NORTHERN NEVADA
Public Health
Environmental Health

NORTHERN NEVADA PUBLIC HEALTH
ENVIRONMENTAL HEALTH SERVICES DIVISION
1001 East Ninth Street • Bldg B • Reno, Nevada 89512
Telephone (775) 328-2434 • Fax (775) 328-6176
www.NNPH.org
HealthEHS@NNPH.org

APPLICATION FOR VARIANCE TO THE REGULATIONS GOVERNING SEWAGE, WASTEWATER, AND SANITATION

Office Use Only
Fee Paid _____
Date Paid _____
Cash/CC/Check _____
Receipt No. _____
Date Appl. Received _____
Considered Comp. _____

DATE 2/11/2026 PROJECT NAME 430 RIVER PINES DRIVE, VERDI

OWNER

Name THE COOK 2011 FAMILY TRUST
Address PO BOX 314
VERDI, NV 89439
Phone 775-223-7432
Email Address verdicook@gmail.com

ENGINEER

Name MATHEW D. BANTA, PROF. HYDROGEOLOGIST
Address CONFLUENCE WATER RESOURCES LLC
14175 SADDLEBOW DR., RENO NV 89511
Phone 775-843-1908
Email Address mbanta@confluencewaterresources.com

The following items must be submitted with this application:

JOB ADDRESS 430 RIVER PINES DRIVE
SIZE OF PARCEL 2.71 ACRES /Acre
COPY OF LEGAL DESCRIPTION AND VERIFICATION OF CURRENT VESTING ON TITLE
EXISTING PARCEL(S) APN(S) 038-280-67 LOT PARCEL B BLOCK PM 5351
REASON FOR VARIANCE REQUEST FOR THE 2ND PARCEL MAP ON SUBJECT PARCEL, MUST DEMONSTRATE THAT ADEQUATE MEASURES HAVE BEEN TAKEN TO ENSURE THE SMALLER LOT AREA WILL NOT HAVE A GREATER IMPACT TO THE GROUNDWATER QUALITY THAN THE ORIGINAL PARCEL SIZE.
SECTION(S) OF REGULATIONS TO BE VARIED 040.030

IF A PARCEL MAP: PROJECT NAME EXISTING PARCEL MAP FOR GIACOMINI (RECORDED IN 2018)
APN(S) 038-280-67 LOT PARCEL B BLOCK PM 5351

IF TENTATIVE MAP: PROJECT NAME PROPOSED PARCEL MAP FOR THE COOK 2011 FAMILY TRUST
NUMBER OF PROPOSED LOTS 2 LOTS REQUIRING VARIANCES 2
LOT DESCRIPTION(S) EXISTING PARCEL "B" OF PARCEL MAP 5351 PROPOSED TO BE DIVIDED INTO PARCEL "B1" (1.00 ACRE) AND PARCEL "B2" (1.71 ACRES) PER THE PROPOSED 2ND PARCEL MAP

Prepare and submit this original application with 9 copies and 10 copies of a construction plot plan with specifications drawn to scale (minimum 1 inch = 30 feet) and include the required following requirements:

- ⌗ Vicinity map.
- ⌗ The direction of North.
- ⌗ A diagram of the location of roadways, easements or areas subject to vehicular traffic, material storage or large animal habitation.

List continued on reverse ...

... continued from previous page

- A diagram of the location and distance to any well and on-site sewage disposal system within 150 feet of the subject property (if none, so indicate).
- A diagram of the distances from the proposed on-site disposal system to any proposed or existing on-site well.
- A diagram of the location of any percolation hole or test trench(es) on the property.
- A diagram to scale of the location of all proposed on-site sewage disposal system components, including a delineated area for future replacement of disposal trench(es).
- A diagram of the distance to any available sewer system (if none, so indicate).
- The number of bedrooms in the proposed building.
- The maximum slope across the disposal area.
- A diagram of the lot dimensions and total lot area.
- The location of water supply lines.
- A diagram of all structures on site.
- A diagram of all existing and proposed drainage improvements.
- A diagram of the location of any watercourse and/or natural drainage channel within 150 feet of the property (if none, so indicate).
- Soil logs and percolation test results, including calculations and actual field data (if required).
- Sewage loading calculations and application rates.
- System sizing calculations.
- Pertinent geological and hydrogeological information.
- Construction drawings, cross-sections and specifications of the proposed system.
- Certification by an engineer that the proposed system is properly designed to function for at least ten (10) years (engineer's seal).
- Submit a completed Notice of Special On-Site Requirements. We will give you the form after variance is approved by the District Board of Health.

BE PREPARED TO SUBMIT:

- Other information may be required to enable the Board to adequately consider the application.

THE SUBMITTED DATA, DOCUMENTS AND DESIGNS MUST DEMONSTRATE WHETHER:

1. The proposed system will significantly and/or adversely impact any water so that the water may no longer be used for its existing or expected beneficial use.
2. The proposed system will be detrimental or pose a danger to the public health, safety or create or contribute to a public health hazard.
3. Other reasonable alternatives for compliance with these regulations are available to the applicant. State the alternatives considered, including reasons for rejection.

ALL INFORMATION MUST BE PROVIDED AND THIS APPLICATION MUST BE PROPERLY COMPLETED PRIOR TO SUBMITTAL. FAILURE TO DO SO MAY RESULT IN SIGNIFICANT DELAYS TO THE PROCESSING OF THIS VARIANCE REQUEST.

February 11, 2026

Sewage, Wastewater, and Sanitation (SWS) Hearing Advisory Board
Northern Nevada Public Health (NNPH), Environmental Health Services
c/o David Kelly, Environmental Health Specialist Supervisor
1001 E Ninth St., Bldg. B
Reno, NV 89512
775-846-6623
DAKelly@nnph.org

RE: 430 River Pines Drive, Verdi, Application for Variance (APN 038-280-67)

SWS Hearing Advisory Board,

This application for variance is being made by the owners of 430 River Pines Drive (APN 038-280-67) which is a vacant 2.71 acre parcel located in Verdi, Nevada. Said parcel is within the City of Reno limits, but not within the Truckee Meadows Water Authority service territory. The nearest public sewer line (Lawton Interceptor) is over 3,000' away and is not cost feasible to extend.

Upon pricing the exorbitant construction cost of a retirement home, it became apparent that dividing the parcel and selling off the remainder is the only means to proceed with building. As the City of Reno zoning is LLR1 (1-acre minimum), the owners have submitted and received conditional approval of a City of Reno Parcel Map to split the parcel into a 1.00 acre and a 1.71 acre parcel. However, this proposed parceling is not in conformance with NNPH SWS Regulation 040.030 since the original parcel map recorded in 2018.

Pursuant to the option outlined in 040.030, the enclosed demonstrates that adequate measures have been taken to ensure that the smaller lot area will not have a greater impact to the groundwater quality than the original parcel size. The enclosed exhibits support said demonstration and are summarized as follows:

Exhibit 1	Summary of Findings; December 2, 2025 Evaluation of Potential Degradation to Groundwater from Denitrifying Septic Systems at APN 038-280-67 letter prepared by Mathew Banta, Professional Hydrogeologist
Exhibit 2	Groundwater Flow Evaluation; February 9, 2026 Evaluation of Potential Degradation to Groundwater from Septic Systems at APN 038-280-67 memorandum prepared by Mathew Banta, Professional Hydrogeologist
Exhibit 3	Curriculum Vitae for Mathew Banta, Professional Hydrogeologist

Attachment A	Nevada Division of Environmental Protection (NDEP) Bureau of Water Pollution Control (BWPC) guidance document, Division Memorandum dated January 28, 1991, from John Nelson of the Water Permits Branch to Lew Dogion, Administrator and Dick Reavis, Division Bureau Chief; and accompanying Attachment 1; both being referenced in the Exhibit 2 memo
Attachment B	Division of Water Resources Well Driller's Report Lot No. 142829, Permit 35492, Basin 091, of the **existing well within proposed Parcel "B2" that has a Static Water Level of 113' deep**; and three other nearby drilling reports; all being referenced in Exhibit 2 memo
Attachment C	Bio Microbics Bio Barrier Membrane Bioreactor denitrifying septic system literature/specs as referenced in Exhibits 1 & 2
Attachment D	Nexgen Advanced Enviro-Septic System denitrifying septic system literature/specs as referenced in Exhibits 1 & 2
Attachment E	Environmental Protection Agency (EPA) Onsite Wastewater Treatment Systems Technology Fact Sheet 9 as referenced in Exhibits 1 & 2
Attachment F	Washoe County's Assessor Parcel Map with the subject 2.71 acre parcel highlighted in yellow
Attachment G	Grant, Bargain, and Sale Deed Document Number 4871625 being the conveyance of the subject 2.71 acre parcel to the applicant/current owner
Attachment H	Aerial photo showing subject parcel, proposed new internal property line, distance of over 1/4 mile to the Truckee River, and 900' circle with no other water wells (Verdi Elementary School's well has been plugged and they are now hooked to TMWA)
Attachment I	Aerial photo showing subject parcel, proposed new internal property line, and improvements
Attachment J	The 2018 Parcel Map 5351 which created subject Parcel "B", Septic Plot Plan, Test Trench Inspection (permit #4461), and Per Rate Test results
Attachment K	Proposed Parcel Map which would result in Parcel "B1" (1.00 acre) and Parcel "B2" (1.71 acres), Septic Plot Plan, City of Reno approval letter for Case No. 24-00023, and approved Extension of Time for PAR24-00023

Attachment L	Subject Variance NNPH SWS Regulation 040.030
Attachment M	Water Rights Deed Document Number 5374628 which shows the applicant/owner has already purchased the water rights which will be relinquished in favor of proposed Parcel "B1". This is required to have the right to drill a new domestic well on the proposed 1.00 acre parcel (Parcel "B1"); Also the submitted NDWR Affidavit to Relinquish Water Rights in Favor of use of water for Domestic Wells
Attachment N	Two letters of support from the only two directly adjacent residential parcels

The owners are willing to encumber both proposed Parcel "B1" and proposed Parcel "B2" with a recorded requirement to install cited Denitrifying Septic Systems concurrent with residential building permits. We appreciate your consideration in this variance approval.

Sincerely,

Heather Cook

Ryan and Heather Cook,
Trustees of the Cook 2011 Family Trust
Applicant/Owner

Exhibit 1

Summary of Findings; December 2, 2025 Evaluation of Potential Degradation to Groundwater from Denitrifying Septic Systems at APN 038-280-67 letter prepared by Mathew Banta, Professional Hydrogeologist

Confluence Water Resources LLC
14175 Saddlebow Drive
Reno, Nevada 89511
T: (775) 843-1908
mbanta@confluencewaterresources.com
www.confluencewaterresources.com

December 2, 2025

Ryan and Heather Cook
430 River Pines Dr.
Verdi, NV
89439

Subject: Evaluation of Potential Degradation to Groundwater from Denitrifying Septic Systems at APN 038-280-67.

Dear Mr. and Mrs. Cook:

Confluence Water Resources LLC (CWR) has evaluated the potential permeability and hydraulic gradient of groundwater flow in the vicinity of your property (APN 038-280-67). The results of this evaluation were provided to you under separate correspondence. The results suggested that denitrifying septic systems would be required to reduce the minimum lot size requirements to limit potential risks in degrading groundwater from septic effluent.

Denitrifying septic systems are highly effective at removing nitrogen from septic effluent based on claims from at least two major manufacturers. BIO MICROBICS® Bio Barrier Membrane Bio-Reactor system claims it can deliver septic effluent with total nitrogen concentrations less than 10 mg/L. NEXGEN Septic's claims removal of up to 99% of environmental contaminates with the Advanced Enviro-Septic® System.

https://biomicrobics.com/products/biobarrier-residential/
https://www.nexgenseptics.com/products/advanced-enviroseptic-septic-systems/

Environmental Protection Agency Onsite Wastewater Treatment Systems Technology Fact Sheet 9 for Enhanced Nutrient Removal suggests wastewater separation systems, which remove toilet wastes and garbage grinding, are capable of 80 to 90 percent nitrogen removal. Physical chemical systems such as ion exchange, volatilization, and membrane processes are capable of similar removal rates.

Denitrifying septic systems are expected to be highly efficient in removing nitrogen from septic effluent. If the concentration of nitrogen in untreated septic effluent is 50 to 100 mg/L, the effluent concentration could be <10 mg/L using denitrifying systems as described above.

Installation of denitrifying systems on both proposed Parcel "B1" and Parcel "B2" will not have a greater impact on the groundwater quality than a conventional septic system located on the original parcel size, if the denitrifying systems are maintained and operate in accordance with the manufacturer's specifications to deliver septic effluent under the maximum contaminant level (MCL) of 10 mg/L.

Please contact Matt Banta of CWR should you have any questions regarding this evaluation at (775) 843-1908.

Sincerely,

Confluence Water Resources, LLC

Matt Banta, PH
mbanta@confluencewaterresources.com
(775) 843-1908

Exhibit 2

Groundwater Flow Evaluation; February 9, 2026 Evaluation of Potential Degradation to Groundwater from Septic Systems at APN 038-280-67 memorandum prepared by Mathew Banta, Professional Hydrogeologist

Confluence Water Resources LLC
www.confluencewaterresources.com
mbanta@confluencewaterresources.com
14175 Saddlebow Drive
Reno, Nevada 89511
C: (775) 843-1908

February 9, 2026
Memorandum
Evaluation of Potential Degradation to Groundwater from Septic Systems at APN 038-280-67

Confluence Water Resources (CWR) has prepared this memorandum to summarize the fidings of an evaluation to degrade groundwater from septic systems on APN 038-280-67, referred herein as the Property.

1. Introduction

The objective of the evaluation is to estimate the appropriate maximum density of septic systems that would be permissible on APN 038-280-67 without causing degradation to groundwater. The evaluation was completed using the governing equations in the Nevada Division of Environmental Protection (NDEP) Bureau of Water Pollution Control (BWPC) guidance document, Division Memorandum dated January 28, 1991, from John Nelson of the Water Permit Branch to Lew Dodgion, Administrator and Dick Reavis, Division Bureau Chief, (see **Attachment A**).

Part II., of *Attachment 1* of the BWPC guidance document provides requirements for determining the number of residences (single family units) which will trigger a groundwater study based on the following equation. The objective is to determine density of septic systems per acre or per square mile.

$$Number\ of\ Septic\ Systems = \frac{(0.2)\ (ppt\ recharge\ AF) + (0.02)\ (storage\ AF)}{0.392\ \text{AF per year per residence}}$$

The following constraints to the governing equation are defined by the BWPC in Part II., of *Attachment 1* of the guidance document.

- Total contamination equals contamination contributed to the total aquifer recharge plus contamination contributed to the groundwater in storage.
- The total contamination is proportional to the total number of residences on a septic system.
- Groundwater in storage equals groundwater stored in the upper 100-feet of saturated alluvium.
- The volume available for assimilating (i.e. diluting) septage is the volume of total aquifer recharge plus groundwater in storage.
- The total number of septic systems equals the number of septic systems affecting recharge volume plus the number of septic systems affecting storage volume.

Part III., of *Attachment 1* of the guidance document provides governing assumptions and definitions which are inherent to the premises for the governing equation.

1. All contamination being considered is derived from septic systems; therefore, total contamination is related to the total number of residences on septic systems.
2. Total nitrogen is the constituent of primary concern with respect to impacts on groundwater quality from septic systems. This is based on known contamination and groundwater studies in Nevada.
3. An estimate of maximum residential flow is 350 gallons per day (gpd), which is equivalent to 0.392-acre feet per year per residence.
4. Based on the EPA Design Manual for Onsite Wastewater Treatment and Disposal Systems, the concentration of total nitrogen which enters a leach field varies from 35 mg/L to 100 mg/L. As a conservative approach to groundwater protection, BWPC assumes 100 mg/L total nitrogen as the input value for nitrogen entering the leach field.
5. As a conservative estimate for use in the governing equation, the accepted limit of total nitrogen in groundwater used for drinking water is 10 mg/L based on NDEP MCL's.
6. All the 100 mg/L of total nitrogen is available to be converted to nitrogen as nitrate. The drinking water standard for nitrate is 10 mg/L per the Federal Safe Drinking Water Act.
7. Precipitation is abbreviated as (ppt) in the governing equation.
8. The abbreviation for acre-feet per year is defined as AFY, and acre-feet is defined as AF.

2. Mixing Analysis of Groundwater Recharge and Septic Effluent Discharge

2.1. Septic Effluent Recharge from Precipitation (Part 1)

Part IV, of *Attachment 1* of the guidance document provides assumptions relating to the number of septic systems limited by precipitation recharge considerations (first factor in the governing equation Part 1).

1. 50% decreases in concentration of septic effluent in the unsaturated zone is assumed (exp., plant uptake, possible dilution etc.). Therefore, the possible concentration of the discharge from a septic system which could reach the groundwater was assumed to be 50 mg/L.
2. Precipitation recharge has a total nitrogen concentration of zero (0) mg/L.
3. If precipitation recharge is assumed to have a nitrogen concentration of zero, then all nitrogen in recharge to groundwater must come from septic systems. If a septic system has an output of 50 mg/L, but 10 mg/L is the acceptable limit, then the ratio of permissible septic recharge to precipitation recharge must be 1:5, or 0.20. Therefore, septic recharge equals (0.20) x (precipitation recharge).

Precipitation recharge is expected to range between 1.0 to 0.5 feet per year depending on the annual precipitation at the elevation of the Property and how the property owner applies irrigation pursuant to their water right permits. Truckee Meadows Water Authority, TMWA, 2019, Verdi Groundwater Model Report, Figure 23 provides an estimate of distribution of recharge from infiltration of precipitation in the vicinity of the Property. According to TWMA and pursuant to the property owner's water right permits, approximately 1-acre foot of water could be recharged from infiltration of precipitation. However, it is important to consider that each lot will

be developed with impervious services, driveways, homes, etc. which will prohibit infiltration on the Property. For this analysis, CWR assumes only about half of the available water will be infiltrated over a unit area of 1-acre once a home and driveways are built. If precipitation recharge is 1.0 foot per year per acre (1-AFY), the analysis must assume 6-inches or 446.3 gallons per day (gpd) will infiltrate to account for loss in area from impermeable surfaces.

2.2. Septic Effluent Recharge from Aquifer Storage (Part 2)

Part V, of *Attachment 1* of the guidance document provides assumptions relating to the number of septic systems limited by aquifer storage considerations (second factor in the governing equation Part 2).

1. A constant volume of aquifer storage is assumed, with negligible inter-basin flow.
2. Groundwater in storage may have a background value of total nitrogen between zero (0) and 5 mg/L.
3. Because 10 mg/L is the "trigger" limit of nitrogen in groundwater used for drinking, and water in storage may have up to 5 mg/L background concentrations, the maximum concentration of nitrogen which could be added to water in storage is 5 mg/L. Therefore, a number less than 5 mg/L must be used in the calculation to provide an adequate means of prevention of pollution. In this instance, 2 mg/L was chosen as a limit for nitrogen added to groundwater in storage.
4. When calculating the effect of nitrogen from septic systems on the groundwater in aquifer storage, no decrease in concentration of "septic effluent" in the unsaturated zone was assumed.
5. If a septic system has an output of 100 mg/L, but 2 mg/L is the acceptable concentration to be added to groundwater in storage, then the ratio of permissible septic nitrogen to aquifer storage nitrogen must be 2:100, or 0.02. Therefore, septic nitrogen contributed to groundwater in storage = (0.02) x (groundwater storage).

Groundwater Storage

is defined as the capacity of the aquifer to hold and release water. Storativity is defined as in Specific Yield in unconfined aquifer which is equivalent to drainable porosity or volume of water drained "released" under gravity (Fetter, 2001). In this case, groundwater is not necessarily released from storage except for distal losses associated with domestic wells and evapotranspiration. The BWPC guidelines assume a constant volume of "aquifer storage" which implies inflow equals outflow. In this case, the flux of groundwater flow was applied using the groundwater flow equation and information from the domestic well on the property to provide an estimate of the volume of groundwater potentially available for dilution per unit area.

From Dary's Law: $Q = K(i)(A)$

Q = Groundwater flow per cross-sectional area (Ft^3/day).
K = Hydraulic conductivity (Ft/day).
(i) = hydraulic gradient (Ft/Ft dimensionless)
A = Cross sectional area (Ft^2)

2.3. Assessment of Hydraulic Conductivity

Hydraulic Conductivity (K) was calculated from the Specific Capacity (SC) of the domestic well recently drilled on the property (NDWR Well Log No.142829). Specific Capacity was estimated using drawdown and discharge data provided by the drilling contractor. The Specific Capacity of the well is presented as (gpm/ft) of drawdown. The following equation can be used to estimate Transmissivity (T) from Specific Capacity per (Driscoll, 1986):

T = 1500 * Q/s (for an unconfined aquifer)
Note: T = Transmissivity (gpd/ft); Q/s = Specific Capacity (gpm/ft),
Q = Discharge from the well in gpm, and s = drawdown

Specific Capacity is estimated based on (gpm) pumped or airlifted from the well divided by feet of drawdown. The estimate of Specific Capacity assumes the following.

- Well depth = 298'.
- Static water level = 113'.
- Assuming dynamic water level during airlifting is 10' from bottom of well per the drilling contractor, or approximately 288', (see 3/12/2025 email correspondence with Mr. Cook).
- Total drawdown would then be approximately (288' - 113') = 175'.
- Assuming 15 gpm discharge rate based on the values reported by the drilling contractor.
- SC = 15 gpm/175' = 0.086 gpm/ft.

The following equation can be used to estimate Transmissivity from Specific Capacity per (Driscoll, 1986):

T = 1500 x SC (for an unconfined aquifer)
Note: T = Transmissivity (gpd/ft); SC (gpm/ft)
T = 1500 x 0.086 gpm/ft = 129 gpd/ft = 17.244 ft^2/day
K = T (ft^2/day) / b (ft)
Where, b = aquifer saturated thickness.
Assuming (b) = (depth of well - static water level).
(b) = 298' - 113' = 185'
K = 17.244 ft^2/day / 185' = 0.09 ft/day.

From Drillers Report:
0' to 38' Cobbles and boulders
38' to 81' Gray clays and volcanics
81' to 126' Dark brown sandy clays
126' to 234' Gray sandy clays
234' to 298' Gray sandy clays with volcanics
*Clay dominated stratigraphy from static water level to TD of well. (See Log No.142829 **Attachment B**).

2.4. Assessment of Hydraulic Gradient

Land surface elevations were approximated using Google Earth elevation data. Groundwater elevation was then approximated using drill collar elevations from land surface and the static water levels from the drilling reports (**Attachment B**). Most wells are domestic. The groundwater elevations are dynamic and subject to influences to pumping, flux along the Truckee River, and potential leaking from the canal. Physical groundwater level data should be collected and monitored to provide a much better understanding of hydraulic gradient in the area. For this reason, the potential gradient on the Property was also evaluated using the

Truckee Meadows Water Authority simulated hydraulic heads for the Verdi-Area, TMWA, 2019, Verdi Groundwater Model Report, Figure 37, simulated hydraulic head for the steady-state model (layer 4).

The gradient is the head difference between wells divided by the horizontal linear distance separating them. The gradient of head perpendicular to the equipotential lines between multiple wells, is found by the following equation derived from C.W. Fetter, 2001, Fourth Addition.

Gradient (h) = $\sqrt{[(dh/dx)]^2 + [(dh/dy)]^2}$

- The gradient was estimated to be between 0.01 to 0.05 in the vicinity of the Property.

3. Results of Analysis

The following provides a summary of the results of the analysis using BWPC's governing equation and the assumptions made in the analysis.

- (K) was assumed to be 0.09 ft/day based on the hydraulic conductivity estimated from Specific Capacity of the domestic well on the Property.

- A hydraulic gradient of 0.05 was assumed, based on the groundwater elevations derived from drillers reports and TMWA's groundwater model.

- The cross-sectional area is assumed on a per-acre basis. The analysis assumes a minimum lot size of 1-acre and an aquifer thickness of 100 feet per the BWPC guidelines. The resulting cross sectional area is 20,871 Ft^2.

a=	Lot Size (AC)	1
	SQFT	43560
	Linear FT	208.71
	a = 208.7ft x	100 feet deep saturated thickness per NDEP

Q=Kia

K	0.09	ft/day
i	0.05	
a	20871.03	FT2
Q=	93.92	Ft3/day
Q=	702.61	gall/day over 1-acres

The volume of groundwater potentially available for dilution as "Storage" per unit area according to Dary's Law, where Q = Kia, is approximately 702.61 gallons per day. Precipitation recharge is expected to be approximately 446.3 gpd as described in Section 2.1.

According to the governing equation, the number of permissible septic systems for the Property would be based on the following.

$$Number\ of\ Septic\ Systems = \frac{(0.2)\ (ppt\ recharge\ AF) + (0.02)\ (storage\ AF)}{0.392\ \text{AF per year per residence}}$$

Or,

$$\#\ \text{of Septic Systems} = \frac{(0.2)\ (446\ \text{gpd}) + (0.02)\ (702.61\ \text{gpd})}{350\ \text{gpd per single family residence}}$$

The density of permissible septic systems would be approximately 0.30 septic systems per acre, and the limitation is 1.0 septic systems per acre. The hydraulic conductivity of the clay penetrated by the well on the Property and the hydraulic gradient of groundwater flow through the area are not sufficient to produce enough groundwater flux, or storage to dilute septic effluent. Due to the low hydraulic conductivity of the clay, the lot size must be significantly larger than 1-acre to promote an increase in recharge from precipitation to dilute septic effluent under the governing equation. Alternatively, the concentration of septic effluent could be physically reduced as a measure to increase dilution potential considering the existing hydrogeological conditions. In this case, denitrifying septic systems will be required to reduce the minimum lot size requirements to limit potential risks in degrading groundwater from septic effluent.

Denitrifying septic systems are highly effective at removing nitrogen from septic effluent based on claims from at least two major manufacturers. BIO MICROBICS® Bio Barrier Membrane Bio-Reactor system claims it can deliver septic effluent with total nitrogen concentrations less than 10 mg/L. NEXGEN Septic's claims removal of up to 99% of environmental contaminates with the Advanced Enviro-Septic® System.

https://biomicrobics.com/products/biobarrier-residential/
https://www.nexgenseptics.com/products/advanced-enviroseptic-septic-systems/

Environmental Protection Agency Onsite Wastewater Treatment Systems Technology Fact Sheet 9 for Enhanced Nutrient Removal suggests wastewater separation systems, which remove toilet wastes and garbage grinding, are capable of 80 to 90 percent nitrogen removal. Physical chemical systems such as ion exchange, volatilization, and membrane processes are capable of similar removal rates.

Denitrifying septic systems are expected to be highly efficient in removing nitrogen from septic effluent. If the concentration of nitrogen in untreated septic effluent is 50 to 100 mg/L, the effluent concentration could be <10 mg/L using denitrifying systems as described above.

3.1. Results of Analysis Assuming Denitrifying Septic Systems

A separate evaluation was completed assuming denitrifying septic systems would be deployed on the Property. Normal septic effluent is expected to have a total nitrogen concentration of 100 mg/L. The BWPC guidance assumes that precipitation recharge has a nitrogen concentration of zero, and all nitrogen in recharge to groundwater comes from septic systems. The BWPC guidance assumes 50% decreases in concentration of septic effluent in the unsaturated zone (exp., plant uptake, possible dilution etc.). Therefore, the possible concentration of the discharge from a septic system which could reach the groundwater would be 50 mg/L. Pursuant to the BWPC guidelines, if a septic system has an output of 50 mg/L, but 10 mg/L is the acceptable limit, then the ratio of permissible septic recharge from precipitation recharge must

be 1:5, or 0.20. Therefore, septic recharge equals (0.20) x (precipitation recharge) as previously described in Section 2.1.

The Project will require denitrifying septic systems. For this evaluation, denitrifying septic systems assume an effluent concentration of 10 mg/L vs 100 mg/L total nitrogen. A 50% decrease in concentration in the unsaturated zone in accordance with the BWPC guidance document would result in a contribution of 5 mg/L total nitrogen from precipitation recharge to groundwater. If a septic system has an output of 5 mg/L, but 10 mg/L is the acceptable limit, then the ratio of permissible septic recharge from precipitation recharge must be 2:1, or 2.0. Therefore, septic recharge will equal (2.0) x (precipitation recharge).

In accordance with BWPC assumptions, 2.0 mg/L was chosen to provide adequate means of pollution prevention to groundwater in storage as described in Section 2.2. If the nitrogen concentration from denitrifying septic systems is expected to be < 10 mg/L but 2 mg/L is the acceptable concentration to be added to groundwater in storage, then the ratio of permissible septic nitrogen to aquifer storage must be 2:10, or 0.2. Therefore, septic nitrogen contributed to groundwater in storage = (0.2) x (groundwater storage).

According to the governing equation, the number of permissible septic systems for the Property using denitrifying technology would be based on the following.

$$\text{\# of Septic Systems} = \frac{(2.0)\,(446\ \text{gpd}) + (0.2)\,(702.61\ \text{gpd})}{350\ \text{gpd per single family residence}}$$

The density of permissible denitrifying septic systems would then be approximately 3.0 septic systems on 1-acre.

Based on this evaluation, the installation of denitrifying systems on both proposed Parcel "B1" and Parcel "B2" will not have a greater impact on the groundwater quality than a conventional septic system located on the original parcel size, if the denitrifying systems are maintained and operate in accordance with the manufacturer's specifications to deliver septic effluent under the maximum contaminant level (MCL) of 10 mg/L.

4. Disclaimer

CWR has exercised all due care in reviewing all information collected. Opinions presented in this memorandum apply to the site conditions and features as they existed at the time of the investigation, and those reasonably foreseeable. These opinions do not necessarily apply to conditions and features that may arise after the date of the investigation. All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices. CWR reserves the right but not the obligation to revise this memorandum should additional information become available. The findings of this memorandum are valid as of the present date. However, changes in the conditions of a property can and do occur with the passage of time, whether they be due to natural processes or the work of other people on this or adjacent properties. Accordingly, the findings of this memorandum may be invalidated wholly or partially by changes outside of our control. Therefore, this memorandum is subject to review and revision as changes in conditions are

identified. This evaluation does not consider other potential sources of nitrogen loading to include nitrogen in soils generated from the over application of fertilizers, nitrogen in soils from heavy livestock use, and nitrogen loading from poorly managed septic systems on adjacent properties. This evaluation did not investigate the potential impacts to groundwater from microplastics, caffeine, illicit or pharmaceutical drugs, metals to include arsenic, forever chemicals also known as per-and polyfluoroalkyl (PFAS) chemicals, or any other substances, compounds, or chemicals associated with the effluent of septic discharge except for nitrogen. The evaluation is specific to the potential to degrade groundwater from septic borne nitrogen in accordance with the governing equation of the NDEP-BWPC guidance document (Division Memorandum dated January 28, 1991, from John Nelson of the Water Permit Branch to Lew Dodgion, Administrator and Dick Reavis, Division Bureau Chief).

5. References

Bio Microbics, Bio Barrier Membrane Bioreactor.
https://biomicrobics.com/products/biobarrier-residential/

C.W. Fetter, 2001, Applied Hydrogeology, Fourth Edition.

Driscoll, F.D, 1989. Groundwater and Wells: 3rd edition, Johnson Filtration Systems.

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Nevada Division of Water Resources Well Log Database.
https://water.nv.gov/welllogquery.aspx

NEXGEN Advanced Enviro-Septic® System.
https://www.nexgenseptics.com/products/advanced-enviroseptic-septic-systems/

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Exhibit 3

Curriculum Vitae for Mathew Banta, Professional Hydrogeologist

Mathew D. Banta, PH

Principal Consultant – Water Resources and Environmental Sciences

mbanta@confluencewaterresources.com
775-843-1908
www.confluencewaterresources.com

Profession	Water Resources and Environmental Consultant
Education	Bachelor of Science, Environmental and Natural Resource Science with an Emphasis in Hydrology, University of Nevada, Reno 2003
Registrations/ Affiliations	American Institute of Hydrology, Professional Hydrologist-Ground Water, (No. 15-HGW-7004) MSHA Miner Safety Training (Surface, Metal and Non Metal) Nevada Water Resources Association American Exploration and Mining Association Geologic Society of Nevada

Specialization

Groundwater and Surface Water Studies for Mining, Development, Geothermal and Industrial Operations. Dewatering and Water Supply Evaluations for Mining Projects. Water Resource Inventories. Water Rights Acquisitions and Planning. Water Resource Permitting and Water Resource Management Plans.

Expertise

Mr. Banta has over 20 years of technical and professional experience in groundwater and surface water resource inventories, water development projects and water resource management. Mr. Banta's has managed and completed numerous groundwater and surface water resources investigations and inventories, hydraulic testing programs, aquifer testing programs and groundwater characterization studies throughout the world and western U.S. Mr. Banta has extensive professional expertise in stakeholder engagement, environmental natural resource studies, permitting, regulatory compliance, water resource monitoring plans, and drilling program planning and management.

Mr. Banta earned a Bachelor of Science degree in Environmental and Natural Resource Science, with an emphasis in Hydrology from the University of Nevada-Reno and is a certified professional hydrogeologist with the American Institute of Hydrology. Mr. Banta offers diverse experience in the United States, Canada, South America, Russia, and Mexico, with focused expertise in complex water resource investigations and characterization studies for lithium brine, open pit, and underground mining operations. Mr. Banta's environmental regulatory and permitting experience includes Special Use Permits, Clean Water Act compliance, USACE resource inventories and permitting, NEPA document preparation, discharge permitting, Nevada water rights, and Nevada Water Pollution Control Permit acquisitions.

Employment

2015 - Present	Confluence Water Resources LLC, Owner, and Principal Consultant
2005 - 2015	SRK Consulting (U.S.) Inc, Reno, Nevada, Senior Consultant (Environmental and Hydrogeology)
2003-2005	Wood Rodgers, Inc., Reno, US, Environmental Scientist
2003	California Regional Water Quality Control Board, Lahontan Region, South Lake Tahoe Student Technician
2002	United States Forest Service, Lee Vining, CA, Hydrological Technician
2001	United States Forest Service, Bridgeport, CA, Hydrological Technician

Languages English and some Spanish

Mathew D. Banta, PH

Principal Consultant – Water Resources

Key Experience: Groundwater and Surface Water Engineering

Recent project experience includes:

5E Advanced Materials Inc., Fort Cady Project, (Boron-Lithium) San Bernardino County, California, 2018 to 2025 - Ongoing Project

- Prepared a Class III Underground Injection Control (UIC) permit application to support 5E Advanced Materials Inc. Fort Cady California project located in Southern California. The permit application was one of a select few which have been approved by the U.S. Environmental Protection Agency (EPA) in California. The permit allows for construction of up-to 500 injection and recovery wells to be used in the solution mining process.
- Designed all program wells which have been authorized by the EPA under the Class III UIC permit regulations. These include complex monitoring wells, observation wells, area of review wells, and injection and recovery wells.
- Oversight and management of Block 1 drilling program. Oversight of contractors, hydraulic testing program, open and cased hole geophysics programs, cement bond logs, well development, mechanical integrity testing, and all sampling activities.
- Completion of multiple well reports, groundwater studies and regular project updates submitted to the EPA regional office.
- S-K 1300 reporting for project hydrogeology.

APEX Resources, Li Creek (Lithium) Project, Nevada 2023 to 2025 - Ongoing Project

- Project Hydrogeologist for new lithium brine discovery in Nevada. Responsible for construction of conceptual hydrogeological model for the project.
- Oversight and direction of geophysical surveys and shallow brine sampling programs.
- Assistance with NI-43-101 Technical Report for the project.

ASR Project, Confidential Client, Nevada 2025-Ongoing Project

- Project Hydrogeologist responsible for design and permitting potential future Aquifer Storage and Recovery (ASR) wells to support a large-scale residential development planned in Northern Nevada.

Project One, Stagecoach Development Hydrogeology Study, Nevada 2024-2025

- Designed and executed a hydrogeology study to evaluate potential degradation to groundwater from nitrates.
- The investigation included Roto-Sonic drilling, material sampling, monitoring well installation, groundwater quality sampling, hydraulic testing, laboratory analysis, collection of water level measurements and a well elevation survey.

ACME Lithium, Clayton Valley (Lithium) Project, Nevada 2022 – 2024

- Designed and executed a high-profile, deep brine sampling and hydraulic testing program to assess lithium concentration and permeability at discreet intervals in Nevada Dissolved Minerals Exploration Holes in Clayton Valley, Nevada.
- Managed hydraulic testing and sampling program.
- Collaborated with Nevada Division of Minerals and Nevada Division of Water Resources to assess new drilling, testing and sampling techniques to support future lithium exploration in Nevada and acquired required drilling and discharge permits.
- Designed and executed a long-term pumping test to estimate transmissivity and storativity of the target brine aquifer. Included deep test well design, and oversight of drilling, well construction, development, and testing activities.
- Design and oversight of brine sampling and Geochem program.
- Data analysis and reporting of hydraulic testing results – proprietary to Client.
- Inferred resource estimate for Clayton Valley lithium brine deposit. Assistance with NI 43-101 Technical Report.

ORMAT Technologies Inc, San Emidio (Geothermal) Project, Nevada 2020, 2021, 2022, 2023

- Reviewed analytical results from injection tests, reviewed drilling program, lithology, geophysical logs and spinner test data to troubleshoot inefficiencies in an existing well which was not meeting the client's injection objectives.
- Design of a large diameter injection wells to support water disposal requirements for ORMAT's. San Emidio Project.
- Provided specifications for drilling programs which were approved by the BLM and Nevada Division of Minerals.
- Oversight of drilling, well installation, well development, and testing activities.
- Completion of well testing in water over 220°F.
- The wells met the client's injection objectives.

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Principal Consultant – Water Resources

Nevada Iron, Buena Vista Project, (Iron) Nevada, 2022 to 2024 Ongoing Project

- WPCP monitoring for Buena Vista Project.
- Water rights management, transfer applications and planning.
- Project Hydrogeologist responsible for mine water supply development and planning.

Ioneer USA Corporation, Rhyolite Ridge Project, (Lithium and Boron) Nevada, 2019, 2020, 2021, 2022

- Completed a surface water resource inventory of seeps, springs, and streams within the domain of the groundwater model for the project.
- Designed and implemented groundwater baseline data collection program, sampling and analytical plan, and carried out monitoring activities for the project.

Elko Mining Group, Spring Valley Hydrogeology Study, (Gold) Nevada, 2019

- Project Hydrogeologist responsible for design and implementation of characterization program to assess the hydrogeology influencing the Spring Valley Project located north of the Coeur Rochester Mine.
- Program manager responsible for monitoring well and large diameter test well design, drilling and well installation QA/QC, diamond drilling and corehole testing activities, hydraulic testing of wells and boreholes, and overall program logistics.
- Design of surface water monitoring system using weirs and stilling wells with transducers. The system was designed to collect high resolution flow data.
- Managed hydraulic testing in core holes using Standard Wire-line Packer System (SWPS) technology.
- Completed analysis and interpretation of current and historical data.
- Multiple presentations, and direct interaction with NDEP-BMRR and BLM to approve work plan for baseline characterization study.

Baker Hughes, Slaven Canyon Pit Lake Dewatering Project, (Barite) 2017 - 2019

- Project hydrogeologist responsible for dewatering planning, water balance preparation and passive inflow estimates to support evaluations for dewatering of the Main Pit at the Slaven Canyon Mine.
- Management and oversight of Waters of the United States Survey and contractor coordination for acquisition of a non-jurisdictional determination from the United States Army Corps of Engineers for Slaven Creek.
- Regulatory agency and stakeholder engagement for pit dewatering.
- Oversight of SLERA contractor and discharge permit contractor. Discharge permit acquired.
- Design modifications for the passive dewatering system.

Baker Hughes, Argenta and Slaven Canyon Mine WPCP Management, (Barite) Nevada, 2017 - 2023

- WPCP monitoring and reporting for Argenta Mine, Slaven Canyon Mine, and Slaven RIBs for the years 2017 through 2021.
- Water rights management, transfers and planning for Baker Hughes Drilling Fluids, Nevada Barite Operations.

National Gold Mining Corporation, National Exploration Project, (Gold) Nevada, 2017 - 2021

- Project Hydrogeologist responsible for design and implementation of groundwater and surface water baseline characterization programs to support mine planning and future dewatering studies.
- Water supply development for multi-year exploration drilling campaign.
- Water rights permitting.

Premier Gold, Helen Cover Underground Project, (Gold) Nevada, 2019

- Completed a Waters of the United States Survey and prepared a preliminary jurisdictional determination application, submitted to the USACOE for several drainages within the project area.
- Completed a surface water inventory of seeps, springs, and streams within the domain of the groundwater model for the project.

Sierra Lithium, Columbus Salt Marsh (Lithium Exploration) Project, Nevada, 2018

- Designed and executed a high-profile packer isolated brine sampling and hydraulic testing program to assess lithium concentration and permeability at discreet intervals in the first permitted Dissolved Minerals Exploration Hole in Nevada. This hole was drilled HQ core to 3,270 feet below ground surface under authorization of the Nevada Division of Minerals.

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- Managed hydraulic testing program using Standard Wire-line Packer System (SWPS) technology, both single and straddle packer systems. Testing included airlift recovery and pumping and recovery tests across target lithology.
- Collaborated with Nevada Division of Minerals and Nevada Division of Water Resources to assess new drilling, testing and sampling techniques to support future lithium exploration in Nevada.
- Data analysis and reporting of hydraulic testing results – proprietary to Client.

American Pacific Borate and Lithium, Fort Cady Project, (Boron and Lithium) San Bernardino County, California, 2018

- Project hydrogeologist responsible for design and implementation of a testing program to evaluate the hydraulic response and potential connectivity between an alluvial aquifer and the Pisgah fault system influencing the ore body.
- Designed a large diameter pumping well (1,000 feet deep) and smaller diameter observation wells (total of 3,000 feet of drilling). Drill bid solicitation and drill contract negotiation. Provided overall program oversight including drilling, well installation, and well development activities.
- Completed a water quality sampling program and completed an assessment of the geochemical footprint of waters and stable radio isotopes.
- Designed and implemented a long-term pumping and recovery test to determine boundary conditions, hydraulic properties and water quality between the alluvial aquifer and the Pisgah fault. Included pump contractor bid solicitation, contract negotiation and implementation of a step test and long-term pumping test.
- Completed pumping test analysis and prepared results for inclusion into a Class III Underground Injection and Control Permit Application.

America Land Holdings, Warm Springs Development Project, Washoe County, Nevada, 2018

- Project hydrogeologist responsible for baseline water resources evaluations supporting the Warm Springs Development Project in Warm Springs Valley, Nevada.
- Prepared an evaluation of water resources and water rights available to the buyer of the Project.
- Worked with the seller and the buyer to negotiate available water rights and identify liabilities for development of long term, high-capacity extraction wells based on the results of the evaluation.
- The baseline water resource evaluation included an assessment of long-term water level trends within the groundwater basin and beneath the Project; Completion of a pumping and recovery test; Analysis of data; Assessment of water quality beneath the Project.

World Properties, St. James Village, Serpa and TMWA, Washoe County, Nevada, 2017-2018

- Project hydrogeologist responsible for baseline data collection and characterization studies supporting water rights transfer applications for St. James Village and Sierra Reflections Projects.
- Design and implementation of short-term hydraulic test and long-term pumping and recovery test to assess cumulative impacts to the Mt. Rose Fan groundwater system and municipal wells.
- Coordination with the local municipality (Truckee Meadows Water Authority), and stakeholder and regulatory engagement.
- Development of conceptual groundwater model and cumulative impact assessments.

GeoXplor Corporation, Chedic Graphite Exploration Project, Nevada, 2017

- Hydrogeologist responsible for development of conceptual groundwater model to support the project.
- Cumulative impact assessments for Chedic Graphite exploration project. Assessed potential impacts to other water rights holders and domestic wells within and adjacent to the project.
- Public outreach and community engagement, stakeholder meetings and presentation of findings to residence and USFS resource specialist.

West Water Resources, Columbus Salt Marsh (Lithium Exploration Project), Nevada, 2017

- Project hydrogeologist responsible for completed lithium brine characterization studies in Columbus Salt Marsh, Nevada.
- Implemented brine sampling program to assess potential lithium resource.
- Involvement with Nevada Division of Minerals and Nevada Division of Water Resources to assess new drilling, testing and sampling techniques to support future lithium exploration in Nevada.

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Principal Consultant – Water Resources

Elko Mining Group, Goldfield Mining District Hydrogeology Study, Nevada, 2017

- Project Hydrogeologist responsible for on-going characterization of hydrogeology influencing Goldfield Nevada and McMahon Ridge mineral deposits.
- Completion of confirmatory hydraulic testing and reporting of current conceptual model.

Klondex Mining Company, Fire Creek Project, Nevada, 2017

- Subcontracted Hydrogeologist responsible for support on design and installation of surface water resource monitoring network throughout Fire Creek, Nevada.
- Installation of weirs and stilling wells with transducers.

Dyno Nobel Inc., Compliance Monitoring and Reporting, Battle Mountain, Nevada (2008 – 2012 and 2017 - 2021)

- Quarterly groundwater monitoring and reporting.
- Discharge monitoring reports and compliance monitoring for Dyno Nobel Battle Mt. facility.

GeoXplor Corporation, Clayton Valley Exploration Project, (Lithium) Nevada, November 2016

- Contract hydrogeologist to support ongoing lithium brine characterization studies and resource estimates in Clayton Valley, Nevada. **Subcontracted through GeoXplor Corporation to support the Lithium X Energy Corporation** Clayton Valley Project.
- Completed an extensive brine sampling program from client's exploration test hole and prepared a comprehensive report, interpreting the analytical results relative to the geology encountered in the test hole.
- Completed a scoping level lithium resource estimate based on the results of the LX-1 exploration hole and public domain data for Clayton Valley.

Lithium Consolidated Minerals Exploration, South Big Smokey Valley Project, (Lithium) Nevada, June 2016

- Prepared water rights application with the NDWR to support the lithium exploration project.
- Prepared a Notice of Intent for mineral exploration and drilling on BLM controlled lands.
- Prepared reclamation cost estimate for phase I drilling using the NDEP and BLM approved SRCE.
- Technical advisory on groundwater and surface water resources in Nevada.
- Drilling and characterization program design and coordination.

Ultra Lithium Inc, 2016 – South Big Smokey Valley Project, (Lithium) Nevada

- Acquired waivers for temporary use of groundwater for mineral exploration through the NDWR to support the project.

June Lake Public Utility District, Groundwater Supply Project, California, August 2016

- Completed feasibility evaluations for development of groundwater supply wells(s) for the community of June Lake, CA.
- Prepared feasibility report and proposed new test well locations.
- Completed an evaluation of the Clark Exploration Test Hole.
- Analyzed pumping and recovery data and estimated hydraulic parameters.

Newmont Mining, Long Canyon Project, (Gold) Nevada, 2016

- Subcontracted Hydrogeologist responsible for support on design and installation of surface water resource monitoring network throughout the Big Spring complex and wetland ecosystem.
- Installation of weirs, flumes and stilling wells within Big Spring complex.
- Oversight of data collection and monitoring during long term high capacity pumping and recovery test at the Long Canyon project.

Lee Vining Public Utility District, Emergency Water Supply Project, California – Ongoing Project Since March 2016

- Completed feasibility evaluations for development of an emergency water supply for the community of Lee Vining, CA.
- Prepared a special use permit application with the USFS and work plan for a comprehensive hydrogeological investigation to support NEPA and CEQA evaluations for the emergency supply well located in Lee Vining Canyon.

Quilici Investments LLC, 2015 through 2016 - Quilici Ranch Induction Well Investigation, Nevada

- Project Hydrogeologist responsible for groundwater and surface water investigation supporting permitting and installation of an induction well located along the Truckee River in Verdi Nevada.
- Drilling program design, bid solicitation and contract negotiation.

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Principal Consultant – Water Resources

- Monitoring well design and hydraulic testing.
- Surface and groundwater quality sampling and analytical interpretation.
- Analysis and interpretation of data and project reporting.

Comstock Mining Inc, Dayton Expansion Project, Nevada (Gold) - Ongoing Project Since September 2015

- Hydrogeologist responsible for characterization of hydrogeology influencing the Dayton Expansion Project and various mineral deposits within the mining district, with primary focus on the Dayton and Spring Valley deposits.
- Field program design, permitting, and implementation of hydrogeological characterization program to support water resource evaluations of a proposed open pit mine expansion.
- Program manager responsible for monitoring well network design, drilling and well installation, hydraulic testing of wells, and program logistics.
- Data analysis, report preparation, and presentations.

Capstone Mining, Pinto Valley Project, (Copper) Arizona, 2015

- Subcontracted Associate Hydrogeologist supporting hydrogeological investigation of faults influencing deep pit excavation.
- Field program coordination and logistical support.
- Managed hydraulic testing program in deep core holes using Standard Wire-line Packer System (SWPS) technology.
- Managed and oversaw installation of grouted in vibrating wire piezometers.

Lundin Gold, Fruta del Norte, (Gold) Ecuador, 2015

- Project Hydrogeologist responsible for characterization study design and implementation.
- Responsible for packer testing, diamond drilling, and corehole testing activities, as well as program logistics.
- Health and Safety coordination.
- Data analysis, report preparation, and presentations.

Veris Gold, Jerritt Canyon, Nevada, 2015

- Potable water supply for SSX mine operations.
- Designed and conducted aquifer testing to support regulatory requirements.

Metallic Goldfield Inc, Gemfield Hydrogeology Study, Nevada, 2011 to 2015

- Project Hydrogeologist responsible for characterization of hydrogeology influencing Goldfield Nevada and various mineral deposits within the mining district, with primary focus on the Gemfield deposit.
- Field program design, permitting, and implementation.
- Program manager responsible for monitoring and water supply well design, drilling and well installation, diamond drilling and corehole testing activities, hydraulic testing of wells, Roto-Sonic drilling activities, and program logistics.
- Conducted and managed hydraulic testing in core holes using Standard Wire-line Packer System (SWPS) technology.
- Water rights planning, development, and acquisitions.
- Data analysis, report preparation, and presentations.

Gradient Resources Inc, Patua Geothermal Project, 2013

- Background data collection and characterization of shallow groundwater system.
- Special Use Permit Monitoring.
- Underground Injection Control Permit Monitoring.
- Project coordination and data control.

Hycroft Recourses and Development, Brimstone Pit Expansion Hydrogeologic Study, Northern Nevada, 2010 to 2014

- Project Hydrogeologist responsible for characterization of Hycroft hydrogeology.
- Field program design, permitting, and implementation.
- Mine water supply exploration and development (potable and non-potable).
- Managed hydraulic testing program in deep core holes with groundwater over 200 °F using Standard Wire-line Packer System (SWPS) technology - Research and Development.

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- Corehole piezometer design, permitting, and installations.
- Managed rotary drilling program and installation of large production and groundwater monitoring wells in water over 200 °F with dissolved Hydrogen Sulfide Gas.
- Installation and calibration of vibrating wire piezometers (VBW) in geothermal aquifer over 2,200 feet.
- Designed and managed pumping test of thermal aquifer.
- Data analysis and report preparation, and presentations.

McEwen Mining Co., Gold Bar Mine Water Supply, Nevada, 2012 to 2014

- Project Hydrogeologist responsible for conducting mine water supply feasibility studies.
- Water rights planning and development.
- Drilling program management and coordination, well installations, hydraulic testing, analysis, and reporting.
- Development of mine water supply supporting the Gold Bar project.

Comstock Mining Co, Hydrogeology Study, Storey Co. Nevada, 2011 to 2014

- Project Hydrogeologist responsible for characterization studies to support various permits, field program design and well permitting.
- Groundwater monitoring well network installation (Process Area).
- Groundwater characterization supporting pit expansion studies.
- Design, permitting, drilling coordination, and installation and testing of mine water supply wells.
- Water rights planning and development.
- Data analysis and interpretations, and report preparation.

Nevada Iron, Buena Vista Project, Nevada, 2011 to 2014

- Project Hydrogeologist responsible for design and implementation of characterization studies to support various permits including NV WPCP, field program design and well permitting.
- Groundwater monitoring well network installation and well testing.
- Groundwater characterization supporting pit expansion studies.
- Water rights planning and development.
- WPCP application support.
- Data analysis and interpretations, and baseline field report preparation.

Baikal Mining, Udakon Project 2012 Hydrogeology Study, Eastern Siberia, Russia, 2012

- Conducted hydraulic testing in deep core holes using Standard Wire-line Packer System (SWPS) technology.
- Data management and project coordination.

Mount Hamilton Ltd., Mount Hamilton Mine Water Supply, Nevada, 2012 to 2013

- Project Hydrogeologist responsible for conducting mine water supply feasibility studies.
- Drilling program management and coordination, well installations, hydraulic testing, analysis, and reporting.

Rhodinia Lithium, 2011- Diabillos Hydrogeologic Study, Argentina, 2011

- Hydrogeologist responsible for installation of piezometers and pumping wells in aquifer with dissolved gas.
- Conducted hydraulic testing in piezometers.

CMC Metals - Bishop Mill, Hydrogeology Study, Inyo County, California, 2010

- Project Hydrogeologist responsible for program design, implementation and permitting.
- Groundwater monitoring network installation.
- Conducted aquifer test in site wells.
- Conducted pump test and analysis to determine aquifer characteristics.
- Report preparation.

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Fronteer Development, Zanzibar Decline Phase II Hydrogeology Study, Nye Co, Nevada, 2010

- Project Hydrogeologist responsible for program design, implementation, and permitting.
- Conducted hydraulic testing in core holes using Standard Wire-line Packer System (SWPS) technology.
- Well design and testing.
- Responsible for drilling and testing activities, and program logistics.
- Data analysis and report preparation.

Shore Gold, 2010 Star Kimberlite Diamond Project Hydrogeologic Study, Saskatchewan, Canada, 2010

- Installation of vibrating wire piezometers (VBW) in flowing sands over 300 meters deep.
- Geotechnical logging of core.
- Analysis of VBW data.

Vista Gold Corporation, Paradones Amarillos Hydrogeologic Study, Baja, Mexico, 2009 to 2010

- Conducted hydraulic testing in core holes using Standard Wire-line Packer System (SWPS) technology.
- Conducted airlift/recovery test in coreholes with SWPS technology.
- Field program manager responsible for drilling and testing activities, and program logistics.
- Data analysis and report preparation.

EP Minerals, Celetom Hydrogeologic Study, Southeast Oregon, 2009

- Test well design and installation in artesian conditions.
- Monitoring well installations.
- Conducted hydraulic testing in completed test wells (airlift/recovery and slug test).
- Field program manager responsible for drilling and testing activities, and program logistics.
- Data analysis and hydrogeological report preparation.

National Oilwell Varco, Big Ledge Mine Hydrogeologic Study, Elko County, Nevada, 2009

- Conducted hydraulic testing in core holes using SWPS technology.
- Conducted airlift/recovery test in coreholes with SWPS technology.
- Field program manager responsible for subcontractor acquisition, drilling and testing activities, and program logistics.
- Data analysis and report preparation.

GMI, Mount Hope Hydrogeologic Study, Central Nevada, 2009

- Conducted hydraulic testing in core holes using SWPS technology.
- Conducted airlift/recovery test in coreholes with SWPS technology.
- Oversaw the installation of deep Vibe wire piezometers.
- Field program manager responsible for drilling and testing activities, and program logistics.
- Data analysis and report preparation.

Vale Inco 2009 Kipper Hydrogeologic Study, Manitoba Canada, 2009

- Conducted hydraulic testing in core holes using SWPS technology.
- Conducted airlift/recovery test in coreholes with SWPS technology.
- Oversaw the installation of deep piezometers.
- Field program manager responsible for drilling and testing activities, and program logistics.

Confidential Client, Heap Leach Pad Closure, Northern Nevada, 2009

- Conducted ground and surface water sampling.
- Managed sampling program and logistics, and reported to the client.
- Consulted on hydrogeology for closure design.

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Northumberland Mine, 2008 Zanzibar Hydrogeologic Investigation, Nye County, Nevada, 2008

- Oversaw drilling program, conducted hydraulic testing, and designed and installation of deep piezometers.
- Managed logistics, reported to the client.
- Prepared hydrogeology report.

Newmont Mining Corporation, 2008 Hope Bay Hydrogeologic Study, Nunavut, Canada, 2008

- Conducted hydraulic testing (packer testing) in core holes using SWPS technology.
- Installation of deep piezometers and VW thermistors and transducers in permafrost.
- Groundwater sampling and VW thermistor and pressure transducer measurements.
- Acting Senior Hydrogeologist for the Hope Bay Gold Belt (June to July 2008). Managed hydro program logistics and reported to the client.

AREVA, 2008 Shea Creek Hydrogeologic Study, Saskatchewan, Canada, 2008

- Conducted hydraulic testing in core holes using SWPS technology.
- Conducted airlift/recovery test in coreholes with SWPS technology.
- Oversaw long-term pump/recovery test.
- Geotechnical logging of rock core.
- Assisted in managing hydro program, managed logistics, conducted SWPS and application training for site staff, and reported to the client.

Vale Inco, 2008 Pipe2 Hydrogeologic Study, Manitoba Canada, 2008

- Conducted hydraulic (packer testing) testing in core holes using SWPS technology.
- Oversaw the installation of deep piezometers.
- Conducted SWPS training for site staff, managed logistics and reported to the client.

Mono County Landfill, Groundwater Monitoring Well Installation, Mono Co., California, 2007

- Managed the program to installation and develop compliance monitoring wells at four Mono County Landfills.
- Managed logistics and contracts with drilling companies.

RNMC, Ruth Tailings Closure, Ely, Nevada, 2007

- Preformed preliminary investigation of groundwater influence in Ruth Tailings.
- Collected data and samples to determined closure limitations and design criteria.

Northumberland, Groundwater Sampling Training, Nye County, Nevada, 2007

- Created a program to assist client with compliance monitoring of site wide groundwater monitoring wells.
- Conducted sampling training for mine staff.

Springer Mine, Groundwater Investigation, Pershing County, Nevada, 2007

- Preformed preliminary groundwater investigation. Collected data and determined the gradient of the potentiometric surface in the subject area.
- Designed and oversaw the installation of groundwater monitoring and observation wells.
- Sampled groundwater monitoring wells, and seeps and springs within the project area.

RNMC, 2007 Well Replacement Program, Ely, Nevada, 2007

- Managed the program for installation and development of the Giroux Wash replacement monitoring wells.
- Conducted field groundwater analysis.
- Managed logistics and contracts with drilling companies.

Mount Hope, 2005 to 2007 Baseline Surface Water Inventory, Sampling, and Data Collection, Eureka, Nevada

- Designed and managed a large field program to inventory, sample, and collect local and regional baseline surface water data for the Mt Hope project.
- Managed logistics and project staff.

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Mount Hope 2006 Hydraulic Testing, Eureka, Nevada, 2006

- Performed pumping and recovery testing of the Mount Hope monitoring wells.
- Managed logistics and contracts with drilling companies.

Mount Hope 2005 Well Installation and Development Program, Eureka, Nevada, 2005

- Managed the installation and development of the Mt. Hope project area monitoring wells.
- Designed and oversaw the installation and development of monitoring wells.
- Managed logistics and contracts with drilling companies.

Mount Hope 2005 Field Analysis of Hydrogeology, Eureka, Nevada, 2005

- Preformed preliminary field analysis of hydrogeology of the Mt. Hope project area.
- Analysis included lift/recovery test, a low stress, short term pumping test.

White Pine Energy Associates, Monitoring Well Installation, White Pine County, Nevada, 2005

- Assisted in the installation and construction of a monitoring well for the purposes of conceptual design of a coal fire power plant in White Pine County Nevada.

Mono County, Monitoring Well Repair, Mono Co., California, 2005

- Managed the repair of MW-3 located at the Benton Crossing Landfill for the Mono County Department of Public Works.

Highland Ditch Design, Reno, Nevada, 2005

- Conveyance and quantities of materials calculations.

Incline Village GID 2004 Stormwater, Incline, Nevada, 2004

- Conceptual detention basin design.

NDOT Highway 50 2004 Stormwater, Eldorado County, Nevada, 2004

- Conceptual detention basin design, work scoping and proposal preparation.

USFS, Mill Creek Flow Analysis, Lee Vining, California, 2002

- Conducted a baseline data collection venture for the USFS to quantify the gaining reaches and the loosing reaches of Mill Creek including:
- Establishment of gauging locations; and
- Collection of flow measurements using a flow meter for duration of a water year.

USFS, Wilson Creek Flow Analysis, Lee Vining, California, 2002

- Conducted a baseline data collection venture for the USFS to quantify the gaining reaches and the loosing reaches of Wilson Creek including;
- Establishment of gauging locations; and
- Collection of flow measurements using a flow meter for duration of a water year.

USFS, Deer Creek Flow Analysis, Lee Vining, California, 2002

- Conducted a baseline data collection venture for the USFS in order to quantify flows of Deer Creek including:
- Establishment of gauging locations; and
- Collection of flow measurements using a flow meter for duration of a water year.

USFS, 2001 West Walker River Watershed Water Resources Inventory, Bridgeport, California, 2001

- Conducted a water resource inventory of the West Walker River Watershed in order to, assist the USFS in water adjudication.

Mathew D. Banta, PH

Principal Consultant – Water Resources

UNR, Sagehen Creek Met Station Construction, Truckee, California, 2001

- Assisted the Desert Research Institute (DRI) in the construction of the Sage hen Creek Met Station.

Humboldt Toiyabe National Forest Dist. 4 2001 Culvert Sizing Project, Bridgeport, California, 2001

- Assisted the USFS in determining the existing condition of culverts, and storm water structures within the national forest.

Key Experience: Environmental Permitting

Recent project experience includes:

Lake Mountain Mining, Olinghouse Project, Nevada, 2025

- 3-Year Bond Update and Reclamation Bond Reconciliation.
- Assistance with Closure Plan and Reclamation Plan updates.
- Attachment A for release of bond for reclaimed ground.

5E Advanced Materials Inc., Fort Cady Project, (Boron-Lithium) San Bernardino County, California, 2018 to 2025 - Ongoing Project

- Prepared a Class III Underground Injection Control (UIC) permit application to support 5E Advanced Materials Inc. Fort Cady California project located in Southern California. The permit application was one of a select few which have been approved by the U.S. Environmental Protection Agency (EPA) in California. The permit allows for construction of up-to 500 injection and recovery wells to be used in the solution mining process.

Baker Hughes a GE Company, Scruffy Oz Project, Nevada, 2019

- Prepared a new Water Pollution Control Permit application for the Scruffy Oz Barite Project located near Battle Mt. Nevada.
- Assisted with the Plan of Operations application for the mine project.
- Compiled results of baseline studies.

Baker Hughes a GE Company, WPCP Monitoring and Reporting, Nevada, Ongoing Since 2017

- Completion of quarterly and annual monitoring and reporting pursuant to the Argenta Mine and Mill and the Slaven Canyon Mine's respective Water Pollution Control Permits.

American Pacific Borate and Lithium California, 2018

- Assist in preparation of a Class III Underground Injection and Control Permit application which was submitted to the U.S. EPA in December of 2018.
- Completed hydrogeologic testing and evaluations to support the permit application.

Lee Vining PUD, California, 2016

- Prepared Special Use Permit Application for Hydrogeological Investigation supporting emergency water supply development.

Bishop Mill Permitting, California, 2010

- Prepared Report of Waste Discharge.
- Prepared Plan of Operations.
- Prepared permits for hydrogeology study and well installations and CEQA evaluations.

Adelaide Mine 2010 WPCP Application, Nevada

- Assessment of Area of Review and Meteorological Report.

Mathew D. Banta, PH

Principal Consultant – Water Resources

Humboldt Modular Mill 2009 WPCP Application, Nevada

- Assessment of Area of Review and Meteorological Report.

Jerritt Canyon 2009 WPCP Renewal Application, Nevada

- Prepared various sections of permit application including
- Assessment of Area of Review, Meteorological Report, and Emergency Response Plan.

Zanzibar Decline 2008 WPCP Application, Nevada

- Prepared various sections of permit application including
- Assessment of Area of Review, Meteorological Report, Emergency Response Plan and Seasonal Closure Plan.

Springer Mine 2008 WPCP Application, Nevada

- Prepared various sections of permit application including.
- Assessment of Area of Review and Meteorological Report.

Hope Canyon Road 2008 EA, California

- Team member for Hope Canyon Road Environmental Assessment preparation for BLM-Ridgecrest Field Office.

Limousine Butte 2007 EA, Nevada

- Team member for Limousine Butte Environmental Assessment preparation for BLM-Ely Field Office.

Wedekind Park 2006 EA, Nevada

- Team member for Wedekind Park Environmental Assessment preparation for BLM-Reno Field Office.

Coeur Rochester Expansion and Closure 2006 EA, Nevada

- Team member for Coeur Rochester Expansion and Closure Environmental Assessment preparation for BLM-Ely Field Office.

ATTACHMENT A

Nevada Division of Environmental Protection (NDEP) Bureau of Water Pollution Control (BWPC) guidance document, Division Memorandum dated January 28, 1991, from John Nelson of the Water Permits Branch to Lew Dogion, Administrator and Dick Reavis, Division Bureau Chief; and accompanying Attachment 1; both being referenced in the Exhibit 2 memo

MEMORANDUM

To: Lew Dodgion, Administrator/Dick Reavis, Bureau Chief

From: John Nelson, Water Permits Branch

Subject: Groundwater Study Requirements

Date: January 28, 1991

In putting together the groundwater study requirements the following steps should be followed:

1) Determine which groundwater basins may be subject to possible degradation from septic systems.

    1) I have developed a model using the basin groundwater storage and the surface recharge. This model creates a density limit for each basin that would trigger the need for the groundwater study. Based on the model the density limits for each basin are found in attachment 1.

    2) Once any portion of groundwater basin has an approved septic system density equal to or greater than the density noted in attachment 1 a groundwater study would be required.

II) Prior to performing the study the area of the study must be determined by a hydrologist. The area of the study shall be determined using as a minimum the following survey requirements.

    1) Locate the area that is proposed for development using septic systems.

    2) Determine the area of the aquifer that will be impacted the most by the development of proposed septic system.

    3) Determine other source areas that will contribute contaminates to the areas identified above.

    The area to be studied shall include the combination of the three areas mentioned above.

III) Evaluate the existing water quality of the area to be studied and characterize the ground-water regime.

1) Groundwater samples must be obtained for the shallow aquifers in each area. Also the groundwater elevations shall be reported.

2) The groundwater shall be sampled for Nitrates, Chlorides, and Total Dissolved Solids.

IV) A conceptual model shall be developed of the study area.

1) The geologic and hydrologic setting of the area must be described. Existing reports such as the U.S.G.S. and Nevada Division of Water Resources should be referenced.

2) Data from domestic wells and monitoring wells must be used to update existing information and to determine the present conditions.

3) Geologic conditions must be evaluated to determine the influence on vertical and horizontal groundwater movement.

4) The Mixing of recharge and septic effluent discharge must be evaluated.

V) Next a numerical model must be developed to simulate the response of an aquifer both hydraulically and chemically to stresses on a set of contiguous blocks. The blocks shall be arranged in rows and columns which comprise the model grid. Each block in the grid shall be no longer than 500 feet by 500 feet. The input data for the model shall have the following parameters and may require additional parameters if necessary.

1) Groundwater elevation data:

2) Transmissivity and Storage Coefficient:

3) Nitrate Concentration in the Groundwater:

4) Contribution of existing septic systems:

VI) The model shall then be run for the following simulations with a minimum time period of 50 years:

1) Simulate for approved septic systems which have not been constructed to date.

2) Simulate for proposed development with all previously approved septic systems.

3) In areas where the existing groundwater depth is less then 100 feet from the natural ground surface, perform a groundwater mounding analysis.

Attachment 1

POLICY FOR DETERMINATION OF MAXIMUM NUMBER OF RESIDENCES ON SEPTIC SYSTEMS PER SQUARE MILE TO BE PERMITTED WITHOUT REQUIRING A GROUNDWATER STUDY TO DETERMINE IMPACT ON GROUNDWATER QUALITY

I. INTRODUCTION

The maximum number of residences on septic systems which will be permitted per square mile without a prior groundwater study has been determined for each of the 232 hydrographic areas in the State of Nevada. Results of this determination are available from the Bureau of Water Pollution Control. Once this predetermined residence number is projected to be exceeded in a given area, a groundwater study will be required before the Nevada Division of Environmental Protection will approve additional septic systems. The groundwater study will be used to determine the impact of proposed septic facilities on existing water quality; approvals may be issued or denied on that basis.

II. THE GOVERNING EQUATION DEFINED

The premise used in determining the number of residences which will trigger the requirement for a groundwater study is based on the following two—part governing equation:

- Total contamination equals contamination contributed to the total aquifer recharge plus contamination contributed to the groundwater in storage where:
- The total contamination is proportional to the total number of residences on a septic system,
- Groundwater in storage equals groundwater stored in upper 100' of saturated alluvium,
- The volume available for assimilating (diluting) septage is the volume of the total aquifer recharge plus groundwater in storage, and
- The total number of septic systems equals the number of septic systems affecting recharge volume plus the number of septic systems affecting storage volume.

Based on the above premise and on the assumptions and calculations outlined in Parts III, IV, and V below, the governing equation is defined as follows:

$$\text{Number of septic systems} = \frac{(0.2)\,(\text{ppt recharge AF}) + (.02)\,(\text{storage AF})}{.392\ \text{AF/yr/residence}}$$

III. GENERAL ASSUMPTIONS AND DEFINITIONS

General assumptions and definitions inherent in the premise for the governing equation are listed below.

1. All contamination being considered is derived from septic systems; therefore, total contamination is related to the total number of residences on septic systems.

2. Total nitrogen has been selected as the constituent of primary concern with respect to impacts on groundwater quality from septic systems. This is based on known contaminants and groundwater studies done in Nevada to date.

3. An estimate of maximum residential flow is 350 gallon/s per day, which is equivalent to 0.392 acre—ft/year/residence.

4. Based on the EPA Design Manual for Onsite Wastewater Treatment and Disposal Systems, the concentration of total nitrogen which enters a leach field varies from 35 to 100 mg/l. As a conservative approach to groundwater protection, 100 mg/l total nitrogen was chosen as input to the leach field.

5. As a conservative estimate for use in the governing equation, the accepted limit of total nitrogen in groundwater used for drinking water is 10 mg/l.

6. All of the 100 mg/l of total nitrogen is available to be converted to nitrogen as nitrate. The drinking water standard for nitrate is 10 mg/l (Federal Safe Drinking Water Act).

7. The abbreviation for "precipitation" is defined as "ppt".

8. The abbreviation for "acre—feet per year" is defined as "AFY", and "acre—feet" is defined as "AF".

IV. ASSUMPTIONS AND CALCULATIONS RELATING TO THE NUMBER OF SEPTICS LIMITED BY RECHARGE CONSIDERATIONS (The First Factor in the Governing Equation)

A. Assumptions

1. A 50% decrease in concentration of septic effluent in the unsaturated zone was assumed (e.g., plant uptake, possible dilution, etc.). Therefore the possible concentration of the discharge from a septic system which could reach the groundwater was assumed to be 50 mg/l.

2. Precipitation recharge has a total nitrogen content of zero.

3. If precipitation recharge is assumed to have a nitrogen content of zero, then all nitrogen in recharge to groundwater must come from septic systems. If a septic system has an output of 50 mg/l, but 10 mg/l is the acceptable limit (IV.A.l), then the ratio of permissible septic recharge to precipitation recharge must be 1:5, or 0.20. Therefore, septic recharge equals (0.20) (precipitation recharge).

B. Calculations

In the determination of the first factor in the governing equation, which addresses the relationship of the total number of residences on septic systems to the contamination in the total recharge to the aquifer, the following relationships were employed:

Septic recharge = (number of septic systems) (output/septic)
= (number of septic systems) (0.392 AFY);

Septic recharge/precipitation recharge = 1/5 = 0.20; and,
Septic recharge = (0.20) (precipitation recharge).

Consequently,

$$\#\ \text{septics} = \frac{(0.20)\ (\text{ppt recharge AFY})}{0.392\ \text{AFY/residence}}$$

V. ASSUMPTIONS AND CALCULATIONS RELATING TO THE NUMBER OF SEPTICS LIMITED BY AQUIFER STORAGE CONSIDERATIONS (The Second Factor in the Governing Equation)

A. Assumptions

1. A Constant volume of aquifer storage is assumed, with negligible interbasin flow.

2. Groundwater in storage may have a background value of total nitrogen of 0-5 mg/l.

3. Because 10 mg/l is the "trigger" limit of nitrogen in groundwater used for drinking (111.5), and water in storage may have up to 5 mg/l background concentration
(V.A.2 above), the maximum concentration of nitrogen which could be added to water in storage is 5 mg/l. Therefore, some number less than 5 mg/l must be used in the calculations to provide an adequate means of pollution prevention. In this instance, 2 mg/l was chosen as a limit for nitrogen added to groundwater in storage.

4. When calculating the effect of nitrogen from septic systems on the ground water in aquifer storage, no decrease in concentration of septic effluent in an unsaturated zone was assumed.

5. If a septic system has an output of 100 mg/l (III.4), but 2 mg/l is the acceptable concentration to be added to ground water in storage (V.A.3 above), then the ratio of permissible septic nitrogen to aquifer storage nitrogen must be 2:100, or 0.02. Therefore, septic nitrogen contributed to groundwater in storage = (0.02) (groundwater in storage).

B. Calculations

In the determination of the second factor in the governing equation, which addresses the relationship of the total number of residences on septic systems to the contamination groundwater in storage in the aquifer, the following relationships were employed:

Total nitrogen of groundwater in storage = nitrogen contributed from septic systems + background nitrogen of ground water in storage;

Concentrations of nitrogen from septic systems and background nitrogen concentrations are proportional to the respective associated fluid volumes;

Nitrogen contributed from septic systems = (number of septic systems) (output from septic systems) = (number of septic systems) (.392 AF);

Concentration of septic nitrogen/background concentration of groundwater in storage = 1/50 = 0.02; and,

Septic nitrogen contributed to groundwater in storage = (.02) (groundwater in storage).

Consequently,

$$\text{The number of septics} = \frac{(0.02)\ (\text{AF storage})}{0.392\ \text{AF}}$$

VI. HIGH AND LOW END LIMITATIONS

The values obtained for the number of residences on septic systems per square mile which will trigger the requirement for a groundwater study prior to approval of additional septic systems have been limited by NDEP on both the high and low ends. Most of the residence numbers fell between 50 and 200; consequently, 50 and 200 were chosen as end—member values. Basins with residence numbers of less than 50 were raised to 50; basins with very high numbers were scaled down to a limit of 200 residences per square mile. This was judged by NDEP to be a fair balance between maximizing groundwater protection in areas of high population pressures, and minimizing the burden on growth in under populated areas.

ATTACHMENT B

Division of Water Resources Well Driller's Report Lot No. 142829, Permit 35492, Basin 091, of the **existing well within proposed Parcel "B2" that has a Static Water Level of 113' deep**; and three other nearby drilling reports; all being referenced in Exhibit 2 memo

APPROX. 310' FROM PROPOSED SEPTIC BEING THE ONLY WELL WITHIN 900' OF PROPOSED NEW SEPTIC

STATE OF NEVADA
DIVISION OF WATER RESOURCES
WELL DRILLER'S REPORT

OFFICE USE ONLY
Log No. 142829
Permit No. 35492
Basin No. 091

PRINT OR TYPE IN BLACK INK ONLY
DO NOT WRITE ON BACK

Please complete this form in its entirety in accordance with NRS 534.170 and NAC 534.340

NOTICE OF INTENT NO N2021-675
WELL NAME (if applicable):

1. OWNER/CLIENT NAME COOK 2011 FAMILY TRUST
MAILING ADDRESS P.O. Box 314, Verdi NV 89439

DETAILED ADDRESS AT WELL LOCATION 430 River Pines Drive, Reno NV 89439
Subdivision Name RIVER PINES County: Washoe

2. PLS LOCATION SW ¼ SW ¼ 8 Sec 19 N/S 18 E
PERMIT/WAIVER NO 35492 (Issued by Water Resources) 038-280-67 (Current Parcel No.)

Latitude 39.52153 UTM E ☐ NAD 27
Longitude 119.98772 UTM N ☒ NAD 83/WGS 84

3. WORKED PERFORMED
☒ New Well ☐ Deepen Orig WL#
☐ Replacement: Original well log #
☐ Recondition: Original well log #

4. PROPOSED USE
☒ Domestic ☐ Irrigation ☐ Monitor
☐ Mining / Dewater ☐ Com / Ind ☐ Stock
☐ Test / Other ☐ Mun / QM ☐ Rec

5. WELL TYPE
☐ Auger ☒ Rotary ☐ RVC
☐ Air ☒ Mud ☐ Sonic
☐ Other

6. LITHOLOGIC LOG

Material Encountered	Lost Circ	Water Strata	From	To
Cobbles, boulders			0	38
gravels, course sands				
Gray clays & volcanics			38	81
Dark Brown			81	126
sandy clays				
Gray sandy clays			126	234
Gray sandy clays		x	234	298
with volcanics				
Washoe County Permit #				
H21-0012WELL				

Date started 13-Aug , 20 21
Date completed 17-Aug , 20 21

7. WATER QUALITIES
Static water level 113 Feet below land surface
Artesian Flow: G.P.M. P.S.I.
Water Temperature: 62 ° Fahrenheit
Water Quality: Not Tested

8. WELL TEST DATA
Test Method: ☐ Bailor ☐ Pump ☒ Air Lift

	G.P.M.	Draw Down (Feet Below Static)	Recorded Time (Hours)
Air Lift	15-20		8 Hours

9. WELL CONSTRUCTION
Depth Drilled: 298 Feet Depth Cased: 298 Feet

HOLE DIAMETER (BIT SIZE)

		From		To	
10 5/8	Inches	0	Feet	298	Feet
	Inches		Feet		Feet
	Inches		Feet		Feet

CASING SCHEDULE

Size O.D. (Inches)	Weight/Ft. (Pounds)	Wall Thickness (Inches)	From (Feet)	To (Feet)
6 5/8	12.94	.188	+2	298

ANNULAR MATERIALS
Sanitary Seal ☒ Yes ☐ No

☒ Neat Cement	0 to 105	☒ Pumped	☐ Poured
☐ Cement Grout	to	☐ Pumped	☐ Poured
☐ Concrete Grout	to	☐ Pumped	☐ Poured
☐ Bentonite Chips	to	☐ Pumped	☐ Poured
☒ Gravel Pack [> 0.2 in.]	105 to 298	☐ Pumped	☒ Poured
☐ Sand Pack [< 0.2 in.]	to	☐ Pumped	☐ Poured
☐ Other, explain:	to	☐ Pumped	☐ Poured

PERFORATIONS:
Type of perforation: Factory Cut
Size of perforation: 3X3/32

From 238 Feet	To 258 Feet
From 258 Feet	To 278 Feet
From 278 Feet	To 298 Feet
From Feet	To Feet
From Feet	To Feet

10. DRILLER'S CERTIFICATION
This well was drilled under my supervision. This report is true to the best of my knowledge.

Name Bruce MacKay Pump & Well Service, Inc. (Contractor)
Address 7465 Longley Lane Reno NV 89511 (Contractor)
Phone 775-851-1600 Ext 3
Nevada contractor's license number as issued by the State Contractor's Board 23096
Nevada well driller's license number as issued by the Nevada Division of Water Resources (on-site driller) 2289
Signed (By actual performing licensed driller or contractor)
Date: 8/19/2021

(Rev. 04-16) USE ADDITIONAL SHEETS IF NECESSARY pg. of pg.

39.52163
119.98670 NAD 27

FORM 4013

STATE OF NEVADA
DIVISION OF WATER RESOURCES
WELL DRILLER'S REPORT

OFFICE USE ONLY
Log No 136123
Permit No. 35492
Basin No. 091

PRINT OR TYPE IN BLACK INK ONLY
DO NOT WRITE ON BACK

Please complete this form in its entirety in accordance with NRS 534.170 and NAC 534.340

NOTICE OF INTENT NO. N20201025
WELL NAME (if applicable)

1. OWNER/CLIENT NAME: Doug & Kristin Crowhurst
MAILING ADDRESS: 21 Garner Drive, Novato CA 94947
DETAILED ADDRESS AT WELL LOCATION: 355 River Pines Drive, Reno NV 89439
Subdivision Name: River Pines County: Washoe

2. PLS LOCATION: NE ¼ SW ¼ 8 Sec. 19 N/S 18 E
PERMIT/WAIVER NO: 35492 (Issued by Water Resources) 038-280-39 (Driller's Parcel No.)
Latitude: 39.52378 UTM E
Longitude: -119.98434 UTM N
☐ NAD 27 ■ NAD 83/WGS 84

3. WORKED PERFORMED
■ New Well ☐ Deepen: Orig WL#
☐ Replacement: Original well log #
☐ Recondition: Original well log #

4. PROPOSED USE
■ Domestic ☐ Irrigation ☐ Monitor
☐ Mining / Dewater ☐ Com / Ind ☐ Stock
☐ Test / Other ☐ Mun / QM ☐ Rec

5. WELL TYPE
☐ Auger ■ Rotary ☐ RVC
☐ Air ■ Mud ☐ Sonic
☐ Other

6. LITHOLOGIC LOG

Material Encountered	Lost Circ	Water Strata	From	To
Cobbles, boulders			0	58
multi colored				
gravels, course				
sands				
Brown bally			58	73
sands				
Gray sandy calys			73	137
Green shale with			137	152
sands				
Hard green shale			152	174
Green shale with			174	238
black volcanic				
rock, fractured				
Fractures 176-218, 218-236				
Washoe County Permit # H20-0123WELL				

Date started: 2-Feb , 20 21
Date completed: 8-Feb , 20 21

9. WELL CONSTRUCTION
Depth Drilled: 238 Feet Depth Cased: 238 Feet

HOLE DIAMETER (BIT SIZE)

		From		To	
10 5/8	Inches	0	Feet	238	Feet
	Inches		Feet		Feet
	Inches		Feet		Feet

CASING SCHEDULE

Size O.D. (Inches)	Weight/Ft. (Pounds)	Wall Thickness (Inches)	From (Feet)	To (Feet)
6 5/8	12.94	.188	+2	238

ANNULAR MATERIALS
Sanitary Seal ■ Yes ☐ No

■ Neat Cement	0	105	■ Pumped	☐ Poured
☐ Cement Grout			☐ Pumped	☐ Poured
☐ Concrete Grout			☐ Pumped	☐ Poured
☐ Bentonite Chips			☐ Pumped	☐ Poured
■ Gravel Pack [> 0.2 in.]	105	238	☐ Pumped	■ Poured
☐ Sand Pack [< 0.2 in.]			☐ Pumped	☐ Poured
☐ Other, explain:			☐ Pumped	☐ Poured

PERFORATIONS
Type of perforation: Factory Cut
Size of perforation: 3/32 X3

From	178	Feet	To	198	Feet
From	198	Feet	To	218	Feet
From	218	Feet	To	238	Feet
From		Feet	To		Feet
From		Feet	To		Feet

7. WATER QUALITIES
Static water level: 78 Feet below land surface
Artesian Flow: G.P.M. P.S.I.
Water Temperature: ° Fahrenheit
Water Quality: Not Tested

8. WELL TEST DATA
Test Method: ☐ Bailer ☐ Pump ■ Air Lift

G.P.M.	Draw Down (Feet Below Static)	Recorded Time (Hours)
20+		5 Hours

10. DRILLER'S CERTIFICATION
This well was drilled under my supervision. This report is true to the best of my knowledge.
Name: Bruce MacKay Pump & Well Service, Inc. (Contractor)
Address: 7465 Longley Lane Reno NV 89511 (Contractor)
Phone: 775-851-1600
Nevada contractor's license number as issued by the State Contractors Board: 23096
Nevada well driller's license number as issued by the Nevada Division of Water Resources (on-site driller): 2289
Signed: (Signature of registered driller or authorized representative)
Date: 2/10/2020

(Rev. 04-16) USE ADDITIONAL SHEETS IF NECESSARY pg. of pg.

39.52388N
119.98332W
NAD:27

STATE OF NEVADA
DIVISION OF WATER RESOURCES
WELL DRILLER'S PLUGGING REPORT

OFFICE USE ONLY
Log No. 134151
Permit No. 49790
Basin 091

PRINT OR TYPE ONLY
DO NOT WRITE ON BACK

Please complete this form in its entirety in accordance with NRS 534.170 and NAC 534.340

NOTICE OF INTENT NO. N2020-117
WELL NAME *(if applicable)*:

1 OWNER Washoe County School District
MAILING ADDRESS 425 East Ninth Street
Reno NV 89512

ADDRESS AT WELL LOCATION 270 Bridge St
Verdi NV 89439
Subdivision Name: *County:* Washoe

2 LOCATION SW ¼ SW ¼ Sec 8 T 19N N/S R 18 E
PERMIT/WAIVER No. 49790 *Issued by Water Resources* 038-060-27 *Parcel No.*

Latitude 39.522189 Longitude -119.989000
UTM E N ☐ NAD 27 ■ NAD 83/WGS 8

3 TYPE OF WELL
☐ Domestic ☐ Irrigation ☐ Test
■ Municipal/Industrial ☐ Monitor ☐ Stock

Is this well being plugged because a replacement well was drilled? No
If yes, what is replacement well NOI?

Is there an existing well log? Yes
If yes, what is NDWR well log #? 27439

4 *EXISTING WELL CONSTRUCTION*
Depth Drilled 602 Feet Depth Cased 602 Feet

EXISTING CASING SCHEDULE

Size O.D. (Inches)	Weight/Ft. (Pounds)	Wall Thickness (Inches)	From (Feet)	To (Feet)
8 5/8	22.36	.250	0	602

Existing Perforations:
Type of perforation Factory Mill Slot
Size of perforation 1/8X3

From	522	feet to	602	feet
From		feet to		feet
From		feet to		feet
From		feet to		feet
From		feet to		feet

5 *WATER LEVEL*
Static water level 73 feet below land surface
Artesian flow G.P.M. P.S.I
Water temperature 63 °F Quality Not Tested

6 Additional Notes or Comments

7 WELL PLUGGING PROCEDURE
Was well cleaned out to total depth? ■ yes ☐ no
If well was not cleaned out to total depth, please explain why:

Was the well contaminated? ☐ yes ■ no
Was the casing pulled? ☐ yes ■ no If pulled from: feet to feet
Was the casing over drilled? ☐ yes ■ no
If casing was left in place, please show where additional perforations were made:

Additional Perforations:
Type of perforater used: Air perforater

From	104	feet to	525	feet	Number of perfs per linear foot 6
From		feet to		feet	Number of perfs per linear foot
From		feet to		feet	Number of perfs per linear foot
From		feet to		feet	Number of perfs per linear foot
From		feet to		feet	Number of perfs per linear foot
From		feet to		feet	Number of perfs per linear foot
From		feet to		feet	Number of perfs per linear foot
From		feet to		feet	Number of perfs per linear foot
From		feet to		feet	Number of perfs per linear foot
From		feet to		feet	Number of perfs per linear foot
From		feet to		feet	Number of perfs per linear foot

8 WELL PLUGGING MATERIALS
Material Used

From	600	feet to	2	feet	12 sack sand slurry	■ Pumped ☐ Poured
From		feet to		feet		☐ Pumped ☐ Poured
From		feet to		feet		☐ Pumped ☐ Poured
From		feet to		feet		☐ Pumped ☐ Poured
From		feet to		feet		☐ Pumped ☐ Poured
From		feet to		feet		☐ Pumped ☐ Poured

Neat Cement Fluid Weight lbs/gal
Bentonite Grout % bentonite
Date Started 4/20/2020
Date Completed 4/21/2020

9 DRILLER'S CERTIFICATION
This well was plugged and abandoned under my supervision and the report is true to the best of my knowledge.
Name Bruce MacKay Pump & Well Service, Inc. *Contractor*
Address 7465 Longley Lane Reno NV 89511 *Contractor*
Phone 775-851-1600

Nevada contractor's license number issued by the *State Contractor's Board* 23096
Nevada driller's license number issued by the Division of Water Resources, the *on-site driller* 2547
Signed *By driller performing actual drilling on site or contractor*
Date 4/21/2020

(Rev 04-15) USE ADDITIONAL SHEETS IF NECESSARY pg. of pg.

NAD 27:
39.52228
119.98798

Plugs well log 27439

REPORT NO. A03.125

STATE OF NEVADA
DIVISION OF WATER RESOURCES

WELL DRILLER'S REPORT

LOG NO. 102644
PERMIT NO.
BASIN 091

NOTICE OF INTENT NO. ~~51489~~ 51481

1. OWNER Steve Downing
MAILING ADDRESS P.O. Box 99 Verdi NV 89439

ADDRESS OF WELL River Pine Drive
Off Bridge Street

2. WELL LOCATION SE 1/4 SW 1/4 SEC. 8 T 19 R 18 E Washoe COUNTY

PERMIT NO PARCEL NO 038-280-30 SUBDIVISION NAME

3. TYPE OF WORK
[X] New Well [ ] Replace [ ] Recondition
[ ] Deepen [ ] Plug [ ] Other

4. PROPOSED USE
[X] Domestic [ ] Irrigation [ ] Test
[ ] Municipal/Industrial [ ] Monitor [ ] Stock

5. WELL TYPE
[ ] Cable [X] Rotary [ ] RVC
[ ] Air [X] Mud

6. LITHOLOGIC LOG

MATERIAL	STRATA	FROM	TO	THICKNESS
Sand, Small Cobbels		0	16	16
Yellow, White, Black Hard Rock		16	20	4
Black Rock, Yellow Clay & DG		20	30	10
Greenish Yellow Clay		30	35	5
Gray Blue Clay Sand		35		
& Small Black Rock		35	65	30
Blue, Green, Clay Sand & Rock		65	75	10
Gray Blue, Blue Green Sandy Clay		75	100	25
Gray Blue Sandy Clay		100	105	5
Greenish Brown		105		
& Gray Blue Sandy Clay		105	115	10
Black Vol. Rock & Gray Blue Clay		115	130	15
Blue Green Clay , Black Rock		130		
& Volcanic Hard Spots		130	170	40
Dark Blue Green Vol. Rock		170		
& Blue Gray Clay Lt. Green Clay		170	240	70
Heavy Blue Gray Clay		240		
& Rock Traces of Brown Clay		240	285	45
Fract. Drk. Blue Green Vol. Rock		285		
& Blue Green, Blue Gray Clay		285	345	60
Drk Blue Grn. Almost Black Rock		345	357	12

Notes :

Date Started 12/10/03 Date Completed 12/18/03

7. WELL TEST DATA

TEST METHOD [ ] Bailer [ ] Pump [X] Air Develop

	GPM	DRAWDOWN	TIME (HRS)
	20+		1 1/2hrs.

8. WELL CONSTRUCTION

Depth Drilled 357 Depth Cased 357

HOLE DIAMETER (BIT SIZE)

10 5/8 Inches 0 Feet 100 Feet
8 1/2 Inches 100 Feet 357 Feet
Inches Feet Feet

CASING SCHEDULE

Size OD	Weight/Ft	Wall Thickness	From	To
6 5/8	12.92	.188	+3	357

PERFORATIONS:
Type Perforation Factory Size Perforation 3/32 X 3
From 277 Feet to 357 Feet
From Feet to Feet
From Feet to Feet

SURFACE SEAL: [X] Yes [ ] No SEAL TYPE:
Seal Depth 100'
PLACEMENT METHOD: [X] Pumped [ ] Poured
[X] Neat Cement [ ] Cement Grout [ ] Concrete Grout [ ] Bentonite

GRAVEL PACKED: [X] Yes [ ] No
From 100 Feet to 357 Feet

9. WATER LEVEL
Static Water Level 63 Feet Below Land Surface
Artesian Flow GPM PSI
Water Temperature Cool F Quality Clear

10. DRILLER'S CERTIFICATION
This well was drilled under my supervision and the report is true to the best of m knowledge.
Name Aqua Drilling & Well Service, Inc.
Address 675 Edison Way
Reno, NV 89502
NV. CONTRACTOR'S LIC. NO 15291 DRILLER'S LIC. NO. ON SITE 2189
Signed
By driller performing actual drilling on site or contractor
Dated December 18, 2003

ATTACHMENT C

Bio Microbics Bio Barrier Membrane Bioreactor denitrifying septic system literature/specs as referenced in Exhibits 1 & 2

Industry Leading Water Recycling Technology

BIO MICROBICS®

BioBarrier®

MEMBRANE BIOREACTOR

NSF/ANSI STD 40 Class 1, STD 245 and STD 350

Ultrafiltration membrane

Reliable performance with low maintenance

RESIDENTIAL • COMMERCIAL • COMMUNITY

BETTER WATER. BETTER WORLD.®

www.biomicrobics.com

SIMPLE • LOW

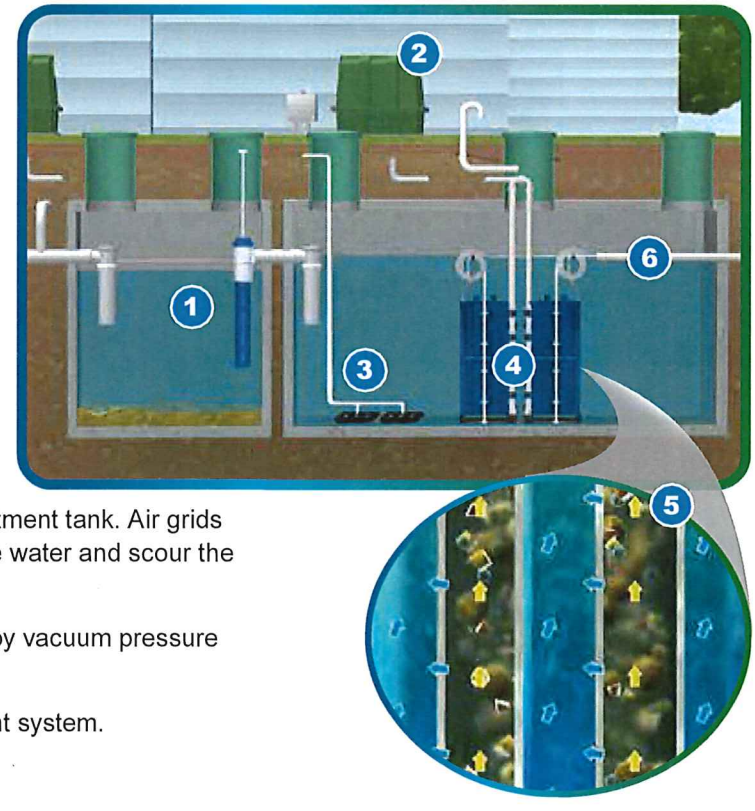
BioBarrier®
MEMBRANE BIOREACTOR

The BioBarrier® is a Membrane Bioreactor (MBR) technology that removes organic pollutants and suspended solids with the use of ultrafiltration membranes. This membrane system replaces the clarifier, sand filter, and disinfection processes used in many conventional wastewater treatment processes.

The membrane module is submerged in a tank full of aerated MLSS (Mixed Liquor Suspended Solids), where organic matter and suspended solids are biologically broken down. The membranes physically separate water from microorganisms and suspended solids. Water is drawn through the membranes with vacuum pressure, leaving the suspended biomass material in the aeration tank. The resulting effluent is 99% free of contaminants such as BOD, TSS, and fecal coliform. Depending on the design of the system, a high level of nitrogen and phosphorus can be removed as well.

The BioBarrier® system is scalable to fit many residential and commercial applications, from single homes to large businesses, and is particularly suitable for cases where high quality effluent is required, such as in water reuse.

HOW IT WORKS!



1. In the primary settling zone, a SaniTEE® screen prevents large solids from entering the treatment zone.
2. An above-ground blower introduces air into the treatment module to aerate the wastewater.
3. In the treatment tank, microbes thrive in the richly aerated environment as suspended growth (MLSS).

   An optional BioRobic® system can be used for extra aeration for high BOD concentrations.
4. The BioBarrier® module is immersed in the treatment tank. Air grids supply coarse bubble aeration to oxygenate the water and scour the membrane surfaces.
5. Treated water is drawn through the membrane by vacuum pressure delivered by a submersible pump.
6. Clear, odorless, treated water exits the treatment system.

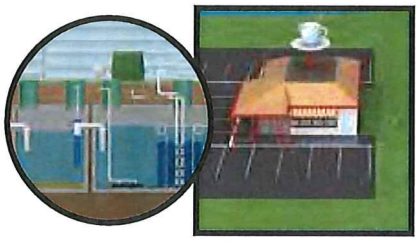
COST • ROBUST

BioBarrier® Membrane Bioreactor. Versions with higher Total Nitrogen (TN) reduction, designated as "-N" models, are also available.

UNIT	MAX HYDRAULIC LOADING GPD	LPD	MAX ORGANIC LOADING Pop. Equiv.
EN NSF 0.5 (-N)	500	1890	8
EN NSF 1.0 (-N)	1000	3800	16
EN NSF 1.5 (-N)	1500	5700	24
EN 2.0 (-N)	2000	7600	32
EN 2.5 (-N)	2500	9500	40
EN 3.0 (-N)	3000	11400	48

MBR module capacities are best rated based on hydraulic loading, organic loading, and other project-specific considerations. Actual capacity may vary with local conditions and performance goals.

BioBarrier® HSMBR® High Strength Membrane Bioreactor. Versions with higher TN reduction ("-N" models) are also available.

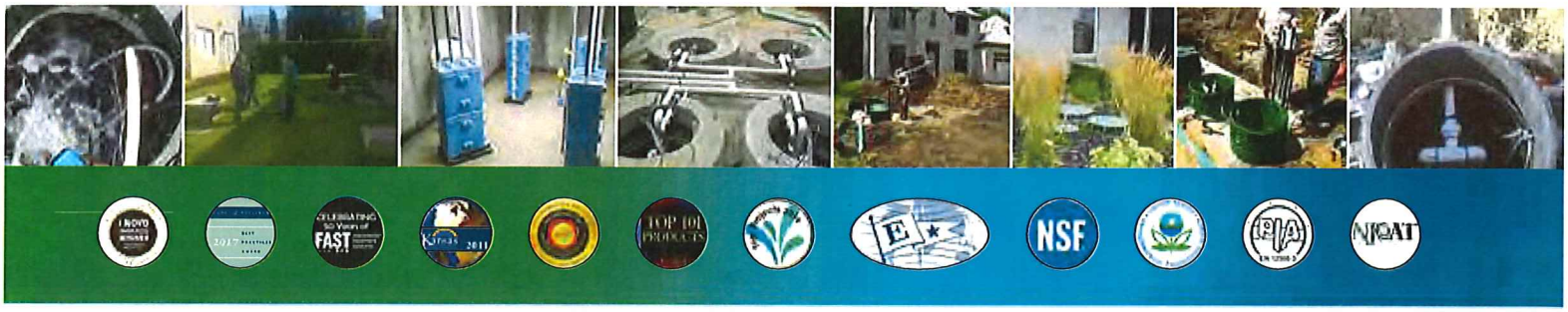


UNIT	MAX HYDRAULIC LOADING GPD	LPD	MAX ORGANIC LOADING Pop. Equiv.
HSMBR® 1.5 (-N)	1500	5700	CONSULT FACTORY
HSMBR® 3.0 (-N)	3000	11400	
HSMBR® 4.5 (-N)	4500	17000	
HSMBR® 6.0 (-N)	6000	22700	
HSMBR® 9.0 (-N)	9000	34000	

For flows larger than 9,000 GPD [34000 LPD] or applications requiring different treatment levels, please consult the factory.

- NSF/ANSI Standard 40, Class1 Residential Wastewater Treatment Systems
- NSF/ANSI Standard 245, Class1 Residential Wastewater Treatment Systems, Nitrogen Reduction
- NSF/ANSI Standard 350, Onsite Residential and Commercial Treatment, Water Reuse
- CAN/BNQ 3680-600 (Onsite Residential) Wastewater Treatment Technologies
- EN 12566-3 Packaged wastewater treatment plants for up to 50 people.

Pictured: HSMBR® membrane modules, control panel, blower housing, SaniTEE®

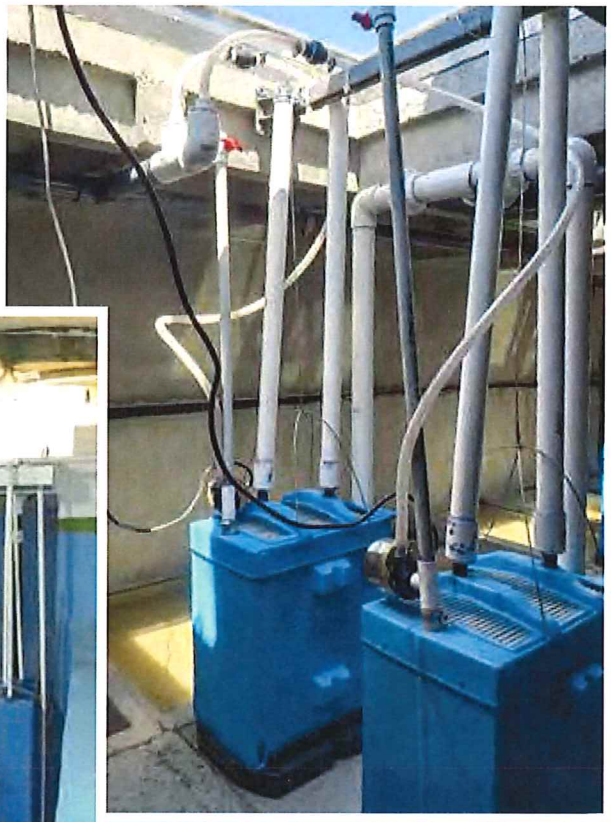


Established in 1996 to focus on water, BioMicrobics – and subsidiaries SeptiTech and Scienco/FAST – is at the forefront of sustainable design, with more than 80,000 systems in over 80 countries. Our systems meet the highest performance standards for treatment of water, graywater, wastewater, and stormwater. BioMicrobics produces innovative systems dealing with wastewater treatment in decentralized settings. Our products are engineered to be simple, low-cost, and robust.

BioBarrier MEMBRANE BIOREACTOR

Single-Family & Residential Systems

The BioBarrier® MBR models 0.5-1.5 are certified to the following standards: NSF/ANSI Std 40, Class 1, for wastewater, Std 245 for nitrogen reduction, and Std 350 for water reuse (the first to receive this distinction), as well as EN 12566-3 certified. This product provides opportunities for water reuse.



BioBarrier HSMBR HIGHSTRENGTH MEMBRANE BIOREACTOR

Small & Large Commercial Systems

BioBarrier® HSMBR® (High Strength Membrane Bioreactor) system is designed specifically to treat all the wastewater (greywater and blackwater) from commercial applications, from small flow to higher flows, such as gas stations, strip malls, office buildings, and even wineries.

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BETTER WATER. BETTER WORLD.
16002 West 110th St. • Lenexa, KS 66219 USA
1-800-753-3278 • ph: 1-913-422-0707 • f: 1-913-422-0808
www.biomicrobics.com • sales@biomicrobics.com

SCIENCO/FAST
a subsidiary of BioMicrobics, Inc.
200 Sun Valley Circle • Fenton, MO 63026 USA
1-800-652-4539 • p: 1-314-756-9300 • f: 1-314-756-9306
www.sciencofast.com • solutions@sciencofast.com

SeptiTech®
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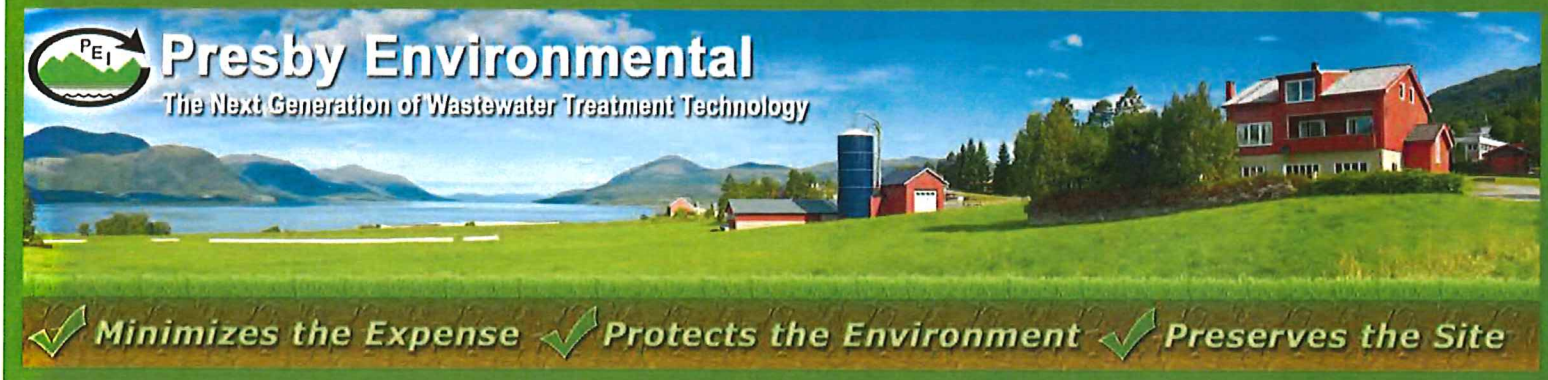
69 Holland Street • Lewiston, ME 04240 USA
1-800-318-7967 • ph: 1-207-333-6940 • f: 1-207-333-6944
www.septitech.com • info@septitech.com

SCIENCO/FAST InTank BWTS
Ballast Water Treatment System
30525 First Street Suite A • Fulshear TX 77441 USA
p : 1-832-640-9221 • f: 1-314-756-9306
www.intankballast.com • intank@sciencofast.com

B-waste-01

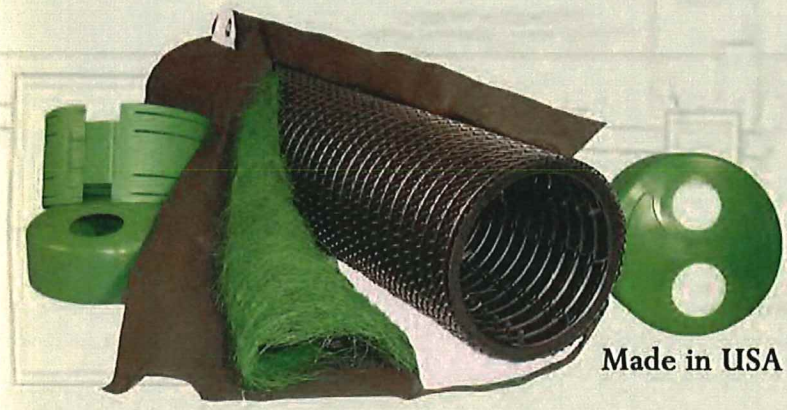
ATTACHMENT D

Nexgen Advanced Enviro-Septic System denitrifying septic system literature/specs as referenced in Exhibits 1 & 2



Advanced Enviro-Septic™(AES) Wastewater Treatment System

Presby Environmental proudly announces...



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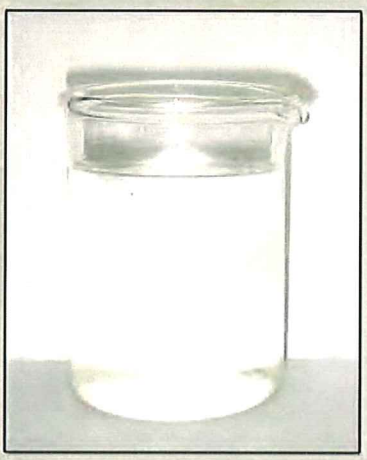


The onsite wastewater treatment system that is sweeping the industry!

NSF®

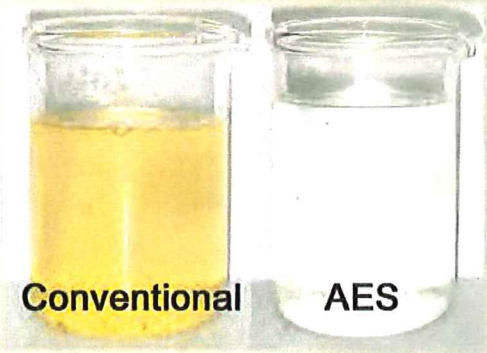
SPD & CTD Models
Certified to NSF/ANSI
Standard 40, Class I

Item 71610

www.PresbyEnvironmental.com

ADVANCED ENVIRO-SEPTIC™ TREATMENT SYSTEM

Why choose Advanced Enviro-Septic™ (AES)?



	Third Party Testing	Industry Standards		
BNQ Testing Parameters	Advanced Enviro-Septic™ Test Results*	EPA Tertiary	NSF-40 Class I	BNQ Advanced Secondary
CBOD (mg/L)	<2	10	<25	<15
TSS (mg/L)	<2	10	<30	<15
Fecal Coliforms (CFU/100 mL)	218	1000	n/a	50,000

* (N/Ref: 30825-049-A) BNQ Test Center, Quebec

The Environmental Advantage

- Removes up to 99% of wastewater contaminants
- Treats and disperses in the same small footprint
- Proven and reliable track record
- Treatment process requires no energy
- Made with significant amounts of recycled plastic
- Protects soil and groundwater from contamination

The Cost Advantage

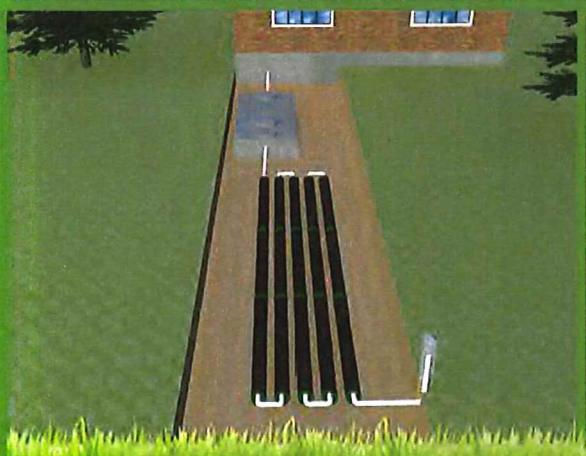
- Smaller installations require smaller crews and less fill material
- Installs quickly and easily
- Lightweight components are easy to handle and transport
- Considerably more cost-effective than mechanical and conventional systems
- Never needs replacement media or special maintenance
- Requires no expensive mechanical devices, computer controls or maintenance contracts
- Durable, non-biodegradable components last indefinitely

The Design Advantage

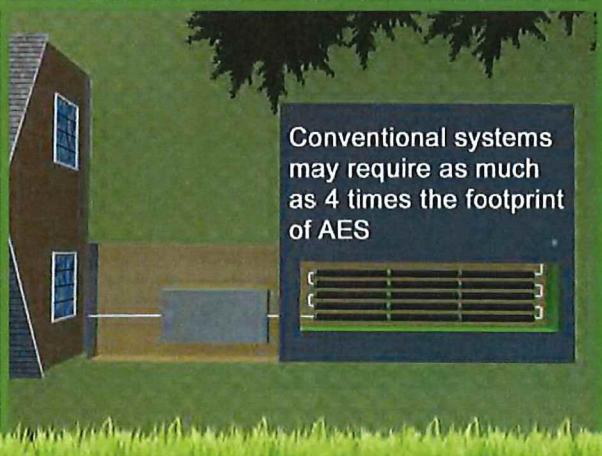
- Available in NSF and non-NSF Certified designs
- Flexible to allow virtually any shape
- Sloping and adaptable configurations
- Multi-Level™ configurations
- Proven performance
- Longevity and reliability
- Technical support
- Free online classes, manuals, templates

"When we looked at the solution, we determined that Presby was the best alternative for us because of the high performance of the system... The design goes together fast and performs at a high capacity when you have limited space."

- Jay Gamble, Vice President and General Manager of the Mt. Sunapee Resort, New England Construction Magazine, April 27, 2009



A powerful eco-system of aerobic and anaerobic bacteria digests up to **99%** of wastewater contaminants, recycling clean water into the environment



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ADVANCED ENVIRO-SEPTIC™ TREATMENT SYSTEM

Ridges
- Increase surface area
- Improve cooling
- Provide more bacterial growth areas

Skimmers at Each Perforation
- Prevent grease and suspended soilds from leaving the pipe
- Protect green fibers and geo-textiles from clogging

Black Geotextile
- Surrounds the pipe and fibers
- Provides protected bacterial treatment surface

Green Plastic Fiber Mat
- Filters more suspended solids
- Protects outer geotextile bacterial treatment surface
- Creates a massive bacterial treatment area

Bio-Accelerator™ Fabric
- Quickly develops treatment biomat
- Screens more solids from the wastewater
- Ensures distribution of wastewater along the entire length of the pipes
- Provides additional treatment surface
- Enhances and accelerates treatment
- Facilitates quick start-up
- Further protects outer layers and the receiving surfaces

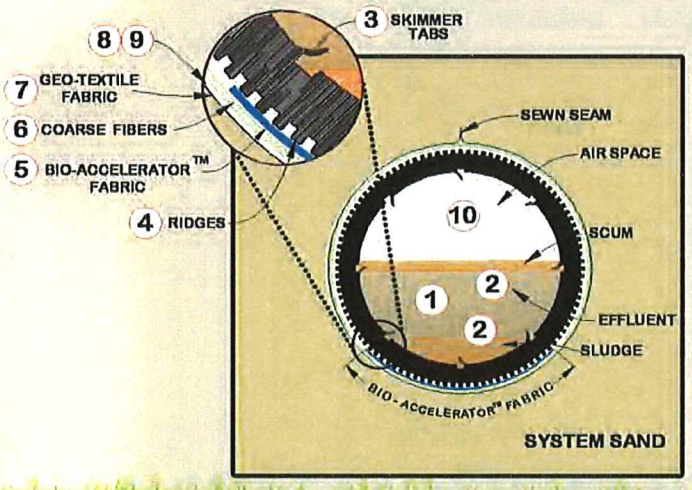
NSF®

The Public Health and Safety Company™

SPD & CTD Models Certified to NSF/ANSI Standard 40, Class I

BNQ BUREAU DE NORMALISATION DU QUÉBEC

ADVANCED ENVIRO-SEPTIC™ WASTEWATER TREATMENT SYSTEM



STAGE 1: WARM EFFLUENT ENTERS THE PIPE AND IS COOLED TO GROUND TEMPERATURE.
STAGE 2: SUSPENDED SOLIDS SEPARATE FROM THE COOLED LIQUID EFFLUENT.
STAGE 3: SKIMMERS FURTHER CAPTURE GREASE AND SUSPENDED SOLIDS FROM THE EXITING EFFLUENT.
STAGE 4: PIPE RIDGES ALLOW THE EFFLUENT TO FLOW UNINTERRUPTED AROUND THE CIRCUMFERENCE OF THE PIPE AND AID IN COOLING.
STAGE 5: BIO-ACCELERATOR™ GEO-TEXTILE FABRIC FILTERS ADDITIONAL SOLIDS FROM THE EFFLUENT, ENHANCES AND ACCELERATES TREATMENT, FACILITATES QUICK START-UP AFTER PERIODS OF NON-USE, PROVIDES ADDITIONAL SURFACE AREA FOR BACTERIAL GROWTH, PROMOTES EVEN DISTRIBUTION, AND FURTHER PROTECTS OUTER LAYERS AND THE RECEIVING SURFACES SO THEY REMAIN PERMEABLE.
STAGE 6: A MAT OF COARSE RANDOM FIBERS SEPARATES MORE SUSPENDED SOLIDS FROM THE EFFLUENT.
STAGE 7: EFFLUENT PASSES INTO THE GEO-TEXTILE FABRIC AND GROWS A PROTECTED BACTERIAL SURFACE.
STAGE 8: SAND WICKS LIQUID FROM THE GEO-TEXTILE FABRIC AND ENABLES AIR TO TRANSFER TO THE BACTERIAL SURFACE.
STAGE 9: THE FABRIC AND FIBERS PROVIDE A LARGE BACTERIAL SURFACE TO BREAK DOWN SOLIDS.
STAGE 10: AN AMPLE AIR SUPPLY AND FLUCTUATING LIQUID LEVELS INCREASE BACTERIAL EFFICIENCY.

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Presby Environmental

...changing the way the world approaches wastewater treatment.

Presby Environmental, Inc. (PEI), founded in 1995 by inventor and entrepreneur David Presby, is an innovative environmental organization that engineers new technology to change the way the world approaches wastewater treatment. Today, PEI is on the cutting edge of wastewater treatment technology to help protect and preserve our most precious natural resources.

Through extensive field testing and R&D, PEI has developed the world's most practical and effective wastewater treatment system, the Advanced Enviro-Septic™ Wastewater Treatment System (AES). AES combines superior treatment and dispersal in the same footprint, offering design, installation and cost advantages no other system can. This System is so effective, it is the only one of its kind to meet the stringent standards of NSF-40 Class I and BNQ Advanced Secondary.

Presby Environmental combines innovation, simplicity and extensive research and development into a patented line of complimentary onsite wastewater treatment technologies, designed and manufactured at PEI's state-of-the-art facility. Mr. Presby continues to lead the industry by striving to improve the techniques and technology used in the field, always pushing to provide **the next generation of wastewater treatment technology.**

Advanced Enviro-Septic™ (AES)

Enviro-Septic® (ES)

Presby Maze®

Presby De-Nyte™

The Best Customer Service in the Industry...*for us it's personal*

- Design layouts
- User-friendly website
- Design, Installation & Operations Manuals
- Online training classes
- Technical support
- System Sand Supplier List

To contact our Customer Service Team

Presby Environmental, Inc.
143 Airport Road
Whitefield, NH 03598

Tel: 800-473-5298
Fax: 603-837-9864
Email: info@presbyeco.com

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ATTACHMENT E

Environmental Protection Agency (EPA) Onsite Wastewater Treatment Systems Technology Fact Sheet 9 as referenced in Exhibits 1 & 2

EPA Onsite Wastewater Treatment Systems Technology Fact Sheet 9

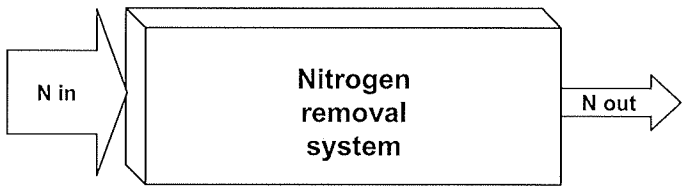
Enhanced Nutrient Removal—Nitrogen

Description

Nitrogen is a pollutant of concern for a number of reasons. Nitrogen in the ammonia form is toxic to certain aquatic organisms. In the environment, ammonia is oxidized rapidly to nitrate, creating an oxygen demand and low dissolved oxygen in surface waters. Organic and inorganic forms of nitrogen may cause eutrophication (i.e., high productivity of algae) problems in nitrogen-limited freshwater lakes and in estuarine and coastal waters. Finally, high concentrations of nitrate can harm young children when ingested.

Ammonia oxidation (nitrification) occurs in some of the processes described in previous fact sheets, and is dependent upon oxygen availability, organic biochemical oxygen demand (BOD), and hydraulic loading rates. Nitrogen removal by means of volatilization, sedimentation, and denitrification may also occur in some of the systems and system components. The amount of nitrogen removed (figure 1) is dependent upon process design and operation. Processes that remove 25 to 50 percent of the total nitrogen include aerobic biological systems and media filters, especially recirculating filters (Technology Fact Sheet 11). Enhanced nitrogen removal systems can be categorized by their mode of removal. Wastewater separation systems, which remove toilet wastes and garbage grinding, are capable of 80 to 90 percent nitrogen removal. Physical-chemical systems such as ion exchange, volatilization, and membrane processes, are capable of similar removal rates. Ion exchange resins remove NH_4-N or NO_3- N. Membrane processes employ a variety of membranes and pressures that all have a significant reject flow rate. Volatilization is generally significant only in facultative lagoon systems where ammonia volatilization can be significant. The vast majority of practical nitrogen-removal systems employ nitrification and denitrification biological reactions. Most notable of these are recirculating sand filters (RSFs) with enhanced anoxic modifications, sequencing batch reactors (SBR), and an array of aerobic nitrification processes combined with an anoxic/anaerobic process to perform denitrification. Some of the combinations are proprietary. Any fixed-film or suspended-growth aerobic reactor can perform the aerobic nitrification when properly loaded and oxygenated. A variety of upflow (AUF), downflow, and horizontal-flow anaerobic reactors can perform denitrification if oxygen is absent, a degradable carbon source (heterotrophic) is provided, and other conditions (e.g., temperature, pH, etc.) are acceptable.

Figure 1. Nitrogen removal systems



The most commonly applied and effective nitrogen-removal systems are biological toilets or segregated plumbing options and/or nitrification-denitrification process combinations. A more complete list is described below, along with accompanying schematic diagrams.

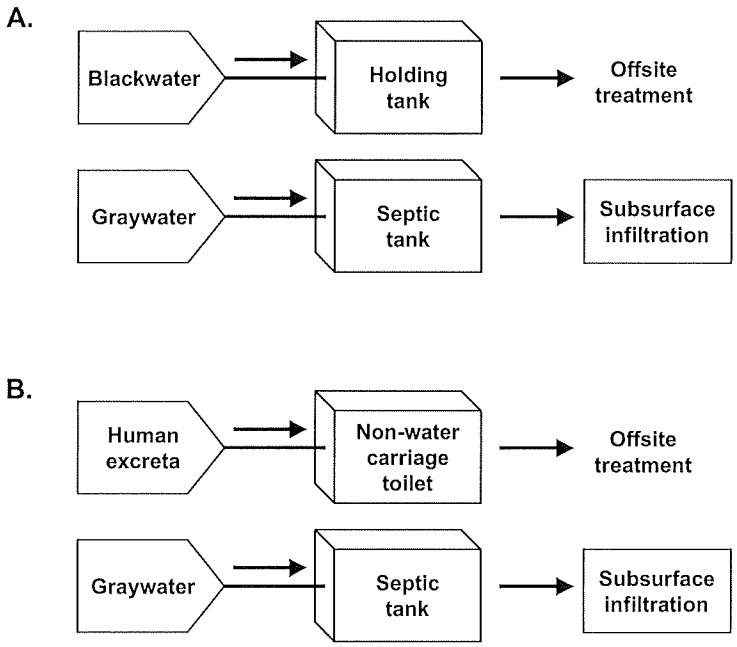
Source separation systems

Source separation relies on isolating toilet wastes or blackwater from wastewater. This requires separate interior collection systems. Two source separation systems were identified: blackwater holding tank with low-volume-discharge toilets and graywater septic tank system, and non-water-carriage toilets and graywater septic tank system (figure 2). These types of toilets are discussed in chapter 3.

Blackwater holding tank with low-volume-discharge toilets and graywater septic tank system

Blackwater discharged directly to a holding tank requires periodic removal for offsite treatment. Graywater wastes can be discharged to a conventional septic tank or subsurface infiltration system.

Figure 2. Source separation systems: A. blackwater holding tank with low-volume discharge toilets and graywater septic tank system; B. non-water-carriage toilet and graywater septic tank system



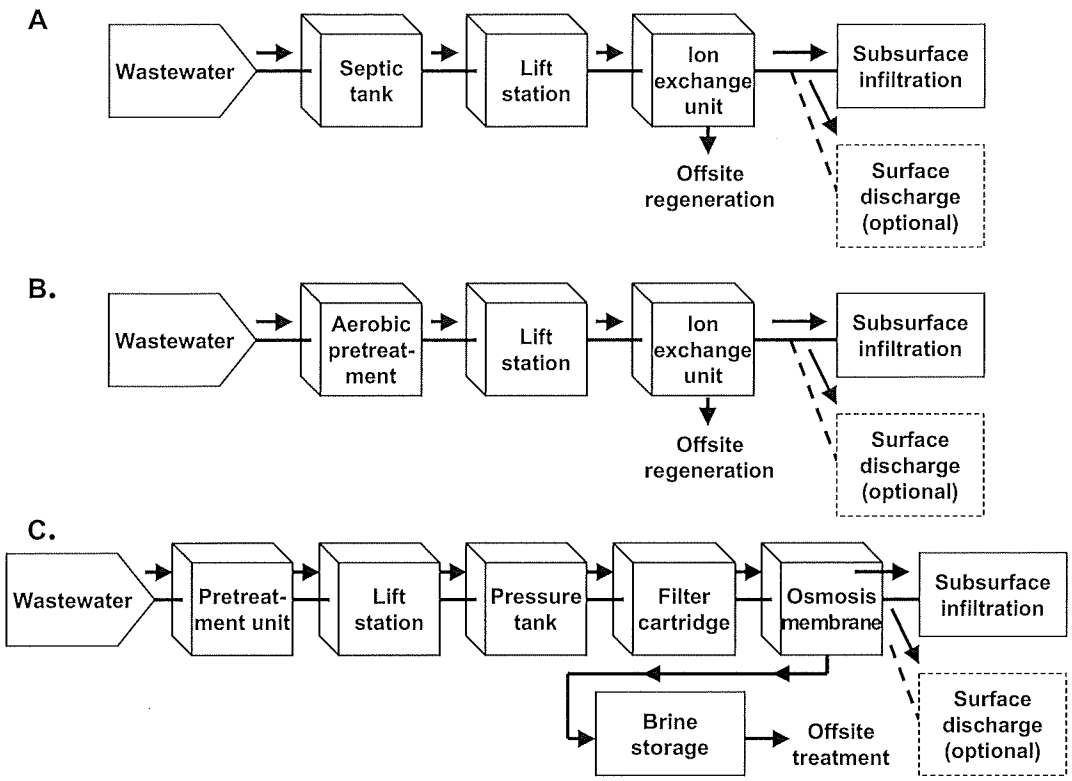
Non-water-carriage toilets and graywater septic tank system

Excreta is discharged to non-water-carriage toilets to promote bulk reduction and decomposition. Biological and incineration toilets are the most common methods of accomplishing this. Non-water-carriage toilets that use these processes are commercially available. The remaining graywater wastes can be discharged to a conventional septic tank subsurface infiltration system.

Physical/chemical treatment systems

Two types of physical/chemical treatment systems, ion exchange and reverse osmosis, appear to have some promise for single home use, although neither is in use at present (figure 9-3).

Figure 3. Physical/chemical systems: A. cation (NH_4^+) exchange; B. anion (NO_3^-) exchange; C. reverse osmosis



Ion exchange

Two types of systems may be employed: cationic or anionic exchange systems. In the cationic system, the ammonium in septic tank effluent is removed. Clinoptilolite, a naturally occurring zeolite that has excellent selectivity for ammonium over most other cations in wastewater, can be used as an exchange medium. In the anionic system, septic tank effluent must be nitrified prior to passage through the exchange unit. Strong-base anion resins can be employed as an exchange medium for nitrate. Both systems require resin regeneration offsite.

Reverse osmosis

This system requires pretreatment to remove much of the organic and inorganic suspended solids in wastewater. Pretreated wastewater stored under pressure is fed to a chamber containing a semipermeable membrane that allows separation of ions and molecules before disposal. Large volumes of waste brine are generated and must be periodically removed for offsite treatment.

Biological treatment systems

A number of onsite treatment systems use biological denitrification for removal of nitrogen from wastewater. These systems have received the most scrutiny with respect to development and performance monitoring. However, more development and performance monitoring will be necessary to refine the performance consistency and improve understanding of operation processes and mechanisms (see figure 4).

Figure 4. Biological systems: A. an aerobic/anaerobic trickling filter package plant; B. sequencing batch reactor (SBR) design principle; C. ISF with AUF; D. source separation, treatment, recombination; E. recirculating sand filter with septic tank option; F. recirculating sand filter with anaerobic filter and carbon source

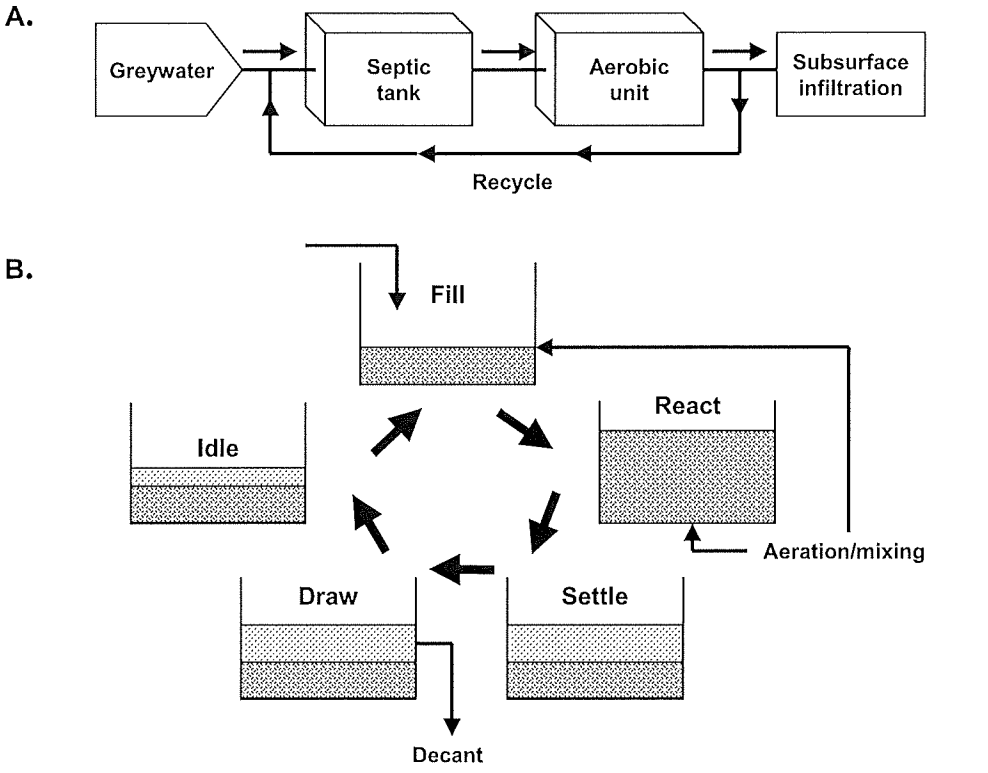
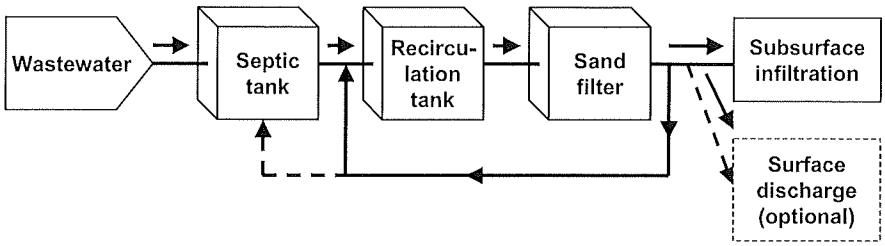


Figure 4. (continued)

E.



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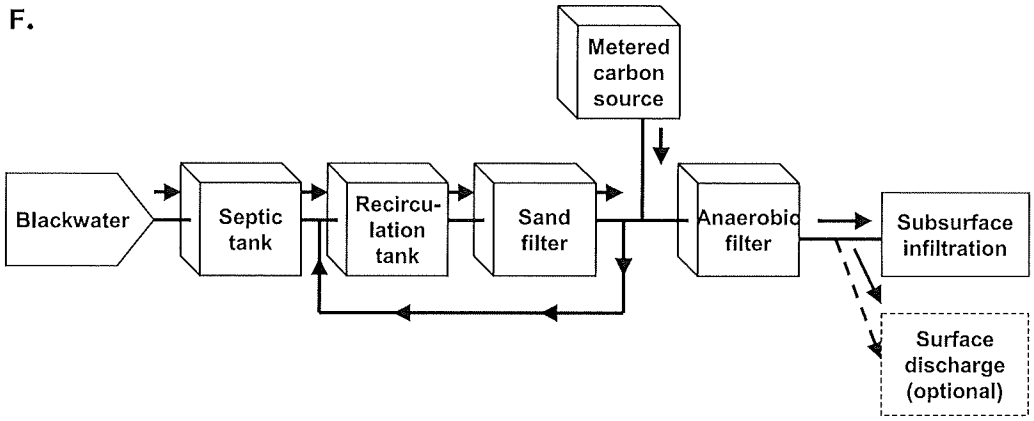


Aerobic/anaerobic trickling filter package plant

These commercial systems use synthetic media trickling filters that receive wastewater from overlying sprayheads for aerobic treatment and nitrification. Filtrate returns to the anaerobic zone to mix with either septic tank contents or incoming septic tank effluent and undergoes denitrification. A portion of the filtered effluent (equal to the influent flow) is discharged for disposal or further treatment.

Sequencing batch reactor (SBR)

If sufficient hydraulic retention time (HRT) is provided to permit nitrification during the "react" phase of the SBR cycle and if the fill stage is anoxic for a sufficient HRT, the system can remove significant amounts of nitrogen and phosphorus. The SBR design is essentially the same as is described in the SBR fact sheet, while operationally the conditions noted above must be maintained.

Intermittent sand filters with anaerobic filters

Nitrification is provided in the ISF, while denitrification is provided in either the preceding septic tank with recirculation or a separate anaerobic filter. A vegetated submerged bed (VSB) ("subsurface flow wetland") may be substituted for the anaerobic filter.

Source separation, treatment, and recombination

One commercial system employs this sequence where blackwater (toilet wastewater), after settling in a separate tank, is aerobically treated with an ISF to nitrify the majority of the nitrogen before it is recombined with settled greywater in an anaerobic upflow filter (AUF) for denitrification.

Recirculating sand filters combined with anaerobic/anoxic filters

RSF systems normally remove 40 to 50 percent of influent nitrogen. To enhance this capability, they can be combined with a greater supply of carbon, time, and mixing than is normally available from the conventional recirculation tank. The anaerobic/anoxic options include recycling to the septic tank, better mixing, and longer HRT in a separate UF or VSB, or adding supplemental carbon (e.g., methanol, ethanol) to enhance the potential of the denitrification step.

Typical applications

Nitrogen removal is increasingly being required when onsite systems are on or near coastal waters or over sensitive, unconfined aquifers used for drinking water. Nitrogen removal systems generally are located last in the treatment train prior to SWIS disposal and may be followed by disinfection when the system must discharge to surface waters. Usually, the minimum total nitrogen standard that can be regularly met is about 10 mg/L. Aerobic biological systems should not be employed at seasonal facilities.

Design assumptions

A myriad of potential systems exist for enhanced nitrogen removal, and all of the major unit processes of such systems are described elsewhere. Also, since waste stream modification is covered in chapter 3, only the most promising, developed options are discussed in this fact sheet. Of the options discussed, granular media filters or aerobic biological systems (usually combined with an anaerobic upflow filter or the original septic tank process) are discussed in more detail.

Some salient design considerations that are not covered in other fact sheets or text include the following:

- Autotrophic denitrification in packed-bed sulfur reactors (variation on AUF) has been successfully demonstrated, but the need for additional alkalinity and the production of a high sulfate effluent have thus far limited the process.
- Denitrification improves with increased HRT in the recirculation tank, better mixing, and a pH between 7 and 8.
- Use of greywater as the degradable carbon source for denitrification limits the degree of denitrification attainable owing to reduced nitrogen content and low carbon-to-nitrogen ratio. The latter should exceed 5:1 for good denitrification.
- Use of synthetic anionic exchange resins appears impractical at this time. Cationic exchange of NH_4-N with clinoptilolite is feasible but very expensive because of the regeneration management costs. Both may be subject to fouling and clogging problems.
- Membranes present a major problem given the volume of the reject stream, which must be collected and frequently trucked to a site that will accept it for disposal.
- The use of beds of carbon-rich materials below SWIS leach lines could be a promising concept if the hydraulic matching problems are solved and the bed service life can be extended for 10 years or more.
- Accessibility, size of the holding tank, and availability of residual management facilities are significant design considerations in blackwater separation systems.
- Recycling to the septic tank may affect solids and grease removal in the tank and cause poor mixing of the nitrified stream with the septic tank contents. This could raise the oxidation-reduction potential (ORP) of the mixture above the normal range for an anoxic zone that accomplishes denitrification. Recycling to the second compartment of a multicompartment tank is suggested at a ratio of less than 2.5 to 1 with a contact time of greater than 2 days.
- An AUF used for enhanced denitrification should be loaded with between 0.06 and 0.3 lb COD/ft^3 per day and have an HRT of at least 24 hours (preferably 36 or more hours). It can be filled with large ($\geq$ 2 inches) rocks or synthetic media. A vegetated submerged bed (VSB) can be substituted for an AUF and may contribute some labile carbon to aid the process.

- SBR design for nitrogen and phosphorus removal is essentially similar, but the amount of labile carbon required is greater (6 to 8 mg/LCOD/ mg/L of TKN to be denitrified).
- Modern microprocessor controls make very complex process combinations possible to remove nitrogen, but overall simplicity is still desirable and requires less O/M sophistication.
- To attain full (>85 percent) nitrification, fixed-film systems cannot be loaded above 3 to 6 g BOD/m^3 per day or 6 to 12 g BOD/m^3 per day for rock and plastic media, respectively.

Performance

Some expected sustainable performance ranges for the most likely combinations of nitrogen removal processes are given in table 1. Some of the nitrogen-removal systems could be combined with source separation and product substitution (low-phosphate detergents) for a maximum reduction in nitrogen where extreme measures might be required. However, the removals would not be additive owing to the changes in wastewater characteristics.

Table 1. Typical N-removal ranges for managed systems

Process	Percent TN removal
RSF	40–50
RSF (with recycle to ST or AUF)	70–80
ST–FFS (with recycle to ST or AUF) [a]	65–75
SBR [a]	50–80
SS and removal	60–80
(SS–TT R) [a]	40–60
ISF–AUF	55–75

[a]Commercially available systems.
Note: RSF = recirculating sand filters; AUF = anaerobic upflow filter; ST = septic tank; FFS = fixed-film system; SBR = sequencing batch reactor; SS = source separation; TT = treatment applied to both systems; R = recombined; ISF = intermittent sand filter.

Management needs

Management needs for most unit processes are covered in other fact sheets. Source separation is feasible only for new homes, as it would be prohibitively expensive for existing homes. AUF systems are different from the fact sheet in that they must have HRTs greater than 2 days to enable anaerobic biological denitrification to be effective. This will add to O/M tasks by requiring regular flushing of excess biological growth. Some separation and removal would require regular inspection and maintenance of non-water-carriage toilets and periodic removal and proper disposal of excess solids from these units and from holding tanks.

Risk management issues

Of the most likely systems shown in the table, few are extremely susceptible to upset by hydraulic loading variations. However, soluble toxic shocks could affect any AUF, SBR, or fixed-film nitrification system. Extreme cold will also have an impact on these systems. However, the ISF, RSF, and AUF systems have been the most resilient unit processes (excluding source separation) when properly housed and insulated. Power outages will affect all of the treatment systems. Reliability would be greatest for those that incorporate filters and less for the SBR and fixed-film systems.

Costs

The capital and total costs of most of the nitrogen removal systems are very site specific, but non-water-carriage toilet source separation (assuming new homes) is the least expensive (low-water-use fixtures and holding tanks would add about $4,000 to $6,000). The biological combinations would be more expensive, and the physical/chemical systems would likely be the most expensive. Multiple units will generally increase costs, while the use of gravity transfer between processes will reduce them.

The additional O/M associated with an AUF involves flushing and disposal of excess flushed solids. If methanol is employed to enhance denitrification, additional O/M is required for the feeding system.

References

Ayres Associates. 1991. *Onsite Nitrogen Removal Systems: Phase I.* Report to Wisconsin DILHR, Madison, WI.

Ayres Associates. 1997. *Florida Keys Wastewater Nutrient Reduction Systems Demo Project: 2nd Quarter Report.* Report to Florida Department of Health and U.S. Environmental Protection Agency. Florida Department of Health, Tallahassee, FL.

Bauer, D.H., E.T. Conrad, and D.G. Sherman. 1979. *Evaluation of Existing and Potential Technologies for Onsite Wastewater Treatment and Disposal.* EPA 600/S2/81/178. Cincinnati, OH.

Boyle, W.C., R.J. Otis, R.A. Apfel, R.W. Whitmeyer, J.C. Converse, B. Burkes, M.J. Bruch, Jr., and M. Anders. 1994. Nitrogen Removal from Domestic Wastewater in Unsewered Areas. In *Proceedings of the Seventh On-Site Wastewater Treatment Conference.* American Society of Agricultural Engineering, St. Joseph, MI.

Katers, J.F., and A.E. Zanoni. 1998. Nitrogen removal. *Journal of Water Environment and Technology* 10(3):32-36.

Lamb, B., A.J. Gold, G. Loomis, and C. McKiel. 1987. Evaluation of Nitrogen Removal Systems for Onsite Sewage Disposal. In *Proceedings of Fifth On-Site Wastewater Treatment Conference.* American Society of Agricultural Engineering, St. Joseph, MI.

U.S. Environmental Protection Agency (USEPA). 1993. *Nitrogen Control Manual.* EPA 625/R-93/010. U.S. Environmental Protection Agency, Office of Research and Development, Cincinnati, OH.

Venhuizen, D. LCRA onsite demonstration project for nitrogen removal and water reclamation. Unpublished but available from D. Venhuizen, P.E., 21 Cotton Gin Road, Uhland, TX 78640.

Whitmyer, R.W., R.A. Apfel, R.J. Otis, and R.L. Meyer. 1991. Overview of Individual Onsite Nitrogen Removal Systems. In *Proceedings of Sixth On-Site Wastewater Treatment Conference.* American Society of Agricultural Engineering, St. Joseph, MI.

Winkler, E.S., and P.L.M.Veneman. 1991. A Denitrification System for Septic Tank Effluent Using Sphagnum Peat Moss. In *Proceedings of Sixth On-Site Wastewater Treatment Conference*, American Society of Agricultural Engineering, St. Joseph, MI.

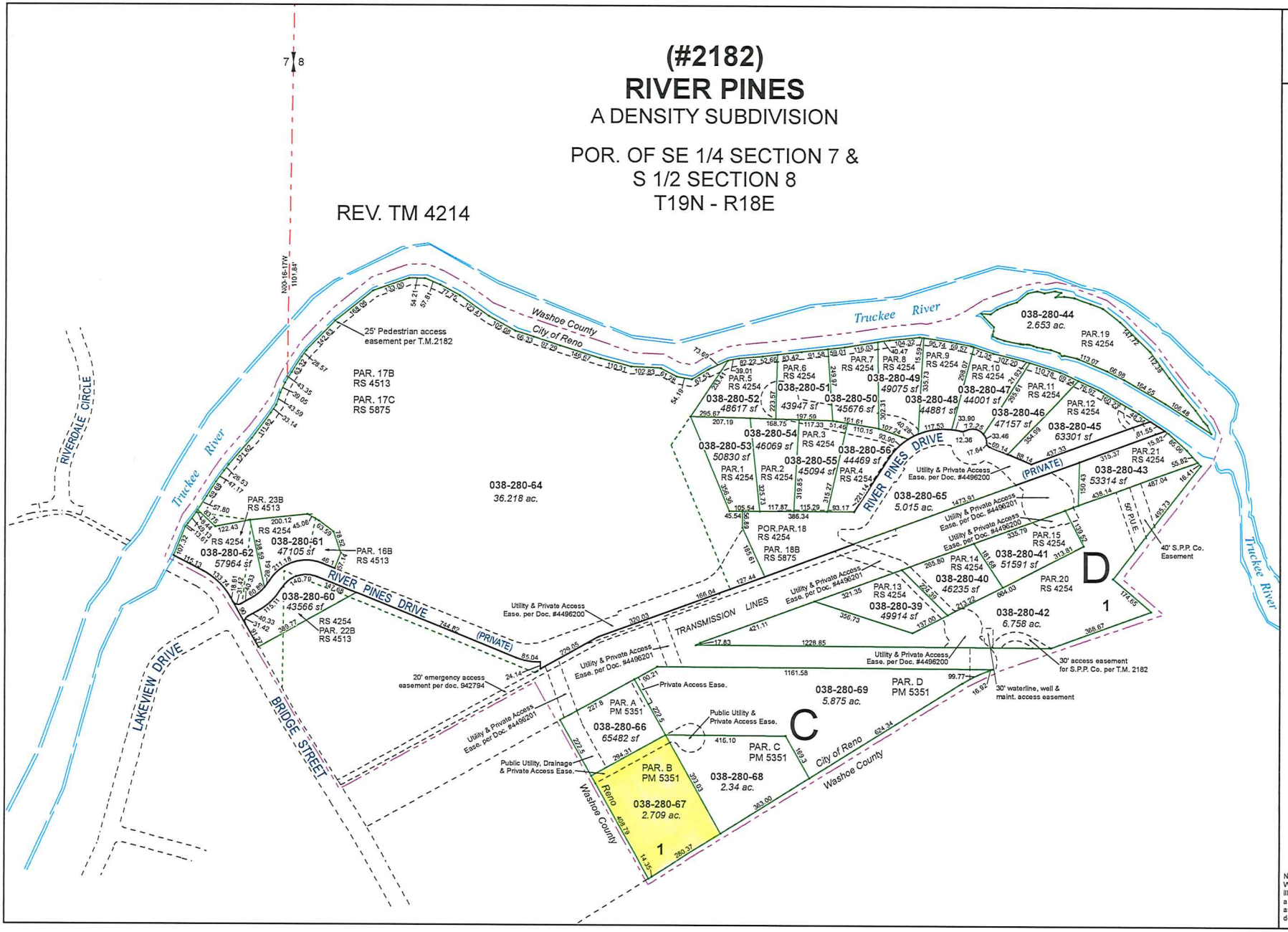
ATTACHMENT F

Washoe County's Assessor Parcel Map with the subject 2.71 acre parcel highlighted in yellow

(#2182)
RIVER PINES
A DENSITY SUBDIVISION

POR. OF SE 1/4 SECTION 7 &
S 1/2 SECTION 8
T19N - R18E

REV. TM 4214



Assessor's Map Number

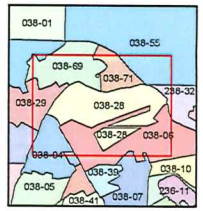
038-28

STATE OF NEVADA
WASHOE COUNTY
ASSESSOR'S OFFICE
Michael E. Clark, Assessor

1001 East Ninth Street
Building D
Reno, Nevada 89512
(775) 328-2231

Feet
0 75 150 225 300

1 inch = 300 feet



created by: KSB 10/31/2017

last updated: KSB 6/18/18

area previously shown on map(s)

038-06

NOTE: This map was prepared for the use of the Washoe County Assessor for assessment and illustrative purposes only. It does not represent a survey of the premises. No liability is assumed as to the sufficiency or accuracy of the data delineated hereon.

ATTACHMENT G

Grant, Bargain, and Sale Deed Document Number 4871625 being the conveyance of the subject 2.71 acre parcel to the applicant/current owner

DOC #4871625
12/07/2018 01:06:44 PM
Electronic Recording Requested By
ETRCO
Washoe County Recorder
Lawrence R. Burtness
Fee: $41.00 RPTT: $820.00
Page 1 of 3

APN# : 038-280-67

RPTT: $820.00

Recording Requested By:
Western Title Company
Escrow No.: 099122-MLM
When Recorded Mail To:
Ryan Garett Cook and
Heather Lynn Cook
P.O. Box 314
Verdi, NV 89439

Mail Tax Statements to: (deeds only)
Same as Above

I the undersigned hereby affirm that the attached document, including any exhibits, hereby submitted for recording does not contain the social security number of any person or persons.
(Per NRS 239B.030)

Signature _____
Lynn Moore Escrow Officer

Grant, Bargain, and Sale Deed

This page added to provide additional information required by NRS 111.312
(additional recording fee applies)

GRANT, BARGAIN AND SALE DEED

THIS INDENTURE WITNESSETH: That

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

David A. Giacomini, Trustee of the David A. Giacomini Trust of 2001 U.D.T dated May 31, 2001, as to an undivided 84% interest; and Waldo Giacomini GST Exempt Trust FBO David Giacomini as to an undivided 16% interest

do(es) hereby GRANT(s) BARGAIN SELL and CONVEY to

Ryan Garett Cook and Heather Lynn Cook, Trustees of the Cook 2011 Family Trust, Dated April 20th 2011

and to the heirs and assigns of such Grantee forever, all the following real property situated in the City of Verdi, County of Washoe State of Nevada bounded and described as follows:

All that certain real property situate in the County of Washoe, State of Nevada, described as follows:

Parcel B of that certain Parcel Map No. 5351 for THE DAVID A. GIACOMINI TRUST OF 2001 U.D.T. DATED MAY 31, 2001, and WALDO GIACOMINI GST EXEMPT TRUST FBO DAVID GIACOMINI, recorded May 21, 2018 as Document No. 4817113, Official Records.

Together with any easement rights appurtenant to the above described property, as more fully described in UTILITY & PRIVATE ACCESS EASEMENT, recorded July 27, 2015, as Document No. 4496200, and UTILITY & PRIVATE ACCESS EASEMENT, recorded July 27, 2015, as Document No. 4496201, Official Records, Washoe County, Nevada.

TOGETHER with all tenements, hereditaments and appurtenances, if any, thereto belonging or appertaining, and any reversions, remainders, rents, issues or profits thereof.

Dated: Decembe- 5, 2018

The David A. Giacomini Trust of 2001 U.D.T. dated May 31, 2001

By: _____
David A. Giacomini, Trustee

The Waldo Giacomini GST Exempt Trust FBO David Giacomini

By: _____
David A. Giacomini, Trustee

STATE OF Nevada }
} ss
COUNTY OF Washoe

This instrument was acknowledged before me on December 5, 2018

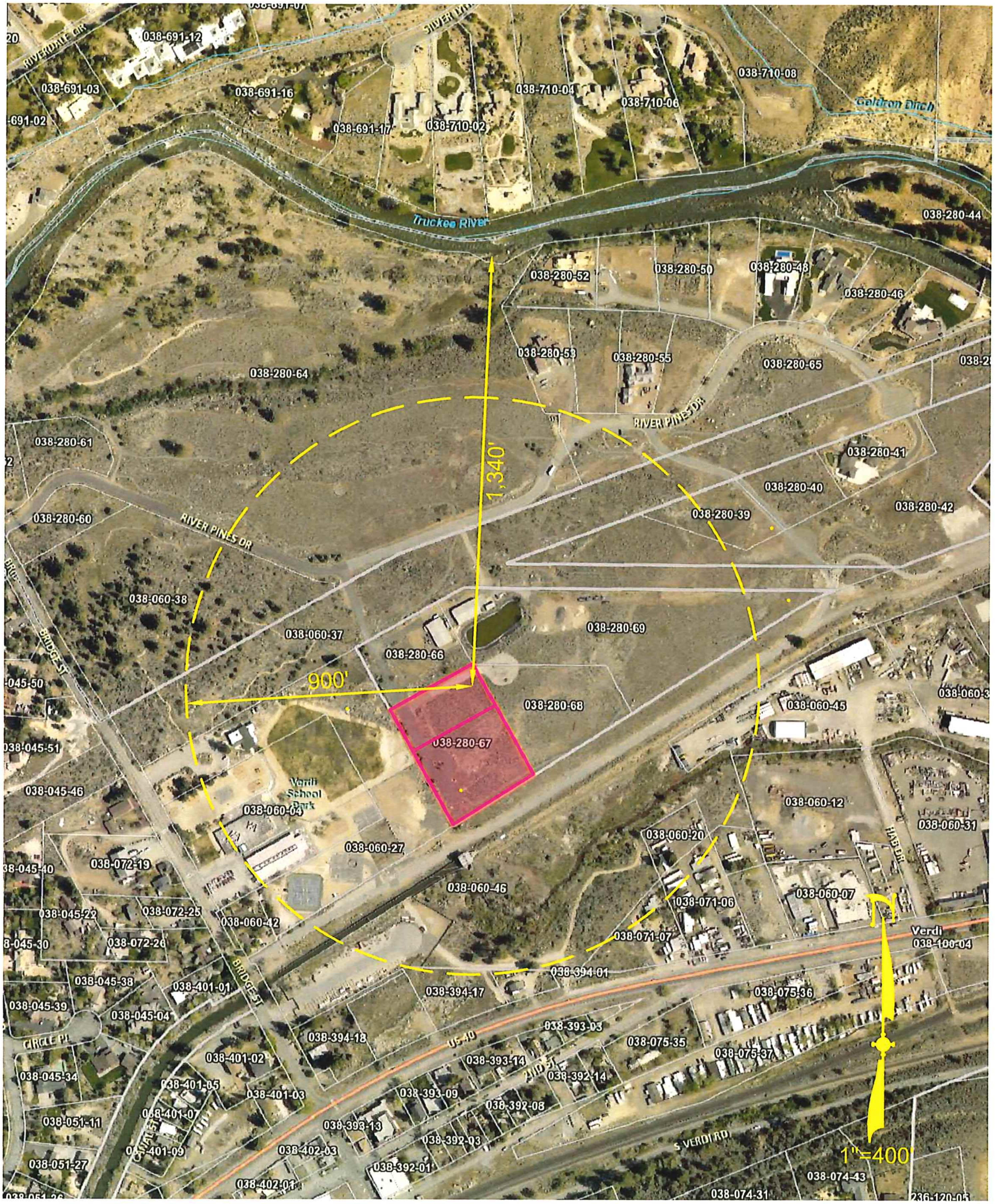
By David A. Giacomini..

_____
Notary Public

LYNN MOORE
Notary Public - State of Nevada
Appointment Recorded in Washoe County
No: 97-0433-2- Expires March 8, 2021

ATTACHMENT H

Aerial photo showing subject parcel, proposed new internal property line, distance of over 1/4 mile to the Truckee River, and 900' radius circle with no other water wells (Verdi Elementary School's well has been plugged, per NDWR log number 134151, and they are now hooked to TMWA water – including irrigation)


Truckee River
Caldron Ditch
RIVERDALE CIR
SILVER DR
RIVER PINES DR
BRIDGE ST
CIRCLE PL
US 40
2ND ST
S VERDI RD
HABIT DR
Verdi School Park
Verdi
1,340'
900'
1"=400'
038-691-12
038-691-03
038-691-16
038-691-17
038-710-02
038-710-04
038-710-06
038-710-08
038-280-44
038-280-52
038-280-50
038-280-48
038-280-46
038-280-53
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038-280-39
038-280-60
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038-060-37
038-280-66
038-280-69
038-280-68
038-280-67
038-060-45
038-045-50
038-045-51
038-045-46
038-060-04
038-060-27
038-060-12
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038-060-20
038-060-07
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038-045-40
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038-071-06
038-045-22
038-072-25
038-060-42
038-071-07
038-100-04
038-045-30
038-072-26
038-394-01
038-045-38
038-401-01
038-394-17
038-075-36
038-045-39
038-045-04
038-393-03
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038-075-37
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038-401-05
038-392-14
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038-401-07
038-392-08
038-393-13
038-051-27
038-402-03
038-392-03
038-392-01
038-074-43
038-402-01
038-074-31
236-120-05

ATTACHMENT I

Aerial photo showing subject parcel, proposed new internal property line, and improvements


038-280-69
038-280-66
038-280-68
038-280-67

ATTACHMENT J

The 2018 Parcel Map 5351 which created subject Parcel "B", Septic Plot Plan, Test Trench Inspection (permit #4461), and Per Rate Test results

5351

PARCEL MAP
FOR
THE DAVID A. GIACOMINI TRUST OF 2001 U.D.T. DATED MAY 31, 2001 and WALDO GIACOMINI GST EXEMPT TRUST FBO DAVID GIACOMINI

OWNER'S CERTIFICATE:

THIS IS TO CERTIFY THAT THE UNDERSIGNED, DAVID A GIACOMINI AS TRUSTEE OF THE DAVID A. GIACOMINI TRUST OF 2001 U.D.T. DATED MAY 31, 2001, AS TO AN UNDIVIDED 84% INTEREST; AND WALDO GIACOMINI GST EXEMPT TRUST FBO DAVID GIACOMINI AS TO AN UNDIVIDED 16% INTEREST, IS THE OWNER OF THE TRACT OF LAND REPRESENTED ON THIS PLAT, AND HAS CONSENTED TO THE PREPARATION AND RECORDATION OF THIS PLAT AND THAT THE SAME IS EXECUTED IN COMPLIANCE WITH AND SUBJECT TO THE PROVISIONS OF N.R.S. CHAPTER 278. THE EASEMENTS SHOWN AND DESCRIBED BY NOTE ARE HEREBY GRANTED; TOGETHER WITH THE RIGHTS OF INGRESS THERE TO AND EGRESS THERE FROM FOREVER.

THE DAVID A GIACOMINI TRUST OF 2001 U.D.T. DATED MAY 31, 2001

BY: DAVID A GIACOMINI TRUSTEE — DATE: 2/1/2018

WALDO GIACOMINI GST EXEMPT TRUST FBO DAVID GIACOMINI

BY: DAVID A GIACOMINI TRUSTEE — DATE: 2-1-2018

NOTARY PUBLIC CERTIFICATE:

STATE OF NEVADA
S.S.
COUNTY OF WASHOE

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON February 1, 2018, BY DAVID A. GIACOMINI.

(SIGNATURE OF NOTARIAL OFFICER)
(MY COMMISSION EXPIRES 7-1-2021)

KELLIE SIMPSON
Notary Public - State of Nevada
Appointment Recorded in Washoe County
No: 13-11264-2 - Expires July 1, 2021

CITY CERTIFICATE:

APPROVED AND ACCEPTED BY THE COMMUNITY DEVELOPMENT DEPARTMENT OF THE CITY OF RENO, WASHOE COUNTY, NEVADA, THIS 17 DAY OF MAY, 2018.

DIRECTOR — COMMUNITY DEVELOPMENT — DATE: 05.17.2018

TAX CERTIFICATE:

THE UNDERSIGNED HEREBY CERTIFIES THAT ALL PROPERTY TAXES ON THE LAND FOR THE FISCAL YEAR HAVE BEEN PAID AND THAT THE FULL AMOUNT OF ANY DEFERRED PROPERTY TAXES FOR THE CONVERSION OF THE PROPERTY FROM AGRICULTURAL USE HAS BEEN PAID PURSUANT TO NRS 361A.265.

APN 038-280-30

Danielle Carlton — DATE: 2/1/2018
WASHOE COUNTY TREASURER
TITLE: Deputy Treasurer

TITLE COMPANY CERTIFICATE:

THE UNDERSIGNED HEREBY CERTIFIES THAT THIS PLAT HAS BEEN EXAMINED AND THE SUBDIVIDER OFFERING THIS PLAT IS THE LAST TITLE HOLDER OF RECORD FOR ALL THE LANDS DELINEATED HEREON, AND THE LANDS ARE FREE FROM ANY LIENS OR ENCUMBRANCES, AS OF January 30, 2018.

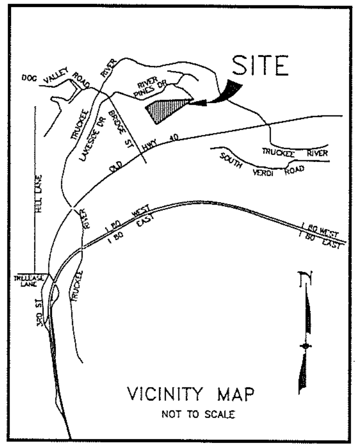
WESTERN TITLE COMPANY

BY: Debbie Cimijotti
TITLE: AVP

DISTRICT BOARD OF HEALTH CERTIFICATE:

THIS MAP IS APPROVED BY THE WASHOE COUNTY DISTRICT BOARD OF HEALTH. THIS APPROVAL CONCERNS SEWAGE DISPOSAL, WATER POLLUTION, WATER QUALITY, AND WATER SUPPLY FACILITIES. THIS MAP HAS BEEN FOUND TO MEET ALL APPLICABLE REQUIREMENTS AND PROVISIONS OF THE ENVIRONMENTAL HEALTH SERVICES DIVISION OF THE WASHOE COUNTY HEALTH DISTRICT.

MPH, REHS — FOR THE DISTRICT BOARD OF HEALTH — DATE: 2/9/2018



VICINITY MAP
NOT TO SCALE

REFERENCES:

1). RECORD OF SURVEY MAP 616, FILE NO. 116872, RECORDED JUNE 6, 1968.
2). RECORD OF SURVEY MAP 763, FILE NO. 276391, RECORDED FEBRUARY 21, 1973.
3). RECORD OF SURVEY MAP 2838, FILE NO. 1871833, RECORDED FEBRUARY 16, 1995.
4). RECORD OF SURVEY MAP 4254, FILE NO. 2863154, RECORDED MAY 30, 2003.
5). RECORD OF SURVEY MAP 4270, FILE NO. 2881263, RECORDED JUNE 30, 2003.
6). RECORD OF SURVEY MAP 4513, FILE NO. 3149519, RECORDED DECEMBER 29, 2004.
7). TRACT MAP 370, FILE NO. 155806, RECORDED SEPTEMBER 10, 1947.
8). TRACT MAP 2182, FILE NO. 942837, RECORDED AUGUST 10, 1984.
9). ANNEXATION TRACT MAP 4203, FILE NO. 2854892, RECORDED MAY 14, 2003.
10). ANNEXATION TRACT MAP 4392, FILE NO. 3099586, RECORDED SEPTEMBER 17, 2004.
11). REVERSION TRACT MAP 4214, FILE NO. 2863152, RECORDED MAY 30, 2003.
12). PARCEL MAP 3785, FILE NO. 2543084, RECORDED APRIL 13, 2001.
13). PRELIMINARY TITLE REPORT, ORDER NO. 065874-MLM, DATED AS OF JULY 16, 2014, PREPARED BY WESTERN TITLE COMPANY.
14). RECORD OF SURVEY MAP 5875, FILE NO. 4751092, RECORDED OCTOBER 4, 2017.

BASIS OF BEARINGS AND COORDINATES:

THE BASIS OF BEARINGS AND COORDINATES FOR THIS SURVEY WERE ESTABLISHED ON MARCH 1, 2001, USING THE PUBLISHED COORDINATES (NAD 83/94, NEVADA WEST ZONE) FOR WASHOE COUNTY CONTINUOUS OPERATING GPS BASE STATIONS "RNW RENO" AND "RSTEAD" AS PER INFORMATION PUBLISHED ON SEPTEMBER 30TH, 1999. THE PUBLISHED COORDINATES WERE MODIFIED BY A COMBINED FACTOR OF 1.00017818493 AND CONVERTING TO THE U.S. SURVEY FOOT. THE COMBINED FACTOR WAS CALCULATED BY MULTIPLYING THE PUBLISHED SCALE FACTOR AT NGS POINT "DARK" (1.00006097) BY AN ELEVATION FACTOR OF 0.99976089140 WHICH PROJECTS THE GRID TO ELEVATION OF 5,000 FEET. ALL DIMENSIONS ON THIS MAP ARE GROUND DISTANCES.

GENERAL NOTES:

1). TOTAL AREA = 12.43± ACRES.

2). TOTAL NUMBER OF PARCELS = 4.

3). A PUBLIC UTILITY EASEMENT, 10 FEET IN WIDTH, CENTERED ABOUT THE PROPERTY LINE IS HEREBY GRANTED ALONG ALL INTERIOR PARCEL LINES.

4). A BLANKET PUBLIC UTILITY EASEMENT IS ALSO HEREBY GRANTED WITHIN EACH PARCEL, EXCEPTING THEREFROM THAT PORTION WITHIN THE FOOTPRINT OF BUILDINGS, FOR THE EXCLUSIVE PURPOSE OF INSTALLING AND MAINTAINING UTILITY SERVICE FACILITIES TO SAID PARCELS AND THE RIGHT TO EXIT SAID PARCELS WITH SAID FACILITIES FOR THE PURPOSE OF SERVING OTHER LOTS AT LOCATIONS MUTUALLY AGREED UPON BY THE OWNER OF RECORD AT THE TIME, AND THE UTILITY COMPANY, TOGETHER WITH THE RIGHTS OF INGRESS THERE FROM FOREVER.

5). THE PUBLIC UTILITY EASEMENTS SHOWN AND NOTED ON THIS PLAT INCLUDE USE FOR THE INSTALLATION AND MAINTENANCE OF CABLE TELEVISION FACILITIES.

6). SEWAGE DISPOSAL SHALL BE BY INDIVIDUAL SEPTIC SYSTEMS.

7). THE "SEWER LEACH FIELD EASEMENT" LOCATED WITHIN LOT 1 OF BLOCK "C" OF SUBDIVISION TRACT MAP 2182, FILE NUMBER 942837, RECORDED AUGUST 10, 1984, HAS BEEN RELINQUISHED PER DOCUMENT NUMBER 4697131, OFFICIAL RECORDS, WASHOE COUNTY, NEVADA.

8). THE NON-EXCLUSIVE EASEMENT FOR PRIVATE ACCESS AND UTILITY PURPOSES, INCLUDING SEWER AND WATER, AS DESCRIBED IN EXHIBIT "X" OF DOCUMENT NUMBER 2863153, OFFICIAL RECORDS OF WASHOE COUNTY, NEVADA, TOGETHER WITH, THE UTILITY & PRIVATE ACCESS EASEMENT AS DESCRIBED IN DOCUMENT 3785891, OF SAID OFFICIAL RECORDS, HAVE BOTH BEEN RELINQUISHED PER DOCUMENT NUMBER 4496198, OF SAID OFFICIAL RECORDS.

9). ALL EASEMENT RIGHTS DELINEATED IN GENERAL NOTE #2, AMENDED GENERAL NOTE #3 (PER DOCUMENT No. 2610881), AND ANY SLOPE, PRIVATE ACCESS, WATERLINE, AND DRAINAGE EASEMENTS AS SHOWN ON SUBDIVISION TRACT MAP 2182, HAVE BEEN RELINQUISHED PER DOCUMENT NUMBER 2863153, OF THE OFFICIAL RECORDS OF WASHOE COUNTY, NEVADA.

10). THOSE EASEMENTS DESCRIBED IN EXHIBIT "B", EXHIBIT "C", EXHIBIT "D", AND EXHIBIT "E" OF EASEMENT DOCUMENT NUMBER 942794, RECORDED AUGUST 10, 1981, OFFICIAL RECORDS OF WASHOE COUNTY, NEVADA, HAVE BEEN RELINQUISHED BY DOCUMENT NUMBER 4496199 OF SAID OFFICIAL RECORDS.

11). FIRE DEPARTMENT ACCESS TO ANY STRUCTURE IN THE NEW PARCEL WILL REQUIRE DEDICATED EASEMENTS AROUND THE EXISTING STRUCTURE(S) WHICH CANNOT BE OBSTRUCTED WITH FENCES OR GATES FROM THE MAIN ROAD. AS THE ALLEYS ARE NOT FIRE SERVICE ACCESS ROADS ACCESS DISTANCES ARE MEASURED FROM THE PUBLIC STREET AT THE CLOSEST END OF THE ALLEY OR THE FRONT PARCEL. FIRE ACCESS CANNOT EXCEED 150 FEET ALONG AN APPROVED ROUTE AND OVER AN APPROVED SURFACE (WALKING PATH).

12). ON NOVEMBER 14TH & 15TH, 2017, SUMMIT ENGINEERING CORPORATION CONDUCTED PERCOLATION TESTS ON EACH OF THE FOUR PARCELS SHOWN HEREON. WASHOE COUNTY HEALTH DISTRICT CONDUCTED TRENCH INSPECTIONS ON NOVEMBER 15TH, 2017 UNDER PERMIT NUMBER 4461. THE RESULTS OF THE FOUR PERCOLATION TESTS ALL YIELDED FAST RESULTS SUCH THAT THE FOUR SUBJECT PARCELS ARE REQUIRED TO SUBMIT ENGINEERED SEPTIC DESIGNS FOR REVIEW AND APPROVAL THAT MEET THE MINIMUM REQUIREMENTS IN THE DBOH REGULATIONS GOVERNING SEWAGE, WASTEWATER, AND SANITATION IN WASHOE COUNTY.

13). WITH THE DEVELOPMENT OF EACH PARCEL AND PRIOR TO THE ISSUANCE OF ANY BUILDING PERMIT FOR SAID PARCEL, THE OWNER SHALL DEDICATE WATER RIGHTS TO THE SERVICING UTILITY SUFFICIENT TO SERVE THE DEVELOPMENT AND SHALL PROVIDE THE CITY OF RENO WITH A WILL SERVE LETTER.

UTILITY COMPANIES CERTIFICATE:

THE EASEMENTS SHOWN ON THIS PLAT HAVE BEEN CHECKED, ACCEPTED, AND APPROVED BY THE UNDERSIGNED PUBLIC UTILITY COMPANIES, CHARTER COMMUNICATIONS, AND TRUCKEE MEADOWS WATER AUTHORITY.

SIERRA PACIFIC POWER COMPANY D/B/A NV ENERGY — DATE: 2/1/2018

NEVADA BELL TELEPHONE COMPANY D/B/A AT&T NEVADA — DATE: 2/1/2018
CLIFF COOPER MGR OSP PLANNING

CHARTER COMMUNICATIONS — DATE: 2/1/2018
DIANE ALBRECHT HFC DESIGNER III

SURVEYOR'S CERTIFICATE:

I, RYAN G. COOK, A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF NEVADA, CERTIFY THAT:

1. THIS PLAT REPRESENTS THE RESULTS OF A SURVEY CONDUCTED UNDER MY DIRECT SUPERVISION AT THE INSTANCE OF DAVID A. GIACOMINI.
2. THE LANDS SURVEYED LIE WITHIN THE SOUTH WEST QUARTER OF SECTION 8, T19N, R18E, MDM, AND THE SURVEY WAS COMPLETED ON JANUARY 30, 2018.
3. THIS PLAT COMPLIES WITH THE APPLICABLE STATE STATUTES AND ANY LOCAL ORDINANCES IN EFFECT ON THE DATE THAT THE GOVERNING BODY GAVE ITS FINAL APPROVAL.
4. THE MONUMENTS DEPICTED ON THE PLAT ARE OF THE CHARACTER SHOWN AND OCCUPY THE POSITIONS INDICATED AND ARE OF SUFFICIENT NUMBER AND DURABILITY.

RYAN G. COOK — P.L.S. 15224

PROFESSIONAL LAND SURVEYOR — RYAN G. COOK — EXPIRES 12/31/18 — No. 15224 — STATE OF NEVADA

1-30-2018

LAND USE RESTRICTION AGREEMENT ACKNOWLEDGMENT

THE UNDERSIGNED, RAYMOND J. PONCIA JR., IS THE BENEFICARY SET FORTH IN THE LAND USE RESTRICTION AGREEMENT RECORDED NOVEMBER 5, 2003, AS DOCUMENT NUMBER 2950148. THIS PARCEL MAP HAS BEEN REVIEWED AND APPROVED BY THE UNDERSIGNED.

RAYMOND J. PONCIA, JR., A SINGLE MAN — DATE: 5/10/18

NOTARY PUBLIC CERTIFICATE:

STATE OF NEVADA
S.S.
COUNTY OF WASHOE

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON May 10, 2018, RAYMOND J. PONCIA, JR., A SINGLE MAN.

(SIGNATURE OF NOTARIAL OFFICER)
(MY COMMISSION EXPIRES NOV. 15, 2019)

JANA LAMOUREAUX
Notary Public - State of Nevada
Appointment Recorded in Washoe County
No: 99-59407-2 - Expires November 15, 2019

TOTAL NUMBER OF PARCELS = 4
TOTAL AREA = 12.43± ACRES

FILE No. 4817113
FEE $ 43.00
FILED FOR RECORD AT THE REQUEST OF BY Sierra Mountain Mortgage Inc
ON THIS 7th DAY OF May 2018 AT 57 MINUTES PAST 10 O'CLOCK AM OFFICIAL RECORDS OF WASHOE COUNTY, NEVADA
Lawrence R Burtness
COUNTY RECORDER
BY: DEPUTY

PARCEL MAP
FOR
THE DAVID A. GIACOMINI TRUST OF 2001 U.D.T. DATED MAY 31, 2001, AND WALDO GIACOMINI GST EXEMPT TRUST FBO DAVID GIACOMINI
A DIVISION OF LOT 1 OF BLOCK C SUB 2182
LOCATED WITHIN THE SW 1/4 OF SEC. 8, T19N, R18E, MDM
RENO — WASHOE COUNTY — NEVADA

N:\DWGS\J29984_RiverPinesPM\Lot1BlkC_PM_TRANSLATED2.DWG ~ 10:35 AM ~ 30-JAN-2018

SUMMIT ENGINEERING CORPORATION

SHEET 1 OF 2

Parcel Map 5351

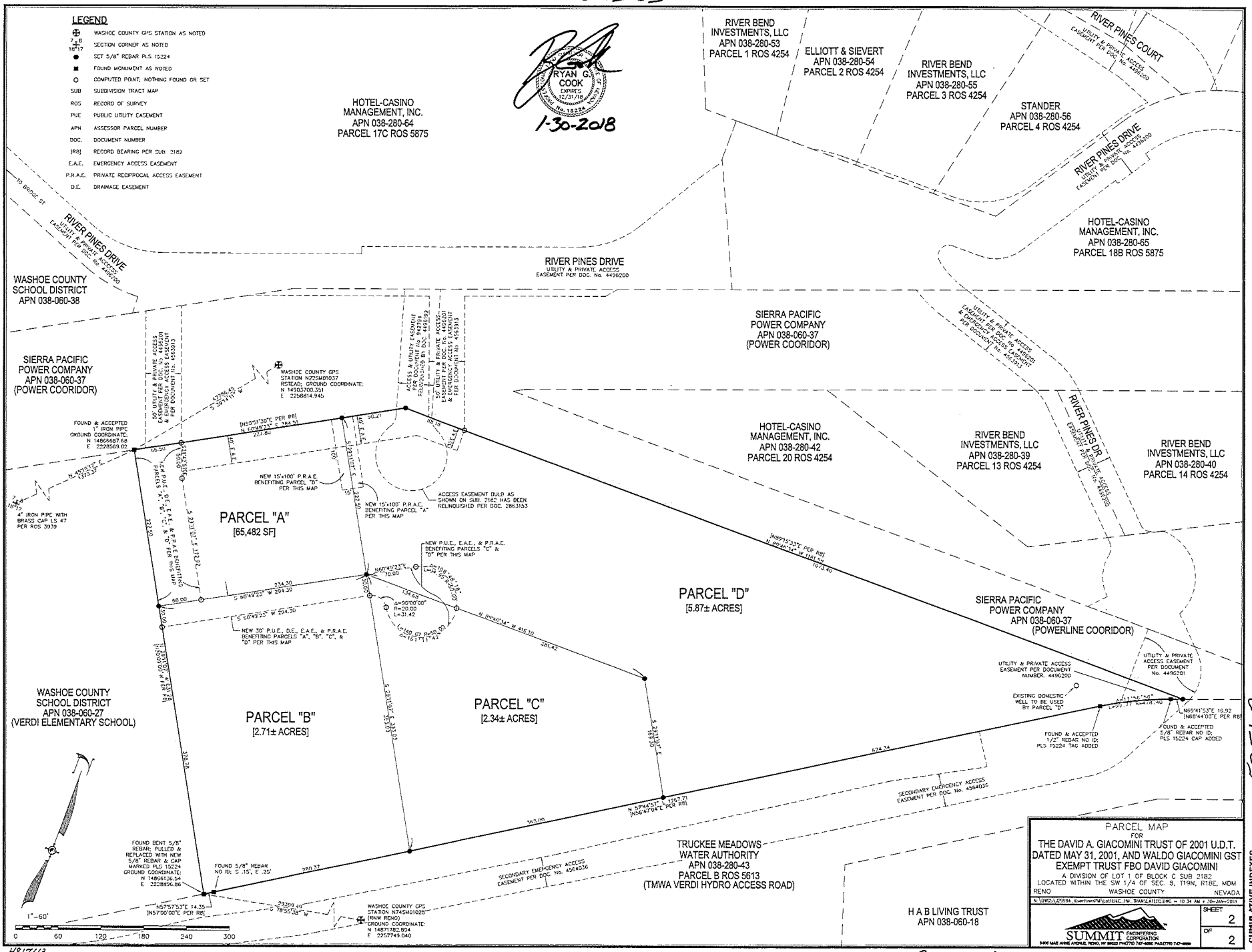
5351

4817113

CUMULATIVE INDEXES SHOULD BE EXAMINED FOR ANY SUBSEQUENT CHANGES TO THIS MAP

CUMULATIVE INDEXES SHOULD BE EXAMINED FOR ANY SUBSEQUENT CHANGES TO THIS MAP

5351A



PARCEL MAP
FOR
THE DAVID A. GIACOMINI TRUST OF 2001 U.D.T. DATED MAY 31, 2001, AND WALDO GIACOMINI GST EXEMPT TRUST FBO DAVID GIACOMINI
A DIVISION OF LOT 1 OF BLOCK C SUB 2182
LOCATED WITHIN THE SW 1/4 OF SEC. 8, T19N, R18E, MDM
RENO WASHOE COUNTY NEVADA

SUMMIT ENGINEERING CORPORATION
5406 MAE ANNE AVENUE, RENO, NV 89523 PH:(775) 747-8550 FAX:(775) 747-8556

SHEET 2
OF 2

CUMULATIVE INDEXES SHOULD BE EXAMINED FOR ANY SUBSEQUENT CHANGES TO THIS MAP

4817113

Parcel Map 5351A

APPLICANT/OWNER NAME:
DAVID A GIACOMINI AS TRUSTEE OF THE DAVID A. GIACOMINI TRUST OF 2001 U.D.T. DATED MAY 31, 2001, AS TO AN UNDIVIDED 84% INTEREST; AND WALDO GIACOMINI GST EXEMPT TRUST FBO DAVID GIACOMINI AS TO AN UNDIVIDED 16% INTEREST.

APPLICANT/OWNER ADDRESS:
10098 JIBBOOM STREET, SUITE 201
TRUCKEE, CA 96161

APPLICANT/OWNER PHONE NUMBER & EMAIL ADDRESS:
530-587-3277
DAVEGIACOMINI@SBCGLOBAL.NET

ASSESSOR PARCEL NUMBER OF SUBJECT PARCEL:
APN 038-280-30

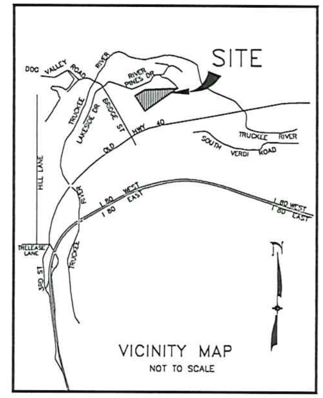
ADDRESS OF SUBJECT PARCEL:
440 RIVER PINES DRIVE
VERDI, NV 89439

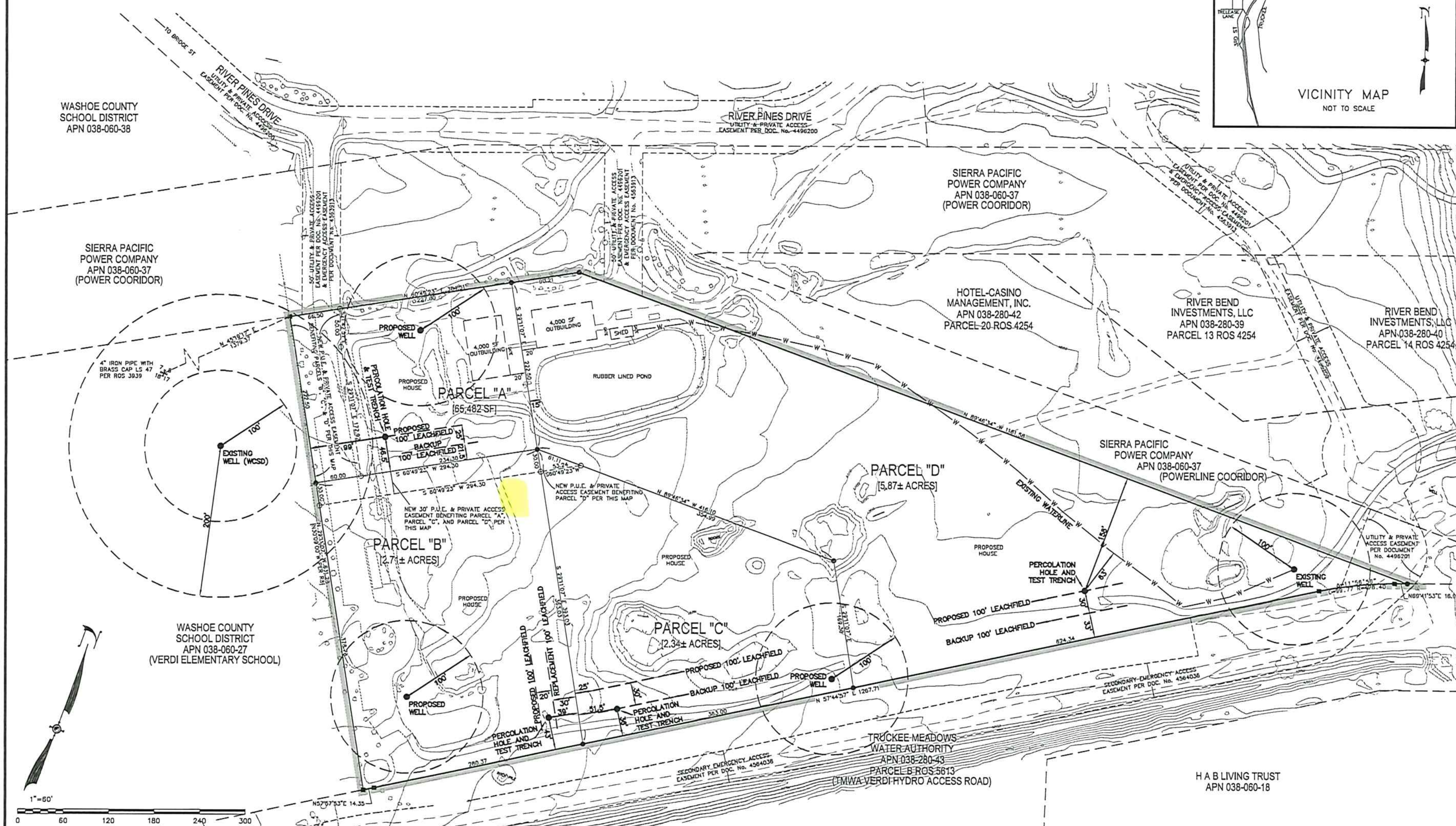
NOTES:

1) THE SUBJECT PROPERTY IS CURRENTLY COMPRISED OF ONE LEGAL PARCEL BEING 12.426 ACRES IN SIZE. REFER TO CITY OF RENO APPLICATION PAR18-00005 FOR THE PROPOSED DIVISION SHOWN HEREON INTO FOUR PARCELS.

2) THERE ARE NO AVAILABLE PUBLIC SEWER SYSTEMS WITHIN 400 FEET OF THE SUBJECT PROPERTY.

3) THERE ARE NO 100-YEAR FLOOD PLAINS ON OR WITHIN 100 FEET OF THE SUBJECT PROPERTY.





SHEET	SCALE	REV.	DATE	DESCRIPTION	BY	APP'D
1 OF 1	HORIZ: 1"=60' VERT: JOB NO:					

N:\DWGS\J30535_DavidGiacomini\Survey\LotBkC_SepticPlotPlan.DWG ' 4:00 PM • 07-NOV-2017

SEPTIC PLOT PLAN FOR DAVID GIACOMINI; APN 038-280-30 440 RIVER PINES DRIVE, VERDI NV

RENO WASHOE COUNTY NEVADA

DESIGNED BY:
DRAWN BY: rcook
CHECKED BY:

SUMMIT ENGINEERING CORPORATION
5405 MAE ANNE AVE RENO, NV. 89523
PHONE (775) 747-8550 FAX (775) 747-8559

WASHOE COUNTY
HEALTH DISTRICT
ENHANCING QUALITY OF LIFE

WASHOE COUNTY HEALTH DISTRICT
ENVIRONMENTAL HEALTH SERVICES DIVISION
1001 East Ninth Street • PO Box 11130 • Reno, NV 89520
Telephone (775) 328-2434 • Fax (775) 328-6176
www.washoecounty.us/health

SWS TEST TRENCH INSPECTION

Office Use Only
Fee Paid _____
_____
Date Paid _____
Cash/CC/Check _____
Receipt No. _____

The section below must be filled out in order to receive inspection results:

APN: 038-28-30 Permit #: 4461 Date of Inspection: 11/15/2017 Time of Inspection: 11 AM
Site Address: 4410 River Pines Drive
Inspection Requestor: Jack Glynn (Summit Engineering) Phone #: 775-530-8814
Email/Mail to: jack@summitnv.com

Attach map or plot plan showing property, vicinity map and location of proposed test trench location.

Trench GPS Coordinates: 39.521628, -119.987244 (Parcel B) ☆

Soil Log: Trench #: 1 Depth: 13' Engineered / Estimated Perc. Rate (mpi): Percolation test being done by Summit

Log Comments: 0 - 1' - Top soil,
1' - 5' - Sand,loose compaction
5' - 13' - Cobbles, boulders, sand, loose compaction,

Ground Water: ☐ Yes ■ No Depth: _____ Bedrock: ☐ Yes ■ No Depth: _____

Fractured Rock: ☐ Yes ■ No Depth/Range: _____

☐ Standard Septic System Allowed ☐ Soil not Suitable for Standard System

A 1-3 bedroom house requires a 1,000 gal. tank with:
- _____ leach line(s), _____ feet wide, by _____ feet deep, by _____ feet long or

A 4 bedroom house requires a 1,200 gal. tank with:
- _____ leach line(s), _____ feet wide, by _____ feet deep, by _____ feet long or

A 5-6 bedroom house requires a 1,500 gal. tank with:
- _____ leach line(s), _____ feet wide, by _____ feet deep, by _____ feet long or

Other: _____

Perforated pipe is to be set at _____ feet below grade.

Comments: Sizing will be based on the percolation test results. Due to the depth of the test trench the maximum trench depth will be set a 9' below existing ground surface.

Inspected by: Scott Strickler Date: 11/15/2017

SUMMIT ENGINEERING CORPORATION
PERC RATE TEST

PROJECT NAME:	Parcel B	**PROJECT NUMBER:**	30636
TEST SPECIFICATIONS:	Fast Perc	**DATE:**	11/15/2017
TECHNICIAN:	Joe/Pedro		

Hole No.	1	**Perc Rate:**	2 min/in
Depth from native ground to gravel:	5		
Soil Description:	Sandy gravel/Gravely sand		
Notes:			

Time	Initial Depth (in)	Final Depth (in)	Inches Drop (in)	Time Interval	Min/in
1126	6	11 8/16	5 8/16	2	0.4
1128	6	8	2	2	1.0
1130	6	8 12/16	2 12/16	2	0.7
1132	6	8 8/16	2 8/16	2	0.8
1134	6	9	3	2	0.7
1136	6	8	2	2	1.0
1138	6	8	2	2	1.0
1140	6	8 8/16	2 8/16	2	0.8

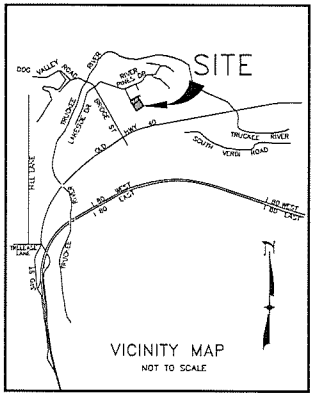
Hole No.	1	**Perc Rate:**	1 min/in
Depth from native ground to gravel:	9		
Soil Description:	Sandy gravel/Gravely sand		
Notes:			

Time	Initial Depth (in)	Final Depth (in)	Inches Drop (in)	Time Interval	Min/in
1128	6	11 5/16	5 5/16	5	0.9
1130	6	9 11/16	3 11/16	2	0.5
1132	6	8 7/16	2 7/16	2	0.8
1134	6	8 14/16	2 14/16	2	0.7
1136	6	8 6/16	2 6/16	2	0.8
1138	6	8 5/16	2 5/16	2	0.9
1140	6	9	3	2	0.7
1142	6	8 9/16	2 9/16	2	0.8

ATTACHMENT K

Proposed Parcel Map which would result in Parcel "B1" (1.00 acre) and Parcel "B2" (1.71 acres), Septic Plot Plan, City of Reno approval letter for Case No. 24-00023, and approved Extension of Time for PAR24-00023

PARCEL MAP
FOR
THE COOK 2011 FAMILY TRUST,
DATED APRIL 20TH 2011



OWNER'S CERTIFICATE:

THIS IS TO CERTIFY THAT THE UNDERSIGNED, RYAN GARETT COOK AND HEATHER LYNN COOK, TRUSTEES OF THE COOK 2011 FAMILY TRUST DATED APRIL 20TH 2011, IS THE OWNER OF THE TRACT OF LAND REPRESENTED ON THIS PLAT, AND HAS CONSENTED TO THE PREPARATION AND RECORDATION OF THIS PLAT AND THAT THE SAME IS EXECUTED IN COMPLIANCE WITH AND SUBJECT TO THE PROVISIONS OF N.R.S. CHAPTER 278. THE EASEMENTS SHOWN AND DESCRIBED BY NOTE ARE HEREBY GRANTED, TOGETHER WITH THE RIGHTS OF INGRESS THERE TO AND EGRESS THERE FROM FOREVER.

THE COOK FAMILY TRUST, DATED APRIL 20TH 2011

_____ _____
BY: RYAN GARETT COOK, TRUSTEE DATE

_____ _____
BY: HEATHER LYNN COOK, TRUSTEE DATE

NOTARY PUBLIC CERTIFICATE:

STATE OF NEVADA
S.S.
COUNTY OF WASHOE

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON _____ 2024,
BY RYAN GARETT COOK.

_____
(SIGNATURE OF NOTARIAL OFFICER)
(MY COMMISSION EXPIRES _____)

NOTARY PUBLIC CERTIFICATE:

STATE OF NEVADA
S.S.
COUNTY OF WASHOE

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME ON _____ 2024,
BY HEATHER LYNN COOK.

_____
(SIGNATURE OF NOTARIAL OFFICER)
(MY COMMISSION EXPIRES _____)

TAX CERTIFICATE:

THE UNDERSIGNED HEREBY CERTIFIES THAT ALL PROPERTY TAXES ON THE LAND FOR THE FISCAL YEAR HAVE BEEN PAID AND THAT THE FULL AMOUNT OF ANY DEFERRED PROPERTY TAXES FOR THE CONVERSION OF THE PROPERTY FROM AGRICULTURAL USE HAS BEEN PAID PURSUANT TO NRS 361A.265.

APN 038-280-67

_____ _____
WASHOE COUNTY TREASURER DATE
TITLE:

TITLE COMPANY CERTIFICATE:

THE UNDERSIGNED HEREBY CERTIFIES THAT THIS PLAT HAS BEEN EXAMINED AND THE SUBDIVIDER OFFERING THIS PLAT IS THE LAST TITLE HOLDER OF RECORD FOR ALL THE LANDS DELINEATED HEREON, AND THE LANDS ARE FREE FROM ANY LIENS OR ENCUMBRANCES, AS OF _____ 2024.

STEWART TITLE COMPANY

_____
BY:
TITLE:

DISTRICT BOARD OF HEALTH CERTIFICATE:

THIS MAP IS APPROVED BY THE WASHOE COUNTY DISTRICT BOARD OF HEALTH. THIS APPROVAL CONCERNS SEWAGE DISPOSAL, WATER POLLUTION, WATER QUALITY, AND WATER SUPPLY FACILITIES. THIS MAP HAS BEEN FOUND TO MEET ALL APPLICABLE REQUIREMENTS AND PROVISIONS OF THE ENVIRONMENTAL HEALTH SERVICES DIVISION OF THE WASHOE COUNTY HEALTH DISTRICT.

_____ _____
FOR THE DISTRICT BOARD OF HEALTH DATE

REFERENCES:

1). RECORD OF SURVEY MAP 816, FILE NO. 116872, RECORDED JUNE 6, 1978.
2). RECORD OF SURVEY MAP 763, FILE NO. 276381, RECORDED FEBRUARY 21, 1973.
3). RECORD OF SURVEY MAP 2638, FILE NO. 1871833, RECORDED FEBRUARY 16, 1995.
4). RECORD OF SURVEY MAP 4254, FILE NO. 2863154, RECORDED MAY 30, 2003.
5). RECORD OF SURVEY MAP 4270, FILE NO. 2881263, RECORDED JUNE 30, 2003.
6). RECORD OF SURVEY MAP 4513, FILE NO. 3149519, RECORDED DECEMBER 29, 2004.
7). TRACT MAP 370, FILE NO. 155800, RECORDED SEPTEMBER 10, 1947.
8). TRACT MAP 2182, FILE NO. 942837, RECORDED AUGUST 10, 1984.
9). ANNEXATION TRACT MAP 4203, FILE NO. 2854802, RECORDED MAY 14, 2003.
10). ANNEXATION TRACT MAP 4392, FILE NO. 3099586, RECORDED SEPTEMBER 17, 2004.
11). REVERSION TRACT MAP 4214, FILE NO. 2863152, RECORDED MAY 30, 2003.
12). PARCEL MAP 2765, FILE NO. 2543084, RECORDED APRIL 13, 2001.
13). RECORD OF SURVEY MAP 5875, FILE NO. 4751092, RECORDED OCTOBER 4, 2017.
14). PARCEL MAP 5351, FILE NO. 4817113, RECORDED MAY 24, 2018.
15). PRELIMINARY TITLE REPORT, ORDER NO. 2263516, DATED AS OF FEBRUARY 16, 2024, PREPARED BY STEWART TITLE COMPANY.

GENERAL NOTES:

1). TOTAL AREA = 2.71± ACRES.

2). TOTAL NUMBER OF PARCELS = 2.

3). A PUBLIC UTILITY EASEMENT, 10 FEET IN WIDTH, CENTERED ABOUT THE PROPERTY LINE IS HEREBY GRANTED ALONG ALL INTERIOR PARCEL LINES.

4). A BLANKET PUBLIC UTILITY EASEMENT IS ALSO HEREBY GRANTED WITHIN EACH PARCEL, EXCEPTING THEREFROM THAT PORTION WITHIN THE FOOTPRINT OF BUILDINGS, FOR THE EXCLUSIVE PURPOSE OF INSTALLING AND MAINTAINING UTILITY SERVICE FACILITIES TO SAID PARCELS AND THE RIGHT TO EXIT SAID PARCELS WITH SAID FACILITIES FOR THE PURPOSE OF SERVING OTHER LOTS AT LOCATIONS MUTUALLY AGREED UPON BY THE OWNER OF RECORD AT THE TIME, AND THE UTILITY COMPANY, TOGETHER WITH THE RIGHTS OF INGRESS THERE FROM FOREVER.

5). THE PUBLIC UTILITY EASEMENTS SHOWN AND NOTED ON THIS PLAT INCLUDE USE FOR THE INSTALLATION AND MAINTENANCE OF CABLE TELEVISION FACILITIES.

6). SEWAGE DISPOSAL SHALL BE BY INDIVIDUAL SEPTIC SYSTEMS.

7). THE "SEWER LEACH FIELD EASEMENT" LOCATED WITHIN LOT 1 OF BLOCK "C" OF SUBDIVISION TRACT MAP 2182, FILE NUMBER 942837, RECORDED AUGUST 10, 1984, HAS BEEN RELINQUISHED PER DOCUMENT NUMBER 4697131, OFFICIAL RECORDS, WASHOE COUNTY, NEVADA.

8). THE NON-EXCLUSIVE EASEMENT FOR PRIVATE ACCESS AND UTILITY PURPOSES, INCLUDING SEWER AND WATER, AS DESCRIBED IN EXHIBIT "A" OF DOCUMENT NUMBER 2863153, OFFICIAL RECORDS OF WASHOE COUNTY, NEVADA, TOGETHER WITH THE UTILITY & PRIVATE ACCESS EASEMENT AS DESCRIBED IN DOCUMENT 3782891, OF SAID OFFICIAL RECORDS, HAVE BOTH BEEN RELINQUISHED PER DOCUMENT NUMBER 4406190, OF SAID OFFICIAL RECORDS.

9). ALL EASEMENT RIGHTS DELINEATED IN GENERAL NOTE #2, AMENDED GENERAL NOTE #3 (PER DOCUMENT No. 2610881), AND ANY SLOPE, PRIVATE ACCESS, WATERLINE, AND DRAINAGE EASEMENTS AS SHOWN ON SUBDIVISION TRACT MAP 2182, HAVE BEEN RELINQUISHED PER DOCUMENT NUMBER 2863153, OF THE OFFICIAL RECORDS OF WASHOE COUNTY, NEVADA.

10). THOSE EASEMENTS DESCRIBED IN EXHIBIT "B", EXHIBIT "C", EXHIBIT "B", AND EXHIBIT "C" OF EASEMENT DOCUMENT NUMBER 942784, RECORDED AUGUST 10, 1981, OFFICIAL RECORDS OF WASHOE COUNTY, NEVADA, HAVE BEEN RELINQUISHED BY DOCUMENT NUMBER 4486169 OF SAID OFFICIAL RECORDS.

11). FIRE DEPARTMENT ACCESS TO ANY STRUCTURE IN THE NEW PARCEL WILL REQUIRE DEDICATED EASEMENTS AROUND THE EXISTING STRUCTURE(S) WHICH CANNOT BE OBSTRUCTED WITH FENCES OR GATES FROM THE MAIN ROAD. AS THE ALLEYS ARE NOT FIRE SERVICE ACCESS ROADS ACCESS DISTANCES ARE MEASURED FROM THE PUBLIC STREET AT THE CLOSEST END OF THE ALLEY OR THE FRONT PARCEL. FIRE ACCESS CANNOT EXCEED 150 FEET ALONG AN APPROVED ROUTE AND OVER AN APPROVED SURFACE (WALKING PATH).

12). ON NOVEMBER 14TH & 15TH, 2017, SUMMIT ENGINEERING CORPORATION CONDUCTED PERCOLATION TESTS ON PARCEL "D" OF PARCEL MAP 5351. WASHOE COUNTY HEALTH DISTRICT CONDUCTED TRENCH INSPECTIONS ON NOVEMBER 15TH, 2017 UNDER PERMIT NUMBER 4461. THE RESULTS OF THE PERCOLATION TEST YIELDED FAST RESULTS SUCH THAT THE SUBJECT PARCEL IS REQUIRED TO SUBMIT ENGINEERED SYSTEM DESIGNS FOR REVIEW AND APPROVAL THAT MEET THE MINIMUM REQUIREMENTS IN THE ODOW REGULATIONS GOVERNING SEWAGE, WASTEWATER, AND SANITATION IN WASHOE COUNTY.

13). WITH THE DEVELOPMENT OF EACH PARCEL AND PRIOR TO THE ISSUANCE OF ANY BUILDING PERMIT FOR SAID PARCEL, THE OWNER SHALL DEDICATE WATER RIGHTS TO THE SERVICING UTILITY SUFFICIENT TO SERVE THE DEVELOPMENT AND SHALL PROVIDE THE CITY OF RENO WITH A WILL SERVE LETTER.

14). THE CC&RS GRANTED PER DOCUMENT No. 2950148 THAT HAD ENCUMBERED PARCEL "B" OF PARCEL MAP 5351 HAS BEEN RELINQUISHED PER DOCUMENT No. 5129034.

15.) THE NEW EXCLUSIVE PRIVATE ACCESS, LANDSCAPING, & USE EASEMENT (E.P.A.L.U.E.) WHICH ENCUMBERS PARCEL "B1" IS FOR THE SOLE BENEFIT OF PARCEL "D2". NO ACCESS IS ALLOWED THROUGH THIS EASEMENT TO ACCESS THE UNENCUMBERED REMAINDER PORTION OF PARCEL "B1".

CITY CERTIFICATE:

APPROVED AND ACCEPTED BY THE COMMUNITY DEVELOPMENT DEPARTMENT OF THE CITY OF RENO, WASHOE COUNTY, NEVADA, THIS _____ DAY OF _____, 2024.

_____ _____
DIRECTOR – COMMUNITY DEVELOPMENT DATE

UTILITY COMPANIES CERTIFICATE:

THE EASEMENTS SHOWN ON THIS PLAT HAVE BEEN CHECKED, ACCEPTED, AND APPROVED BY THE UNDERSIGNED PUBLIC UTILITY COMPANIES AND CHARTER COMMUNICATIONS.

_____ _____
SIERRA PACIFIC POWER COMPANY D/B/A NV ENERGY DATE

_____ _____
NEVADA BELL TELEPHONE COMPANY D/B/A AT&T NEVADA DATE

_____ _____
CHARTER COMMUNICATIONS DATE

SURVEYOR'S CERTIFICATE:

I, LAWRENCE F. GRUBE, A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF NEVADA, CERTIFY THAT:

1. THIS PLAT REPRESENTS THE RESULTS OF A SURVEY CONDUCTED UNDER MY DIRECT SUPERVISION AT THE INSTANCE OF RYAN GARETT COOK AND HEATHER LYNN COOK, TRUSTEES OF THE COOK 2011 FAMILY TRUST DATED APRIL 20TH 2011.
2. THE LANDS SURVEYED LIE WITHIN THE SOUTHWEST QUARTER OF SECTION 8, T19N, R18E, MDM, AND THE SURVEY WAS COMPLETED ON _____ 2024.
3. THIS PLAT COMPLIES WITH THE APPLICABLE STATE STATUTES AND ANY LOCAL ORDINANCES IN EFFECT ON THE DATE THAT THE GOVERNING BODY GAVE ITS FINAL APPROVAL.
4. THE MONUMENTS DEPICTED ON THE PLAT ARE OF THE CHARACTER SHOWN AND OCCUPY THE POSITIONS INDICATED AND ARE OF SUFFICIENT NUMBER AND DURABILITY.

_____ _____
LAWRENCE F. GRUBE P.L.S. 6995

LAWRENCE F. GRUBE — EXPIRES 06/30/25 — No. 6995

TOTAL NUMBER OF PARCELS = 2
TOTAL AREA = 2.71± ACRES

Lawrence F. Grube — Digitally signed by Lawrence F. Grube — Date: 2024.04.08 10:18:02 -07'00'

LAWRENCE F. GRUBE — EXPIRES 06/30/25 — No. 6995

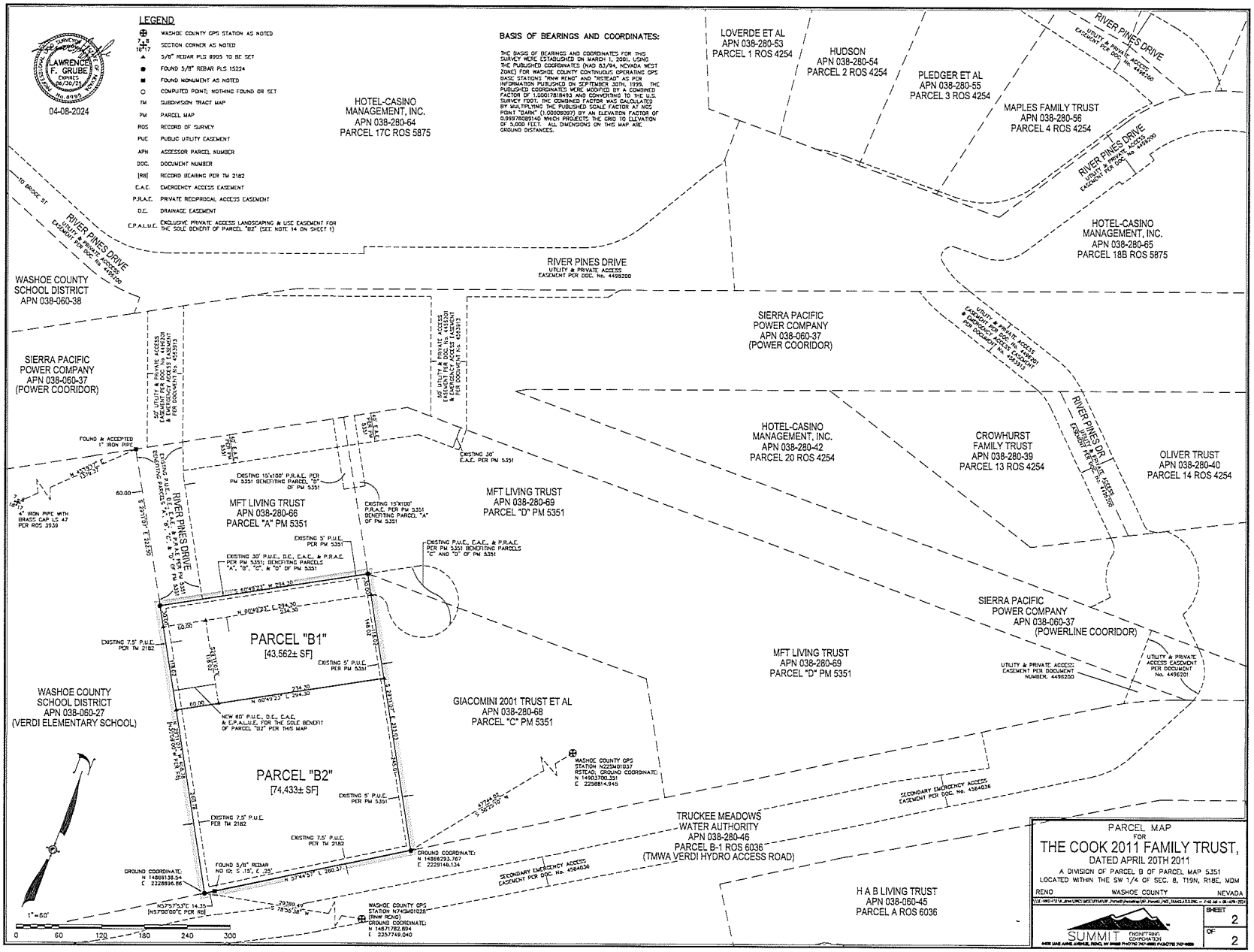
04-08-2024

PARCEL MAP
FOR
THE COOK 2011 FAMILY TRUST,
DATED APRIL 20TH 2011
A DIVISION OF PARCEL B OF PARCEL MAP 5351
LOCATED WITHIN THE SW 1/4 OF SEC. 8, T19N, R18E, MDM
RENO WASHOE COUNTY NEVADA

SUMMIT ENGINEERING CORPORATION
5405 MAE ANNE AVENUE, RENO, NV 89523 PHONE(775) 747-8850 FAX(775) 747-8999

SHEET 1 OF 2

PRELIMINARY, FOR REVIEW ONLY



Chris Pingree
Development Services Director
Development Services Department
P. O. Box 1900
Reno, NV 89505
(775) 326-6650

April 24, 2024

Summit Engineering
Attn: Larry Grube
5405 Mae Anne Ave.
Reno, NV 89523

Re: Case No. PAR24-00023 (Cook 2011 Family Trust Parcel Map)
APN: 038-280-67 (Ward 5)

Dear Sir:

Your application for a Parcel Map for the above-referenced property has been reviewed by the Development Services Department. The proposed parcel map has been determined to be in compliance with the applicable sections of Chapter 278 of the Nevada Revised Statutes.

The subject properties are located in the Large Lot Residential (1 acre), (LLR-1) zone. The Parcel Map is in substantial conformity with the requirements of the zoning district.

This map is hereby approved and must be recorded within one year of the approval date or this approval shall be deemed expired.

Prior to recordation, the applicant shall obtain a technical boundary closure check from Washoe County Engineering.

Appeal of Administrative Decision: This administrative decision may be appealed to the City Council by the applicant, the Mayor or a City Council Member, or any person who is "aggrieved" by the action or inaction. An appeal (together with fees) must be filed with the City Clerk within ten business days starting on the day after written notice of the action is filed with the City Clerk. The City Clerk's Office is located on the 2nd floor of Reno City Hall located at One East First Street, Reno, NV.

Sincerely,

Chris Pingree, Development Services Director
Development Services Department

xc: Mikki Huntsman, City Clerk

Chris Pingree
Development Services Director
Development Services Department
P. O. Box 1900
Reno, NV 89505
(775) 326-6650

February 19, 2025

Summit Engineering
Attn: Larry Grube
5405 Mae Anne Ave.
Reno, NV 89523

Re: Case No. ADM25-00026 (Cook Family Trust Time Extension)
Extension of time for PAR24-00023 (Cook 2011 Family Trust Parcel Map)
APN: 038-280-67 (Ward 5)

Dear Sir:

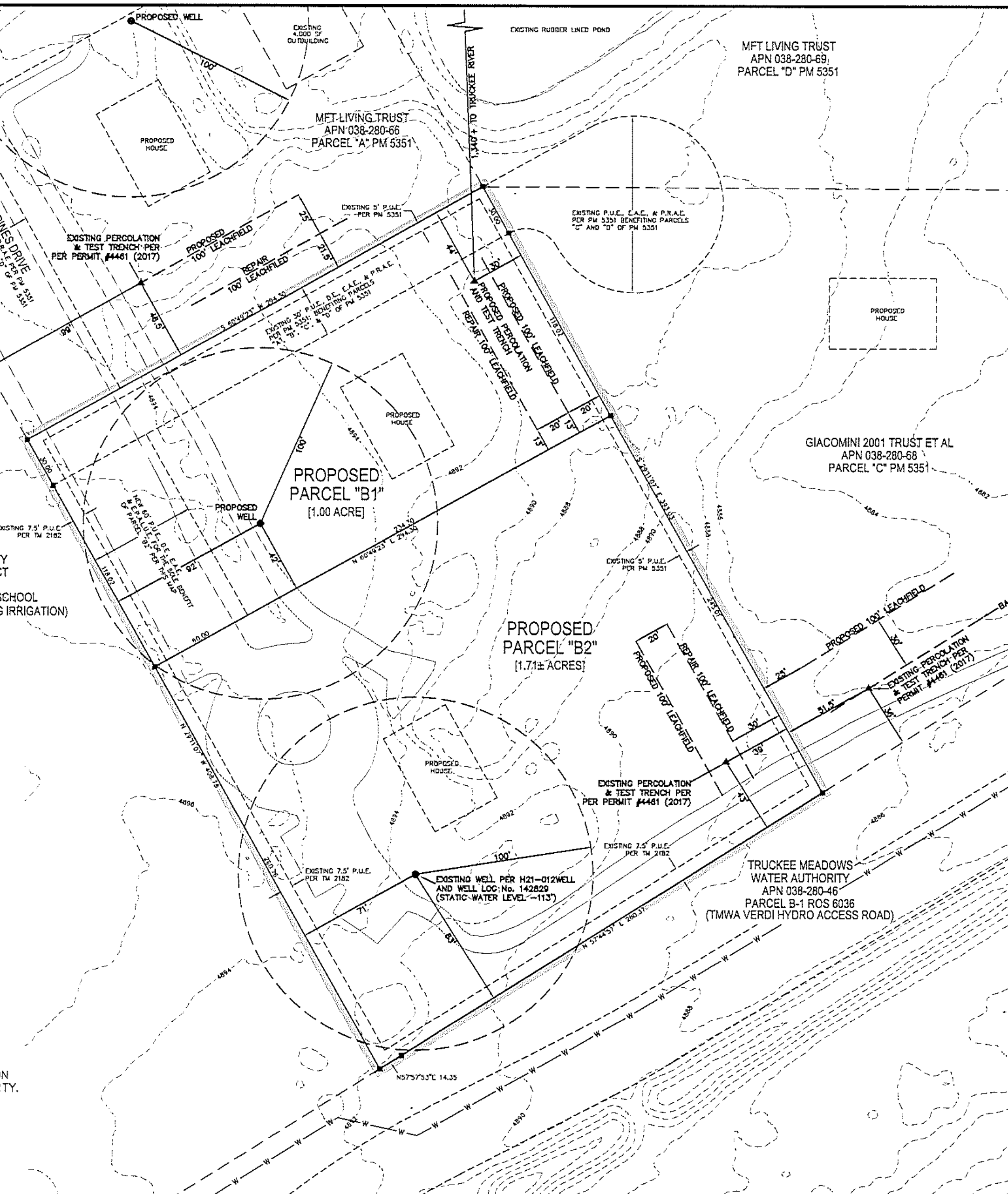
Per Reno Municipal Code (RMC) 18.08.307 (e) the Administrator may extend the approval of a Parcel Map. The applicant is requesting extending the approval of the above Parcel Map to go through a Variance process initiated by Washoe County District Health Department. As such, a 12 month extension of time is **approved**. With this extension, this map must be recorded by April 24, 2026, or this approval will be deemed expired.

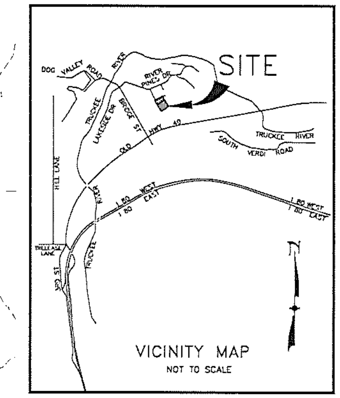
Appeal of Administrative Decision: This administrative decision may be appealed to the City Council by the applicant, the Mayor, any member of the City Council, or any person or entity "aggrieved" by the action or inaction. An appeal (together with fees) must be filed with the City Clerk within ten working days starting the day after written notice of the action is filed with the City Clerk. The City Clerk's Office is located on the 2nd floor of Reno City Hall, located at One East First Street, Reno, NV.

Sincerely,

Chris Pingree, Development Services Director
Development Services Department

xc: Mikki Huntsman, City Clerk
Michael Mischel, Engineering Manager





APPLICANT/OWNER NAME:
RYAN & HEATHER COOK, TRUSTEES OF THE COOK 2011 FAMILY TRUST, DATED APRIL 20TH, 2011.

APPLICANT/OWNER ADDRESS:
PO BOX 314
VERDI, NV 89439

APPLICANT/OWNER PHONE NUMBER & EMAIL ADDRESS:
775-223-7432
VERDICOOK@GMAIL.COM

ASSESSOR PARCEL NUMBER OF SUBJECT PARCEL:
APN 038-280-67

ADDRESS OF SUBJECT PARCEL:
430 RIVER PINES DRIVE
VERDI, NV 89439

NOTES:

1) THE SUBJECT PROPERTY IS CURRENTLY COMPRISED OF ONE LEGAL PARCEL BEING 2.71 ACRES IN SIZE.

2) THERE ARE NO AVAILABLE PUBLIC SEWER SYSTEMS WITHIN 400 FEET OF THE SUBJECT PROPERTY.

3) THERE ARE NO 100-YEAR FLOOD PLAINS ON OR WITHIN 100 FEET OF THE SUBJECT PROPERTY.

1"=30'
0 30 60 90 120 150

LEGEND

- SECTION CORNER AS NOTED
- EXISTING OR PROPOSED PERC & TEST HOLE
- EXISTING OR PROPOSED WATER WELL
- PROPERTY CORNER
- TM SUBDIVISION TRACT MAP
- PM PARCEL MAP
- ROS RECORD OF SURVEY
- PUE PUBLIC UTILITY EASEMENT
- APN ASSESSOR PARCEL NUMBER
- DOC. DOCUMENT NUMBER
- E.A.E. EMERGENCY ACCESS EASEMENT
- P.R.A.E. PRIVATE RECIPROCAL ACCESS EASEMENT
- D.E. DRAINAGE EASEMENT
- E.P.A.L.U.E. EXCLUSIVE PRIVATE ACCESS LANDSCAPING & USE EASEMENT FOR THE SOLE BENEFIT OF PARCEL "B2"

SHEET	SCALE	REV.	DATE	DESCRIPTION	BY	APP'D
1 OF 1	HORIZ: 1"=30'					
	VERT:					
	JOB NO:					

SEPTIC PLOT PLAN FOR
THE COOK FAMILY TRUST; APN 038-280-67
430 RIVER PINES DRIVE, VERDI NV
RENO WASHOE COUNTY NEVADA

DESIGNED BY:
DRAWN BY: ryan
CHECKED BY:

SUMMIT ENGINEERING CORPORATION
5405 MAE ANNE AVE. RENO, NV. 89523
PHONE: (775) 747-8550 FAX: (775) 747-8559

ATTACHMENT L

Subject Variance request under NNPH SWS Regulation 040.030

TABLE 1
MINIMUM LOT SIZE ACCORDING TO SLOPE OVER DISPOSAL AREA

Average Slope of the Disposal Area	On-Site System with Well		On-Site System Community Water	
	Sq. Ft.	Acres	Sq. Ft.	Acres
Less than 5%	43,560	1.0 acre	14,520	.033
5% or more but less than 10%	54,450	1.25 acres	18,150	.042
10% or more but less than 20%	65,340	1.5 acres	21,780	0.50
20% or more but less than 30%	87,120	2.0 acres	29,040	0.67

040.025 On-site sewage disposal fields are prohibited in areas where the original ground slope is greater than 30%.

040.030 The minimum lot size for new subdivisions and a second or subsequent parcel map from the original parcel as it existed on October 23, 2001, proposing to use on-site sewage disposal, shall be 5 acres. The Health Authority may reduce the minimum lot size requirement to as small as one acre per lot if the applicant for division can show to the satisfaction of the Health Authority that adequate measures have been taken to ensure that the smaller lot area will not have a greater impact to the groundwater quality than the 5-acre lot size. In any case, no division shall be approved if the parcel density exceeds the standard established by the Nevada Division of Environmental Protection. Staff decisions regarding the adequacy of the proposed measures shall be approved by the Sewage Wastewater and Sanitation Hearing Board and the District Board of Health through the variance procedure outlined in these regulations. Existing lots and the first four parcels created from an existing parcel shall be a minimum area of 1 acre.

040.035 For other than a single family dwelling, the required minimum area shall be consistent with Table 1 and shall be computed at twenty-two (22) square feet per gallon of estimated sewage. Current Uniform Plumbing Code fixture unit values shall be rated at not less than twenty-five (25) gallons per fixture unit per day. One-half (1/2) of the required area shall be reserved for sewage disposal only.

040.040 In all instances, the lot shall contain sufficient area for the installation of two (2) complete disposal trench systems including all applicable and required setbacks as outlined in these regulations (original plus reserve area for future replacement).

040.045 The disposal trench sidewall shall have a minimum horizontal set back of twenty (20) feet from the face of the finished slope, as measured at the level of the perforated disposal pipe (See Figure 1).

040.050 The minimum setback for disposal trenches from the flow line of a watercourse (irrigation ditches, rivers, ponds, as defined in section 010.305) may be reduced from 100 feet to 50 feet depending upon site conditions, field observations, water flow, and upon approval by the Health Authority.

040.060 The Health Authority shall determine and map septic constraint areas within the Health District. Such maps shall, by District Board of Health action, become part of these regulations. In determining the boundaries of septic constraint areas, the Health Authority shall determine if the geologic and hydrologic conditions would be in compliance with the standards stipulated in these regulations. Legal notices for adoption of septic constraint areas

ATTACHMENT M

Water Rights Deed Document Number 5374628 which shows the applicant/owner has already purchased the water rights which will be relinquished in favor of proposed Parcel "B1". This is required to have the right to drill a new domestic well on the proposed 1.00 acre parcel (Parcel "B1")

APN: N/A (Water Rights Only)

When recorded, mail to Grantee,

Mail tax statement to Grantee:

Cook 2011 Family Trust
PO Box 314
Verdi, NV 89439

DOC #5374628
04/20/2023 04:06:32 PM
Requested By
COOK 2011 FAMILY TRUST
Washoe County Recorder
Kalie M. Work
Fee: $43.00 RPTT: $26.65
Page 1 of 2

WATER RIGHTS DEED

THIS INDENTURE, made and entered into this 20th day of April, 2023, between SIERRA MOUNTAIN MORTGAGE 401K PLAN FBO DAVID GIACOMINI ("**Grantor**") and RYAN GARETT COOK and HEATHER LYNN COOK, trustees of the COOK 2011 FAMILY TRUST, dated April 20th 2011, and any amendments thereto, ("**Grantee**").

W I T N E S S E T H

That said Grantor for and in consideration of the sum of TEN DOLLARS ($10.00), lawful money of the United States of America, to them in hand paid by Grantee, and other good and valuable consideration, the receipt whereof is hereby acknowledged, by these presents do release, remise and forever, all of their right, title and interest in and to all that certain water and water rights of the Grantor more particularly described as:

A portion of the water and water rights described in **Permit No. 82484**, such portion being a total of **1.12 acre feet annually, more or less,** as granted by the State Engineer and filed in the Nevada Division of Water Resources.

TOGETHER WITH ALL AND SINGULAR, the tenements, hereditaments and appurtenances thereunto belonging and in anywise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof.

TO HAVE AND TO HOLD, ALL AND SINGULAR, the said premises together with the appurtenances, unto the said Grantee and to their heirs, executors, administrators, successors and assigns forever.

IN WITNESS WHEREOF, the said Grantor has caused this Water Rights deed to be executed the day and year first above written.

"GRANTOR"

SIERRA MOUNTAIN MORTGAGE 401K PLAN FBO DAVID GIACOMINI

By _____

David Giacomini

STATE OF NEVADA)

) SS

COUNTY OF WASHOE)

On this 20th day of April, 2023, before me, the undersigned, a Notary Public in and for said Stated, personally appeared David Giacomini, who executed the within instrument for the purpose herein stated on behalf of such entity.

WITNESS my hand and official seal.

_____

Notary Public

JANET ANN RUSSELL
Notary Public - State of Nevada
Appointment Recorded in Washoe County
No. 21-0155-02 - Expires March 31, 2025

FORM 4041

Upon recording mail copy to:
State Engineer's Office
901 S. Stewart Street, Suite 2002
Carson City, NV 89701

Relinquishment No. _____
DWR Office Use Only

OFFICE OF THE NEVADA STATE ENGINEER

AFFIDAVIT TO RELINQUISH WATER RIGHTS IN FAVOR OF USE OF WATER FOR DOMESTIC WELLS

1. I, RYAN GARETT COOK do
Print/type name of person signing this form as the Affiant.

hereby swear under penalty of perjury that the assertions of this affidavit are true, and I have the authority to request the relinquishment of the below-mentioned water rights.

2. The owner(s) of record of the water right to be relinquished is COOK 2011 FAMILY TRUST, dated April 20th 2011

3. The owner(s) own all or a portion of the following water right to be relinquished:

Permit 82484 Certificate _____

4. I hereby request to relinquish an amount of water being 1.12 acre-feet annually for either of the following:

For _____ existing parcels or the creation of 1 parcels.
# of parcels *# of parcels*

5. The description of the existing certificated place of use area to be removed from irrigation production is as follows: *(Describe the place of use by Quarter-Quarter Sections, Section, Township, Range, M.D.M., and Assessor's Parcel Number(s). For example: Within the SE¼ SW¼ Section 17, T. 15N., R. 20E., M.D.M., said portion being Carson City Assessor Parcel Number 004-022-01).* Please leave #5 blank if the existing permitted place of use to be relinquished is not a certificated irrigation right.

Relinquishment No. _____
DWR Office Use Only

6. If water to be relinquished is from a certificated irrigation water right, I have provided a map depicting acreage to be stripped or removed from irrigation production. The map is prepared to the standards of the Nevada Division of Water Resource's *Guidelines and Rules for the Preparation of Water Right Maps*.

7. The description of the proposed place of use reflected on the attached parcel map and list of County Assessor Parcel Number(s) is as follows: *(Describe the place of use by Quarter-Quarter Sections, Section, Township, Range, M.D.M., and Assessor's Parcel Number(s). For example: Within the NE¼ NW¼ Section 20, T. 15N., R. 20E., M.D.M., said portion being Carson City Assessor Parcel Number 004-013-01).*

Within the South 1/2 of the SW 1/4 Section 8, T. 19N., R. 18E., M.D.M., said portion being a portion of Washoe County Assessor Parcel Number 038-280-67 being the proposed 1.00 acre parcel known as Parcel "B1" of the Parcel Map for the Cook 2011 Family Trust.

8. I have attached a reduced, scaled, 8½ X 11-inch copy of the tentative map and/or final parcel map indicating which parcel is the original parcel ("parent parcel"), and if applicable which parcel(s) are new. The original tentative and/or final parcel map is prepared to the standards of NRS 278.466.

9. I understand I may petition the State Engineer to void this relinquishment if the final subdivision or parcel map is not recorded within 18 months after the approval of the State Engineer. If a petition to void this relinquishment is not submitted to the State Engineer within the 18-month period, the water remains permanently reverted to the source.

10. I understand once these water rights are relinquished by recordation of a final subdivision map in the office of the county recorder of the county wherein the domestic wells are to be located, as provided in NRS 278.380, or in the case of a final parcel map as provided in NRS 278.4725, the process cannot be reversed nor can I claim said right as a water right.

11. I will provide the State Engineer's Office with a copy of this recorded Affidavit to Relinquish including all attachments, which shall be recorded with the county recorder and submitted to the Division of Water Resources within **ninety (90) days** from the approval date of the State Engineer. If not recorded and submitted to our office within **ninety (90) days**, then this Affidavit is void and the water right will revert to the base right.

$300 FEE FOR FILING & EXAMINATION MUST ACCOMPANY THIS AFFIDAVIT

Relinquishment No. _____
DWR Office Use Only

DATED: This 26 day of JANUARY, 20 26.

_____
Affiant's Signature (Sign in front of a Notary.)

PO BOX 314
Mailing Address

VERDI, NV 89439
City, State. Zip Code

775-223-7432
Telephone Number

verdicook@gmail.com
Email Address

State of NEVADA)
: SS
County of WASHOE)

Subscribed and sworn to before me on this 26 day of JANUARY, 20 26

By: RYAN GARETT COOK
Affiant's printed name

_____
Notary Public signature

JANET ANN RUSSELL
NOTARY PUBLIC
STATE OF NEVADA
APPT. NO. 21-0155-02
MY APPT. EXPIRES FEBRUARY 24, 2029

Area above for Notary stamp

Below Is for State Engineer's Use Only

APPROVED: This _____ day of _____, 20 _____.

_____
State Engineer

$300 FEE FOR FILING & EXAMINATION MUST ACCOMPANY THIS AFFIDAVIT

ATTACHMENT N

Two letters of support from the only two directly adjacent residential parcels owned by others

February 21, 2024

Northern Nevada Public Health
Environmental Health Services Division
1001 East Ninth Street
PO Box 11130
Reno, NV 89520
775-325-2434

RE: Letter of Support for 430 River Pines Drive (APN 038-280-67) Application for Variance

NNPH,

I, Randy Mezger, Trustee of the MFT Revocable Living Trust, am the owner of APN 038-280-66 which is the 1.50 acre parcel immediately adjacent to the Cook 2011 Family Trust 2.71 acre parcel (APN 038-280-67). I am aware of the intent to split APN 038-280-67 into two legal parcels via a City of Reno Parcel Map process which would first require a NNPH approval of a Variance related to the additional septic system for the newly created parcel. I do not object to this proposed development.

Sincerely,

Randy Mezger, Trustee of the
MFT Revocable Living Trust
PO Box 859
Verdi, NV 89439
775-771-4943
amx3@me.com

April 20, 2023

Washoe County Health District
Environmental Health Services Division
1001 East Ninth Street
PO Box 11130
Reno, NV 89520
775-325-2434

RE: Letter of Support for 430 River Pines Drive (APN 038-280-67) Application for Variance

Washoe County Health District,

I, David Giacomini, am the owner of APN 038-280-68 which is the 2.34 acre parcel immediately adjacent to the Cook 2011 Family Trust 2.71 acre parcel (APN 038-280-67). I am aware of the intent to split APN 038-280-67 into two legal parcels via a City of Reno Parcel Map process which would first require a WCHD Application for Variance related to the additional septic system for the newly created parcel. I do not object to this proposed development.

Sincerely,

David Giacomini
10098 Jibboom St., Suite 201
Truckee, CA 96161
davegiacomini@sbcglobal.net
530-587-3277