



# Memorandum

**Date:** August 25, 2022

**To:** SOUTHERN NEVADA DISTRICT BOARD OF HEALTH

**From:** Robert Fyda, PE, REHS, *Environmental Health Engineer/Supervisor* RF  
Herbert Luis Sequera, REHS, *Environmental Health Manager* HS  
Chris Saxton, MPH-EH, REHS, *Environmental Health Director* CS  
Fermin Leguen, M.D., MPH, *District Health Officer* FL

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**Subject:** Variance Request for an Application to Construct a Septic System located at 565 Straight St, Las Vegas, Nevada that would allow installation of a septic system on an undersized lot.

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## I. BACKGROUND:

Erik Cardoso and Daisy Martinez, Owners (“Petitioners”), are requesting a variance to permit and install an individual sewage disposal system (ISDS) on an undersized lot (“Subject Property”) served by private well, located at Assessor’s Parcel Number (APN) 140-34-201-027, also known as 565 Straight St, Las Vegas, NV 89110.

Petitioners request a variance from Section 11.20.2 of the SNHD ISDS Regulations, which requires a minimum lot size of one (1) acre for the installation of an ISDS on a lot served by a private well. The Subject Property has an area of approximately 0.47 acres.

The Subject Property was developed in 1973. The existing lot was created prior to the adoption of the current SNHD ISDS Regulations in 2006 and no subsequent changes to the Subject Property have been recorded. There are 57 existing wells located within one square mile of the proposed ISDS. The Subject Property is also located in an area with a moderate density of existing ISDS; there are 101 lots with an active, traceable ISDS permit within one square mile of the property boundaries (see attached ISDS Density Map).

Petitioner states the following with regards to these requirements:

1. There must be circumstances or conditions which are unique to the petitioner, and do not generally affect other persons subject to the regulation:

*"This property is surrounded by approx. 5 other houses, all which have their own wells. This well has been in use and serving this SFR since approx. 1972 and does meet the minimum setback requirements to the current permitted ISDS, and the proposed new ISDS."*

2. There must be circumstances or conditions which make compliance with the regulation unduly burdensome and cause a hardship to and abridge a substantial property right of the applicant, and the variance is necessary to render substantial justice to and preserve the property rights of the applicant. Please indicate in what manner compliance with the regulation would be burdensome or cause a hardship on your business or how the free use of your property may be affected (if economic factors are an issue, please include estimates regarding the costs that would be incurred by compliance):

*"The current homeowner purchased this property with the sole intent to remodel and enlarge the SFR. The variance for the property size / individual well issues is also to allow for the installation of a new larger ISDS. The current system installed in 1972 would be abandoned in place. The nearest community sewer is over 400' away and would not be feasible nor affordable to connect."*

3. Granting the variance will not be detrimental or pose a danger to the public health and safety. Please provide evidence that the variance request, if approved, will not adversely affect the safe and sanitary operation of the applicant(s) pool, spa, or food establishment:

*"Existing well is currently over 100' away from the existing permitted ISDS and would also be 100'+ from the new proposed larger ISDS location. See attached plot plan."*

## **II. RECOMMENDATION:**

The Subject Property has an area of approximately 0.47 acres, which is smaller than the minimum lot size of one (1) acre required by the SNHD ISDS Regulations. Lot size variances have been approved for other properties. The proposed ISDS can meet all the required setbacks on the undersized lot.

Water samples obtained from the well on the Subject Property and from a neighboring private well on 535 Straight St contained levels of nitrite and arsenic that exceed the concentrations determined by the US EPA to cause adverse public health effects. While nitrates can occur naturally in groundwater, available data from the EPA suggests that a nitrite concentration over 1 mg/L is due to human activity. The nitrate concentrations for both lots are below the EPA's Safe Drinking Water standard of 10 mg/L but results may indicate a possible localized groundwater contamination issue.

The existing septic system is within required setback (100' min) of the neighbor's well and this variance would allow the property owner to relocate the septic to meet the required setbacks from all wells. The property owner is also planning on increasing the septic size in order to accommodate a future expansion to the existing single family residence so the increase of potential wastewater requires treatment prior to release into the environment.

Staff is of the opinion that granting the variance would not endanger public health and safety if it is subject to the conditions below. Staff recommends APPROVAL of the variance for the following reasons:

- The existing septic system is within the zone of influence for the neighbor's well and relocation could improve water quality for neighboring property.
- The age of the existing septic is past its expected life expectancy of 30 years. The existing septic system is 50 years old.
- There is no sewer infrastructure to connect to (600'+).
- The existing property maintains a closed loop on their water resource. Property draws groundwater from the aquifer and releases into the aquifer so no Colorado River is used or consumed.
- No access to LVVWD service at this time without substantial cost.
- Installation of an advanced treatment system will allow the property owner to use their property right and reduce the discharge of pollutant into the aquifer.

If the Board of Health approves the variance, staff recommends approval with the following conditions outlined in Section III.

### **III. CONDITIONS:**

1. Petitioners will install an advanced treatment system in lieu of a conventional septic system.
2. Petitioners and their successors in interest must ensure the advanced treatment system will be maintained for the life of the system. Petitioners and their successors must maintain an active maintenance agreement and provide testing to SNHD annually for the life of system.
3. Petitioners and their successors in interest shall abide by all local governmental regulations requiring connection to community sewage systems. Use of the ISDS shall be discontinued and the structure it serves shall be connected to any community sewage system constructed in the future to within four hundred feet (400') of the Petitioners' property line when connection can be made by gravity flow and the owner(s) are notified and legally required to do so.
4. Petitioners and their successors in interest must abide by the operation and maintenance requirements of the most current SNHD regulations governing individual sewage disposal systems.
5. Construction of the ISDS must be commenced within one (1) year of the date hereof. If the construction has not been commenced within that period, this variance shall automatically expire and be of no further force and effect, unless application is made and approved for an extension of time prior to the expiration date by Petitioners or Petitioners' successors in interest.

Attachments:

- A. Variance Candidate Application
- B. Justification Letter from Petitioners
- C. Sewer Map of 565 Straight St
- D. Proposed ISDS Plan
- E. Groundwater Analysis at 565 Straight St conducted on 11/29/21
- F. Groundwater Analysis at 565 Straight St conducted on 5/24/22
- G. Groundwater Analysis at 535 Straight St conducted on 5/23/22
- H. ISDS Density Map
- I. Public Notice



VARIANCE CANDIDATE WORKSHEET

PART I:

ESTABLISHMENT INFORMATION

Name of Facility/Establishment:
Health Permit Number:
Date of Inquiry:
Name of Operator/Agent:
Address of Operator/Agent:
Contact Information of Operator/Agent:
Office Phone:
Cell Phone:
Fax Number:
Email Address:
If corporation, the name/title of individual to sign for Variance document:
Name:
Title:

OWNER INFORMATION

Name of Property Owner: Erik Trejo
Address of Property Owner: 565 Straight St Las Vegas NV 89110
Contact Information of Property Owner: (702)788-5856
Office Phone:
Cell Phone: (702)788-5856
Fax Number:
Email Address:

PROPERTY INFORMATION

Property Address: 565 Straight St Las Vegas NV 89110
Assessor's Parcel Number (APN): 140-34-201-027
Describe location within larger facility (i.e. hotel/casino/resort, etc.):

SINGLE FAMILY RESIDENCE

Describe Variance Issue (s): (Include sections of the Regulation or Nevada Administrative Code that applies to the request for a variance)

PROPERTY IS CURRENTLY SERVICED BY ITS OWN WATER WELL, AND IS APPROX. 1/2 ACRE IN SIZE, NORMALLY A MINIMUM OF 1 ACRE IS REQUIRED FOR AN INDIVIDUAL WELL. CURRENT OWNER WOULD ALSO LIKE TO INSTALL A NEW LARGER ISDS, TO ALLOW FOR A REMODEL ON THE STRUCTURE.

**PART II:**

Nevada Administrative Code 439.240 states in general that certain conditions or circumstances must be shown to exist in order for a Board of Health to approve a request for a Variance from adopted public health regulations. A variance application letter (as noted below in PART III) MUST specifically address each of the following issues:

1. There must be circumstances or conditions which are unique to the applicant, and do not generally affect other persons subject to the regulation. Please indicate how your request is unique to your situation and is, therefore, not likely to affect other persons subject to the regulations:

THIS PROPERTY IS SURROUNDED BY APPROX. 5 OTHER HOUSES, ALL WHICH HAVE THEIR OWN WELLS. THIS WELL HAS BEEN IN USE AND SERVING THIS SFR SINCE APPROX. 1972 AND DOES MEET THE MINIMUM SETBACK REQUIREMENTS TO THE CURRENT PERMITTED ISDS, AND THE PROPOSED NEW ISDS.

2. There must be circumstances or conditions which make compliance with the regulation unduly burdensome and cause a hardship to and abridge a substantial property right of the applicant, and the variance is necessary to render substantial justice to and preserve the property rights of the applicant. Please indicate in what manner compliance with the regulation would be burdensome or cause a hardship on your business or how the free use of your property may be affected (if economic factors are an issue, please include estimates regarding the costs that would be incurred by compliance):

THE CURRENT HOMEOWNER PURCHASED THIS PROPERTY WITH THE SOLE INTENT TO REMODEL AND ENLARGE THE SFR. THE VARIANCE FOR THE PROPERTY SIZE/INDIVIDUAL WELL ISSUES IS ALSO TO ALLOW FOR THE INSTALLATION OF A NEW LARGER ISDS. THE CURRENT SYSTEM INSTALLED IN 1972 WOULD BE ABANDONED IN PLACE. THE NEAREST COMMUNITY SEWER IS OVER 400' AWAY AND WOULD NOT BE FEASIBLE NOR AFFORDABLE TO CONNECT.

3. Granting the variance will not be detrimental or pose a danger to the public health and safety. Please provide evidence that the variance request, if approved, will not adversely affect the safe and sanitary operation of the applicant(s) pool, spa, or food establishment:

EXISTING WELL IS CURRENTLY OVER 100' AWAY FROM THE EXISTING PERMITTED ISDS AND WOULD ALSO BE 100' + FROM THE NEW PROPOSED LARGER ISDS LOCATION.  
SEE ATTACHED PLOT PLAN.

Attachment A: Variance Candidate Application (Page 3 of 3)

**NAC 439.240 Approval by State Board of Health. (NRS 439.150, 439.190, 439.200)**

1. The State Board of Health will grant a variance from a regulation only if it finds from the evidence presented at the hearing that:
    - (a) There are circumstances or conditions which:
      - (1) Are unique to the applicant;
      - (2) Do not generally affect other persons subject to the regulation;
      - (3) Make compliance with the regulation unduly burdensome; and
      - (4) Cause a hardship to and abridge a substantial property right of the applicant; and
    - (b) Granting the variance:
      - (1) Is necessary to render substantial justice to the applicant and enable the applicant to preserve and enjoy his or her property right; and
      - (2) Will not be detrimental or pose a danger to public health and safety.
  2. Whenever an applicant for a variance alleges that he or she suffers or will suffer economic hardship by complying with the regulation, the applicant must submit evidence demonstrating the costs of compliance with the regulation. The Board will consider the evidence and determine whether those costs are unreasonable.
- [Bd. of Health, Variances Reg. §§ 2.7-2.8, eff. 10-16-80; A 2-5-82; 1-19-84]

**PART III:**

**A Variance Application Letter**, which includes all information provided by the applicant on his worksheet, must be submitted in writing to the Environmental Health Division (EHD) Director no later than 40 days before the monthly Board of Health Meeting. **The Application letter must be on the owner's letterhead signed by the Owner/Corporate Officer specifically listing which part(s) of the Regulation the proposed Variance covers with this completed Worksheet as an attachment. The written Application Letter must take particular care in providing statements and evidence of circumstances or conditions and reasons why the District Board of Health should grant the Variance as listed in NAC 439.240 as shown at the top of this page. ALL information you have provided in PART I and II of this Worksheet must be included in the body of the letter.** The evidence required may include 8 1/2" x 11" or 11" x 17" detailed drawings and/or photographs.

The Variance process is outlined in Nevada Administrative Code (NAC) 439.200 through 439.260 with the exception that an application fee is payable to SOUTHERN NEVADA HEALTH DISTRICT (SNHD).

**This section to be completed by SNHD staff ONLY**

Next closing date is: \_\_\_\_\_ for the \_\_\_\_\_ BOH Meeting.

Referred by: \_\_\_\_\_

(Print Name of REHS)

Completed by: \_\_\_\_\_ Date: \_\_\_\_\_

(Print Name of REHS if not by supervisor)

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

(Owner/Operator/Agent)

Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

(Signature of SNHD Manager)

Attachment B: Justification Letter from Petitioner

Justification/Hardship Letter

April 5, 2022

To: Southern Nevada Health District  
280 S Decatur Blvd  
Las Vegas, NV 89107

From: Erik Trejo Cardoso  
RE: Parcel # 140-34-201-027  
565 Straight St, Las Vegas, NV 89110

To whom it may concern:

I hereby make application and petition the Southern Nevada District Board of Health for a variance to the Regulations Governing Individual Sewage Disposal and Liquid Waste Management for the installation of an individual sewage disposal system (ISDS) on a lot served by an individual water well on a ½ acre. Municipal sewer is located over 400 feet away from this property. All of the adjoining lots have their own well and individual ISDS.

The legal description of said property is APN# 140-34-201-027, further described as Sunrise Manor PT SW4 NW4 SEC 34 20 62

I have owned the property since September 28, 2021 and wish to apply for this variance.

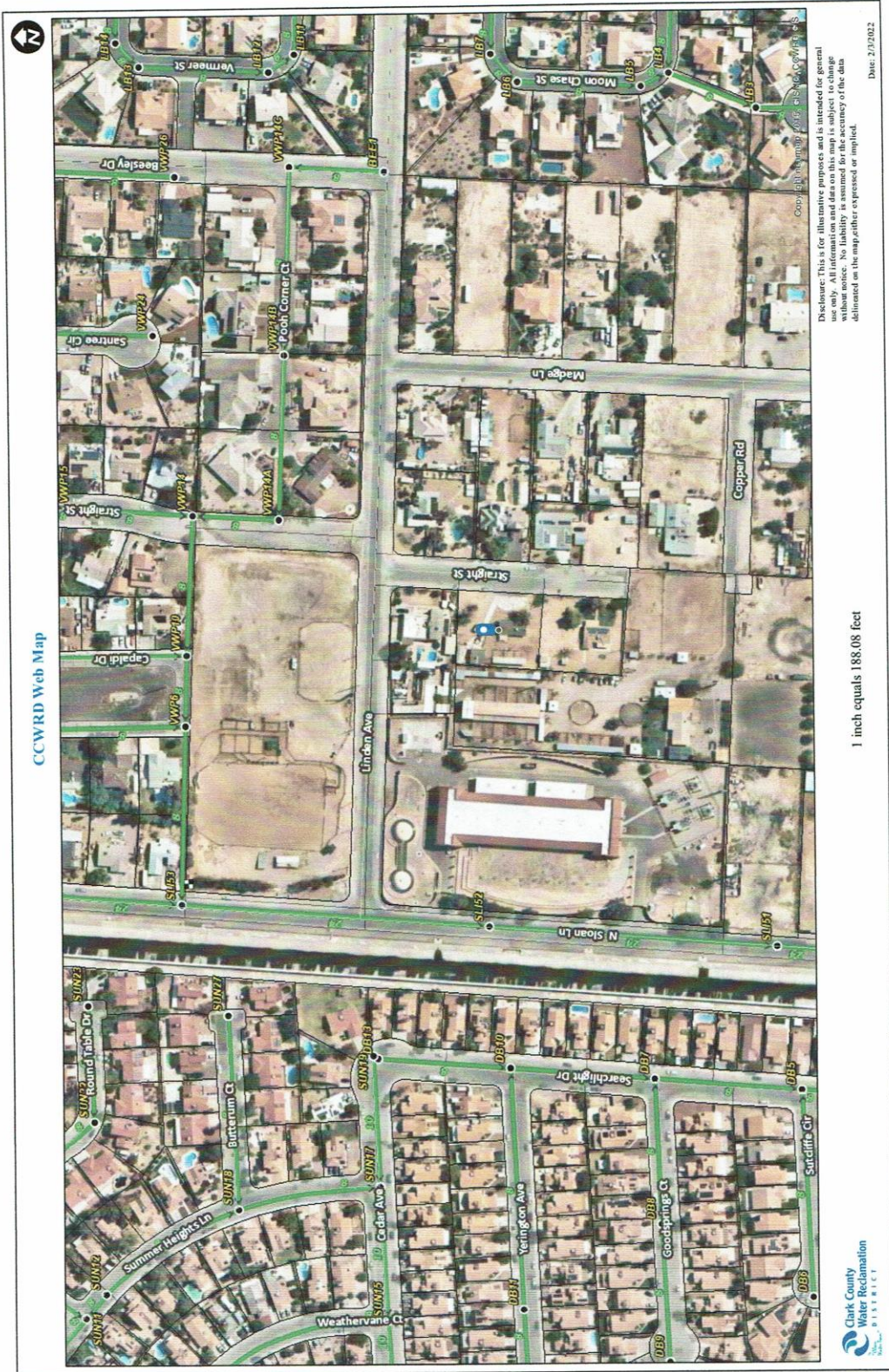
Thank you for your consideration,

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Erik Trejo Cardoso



Attachment C: Sewer Map of 565 Straight St



565 Straight St

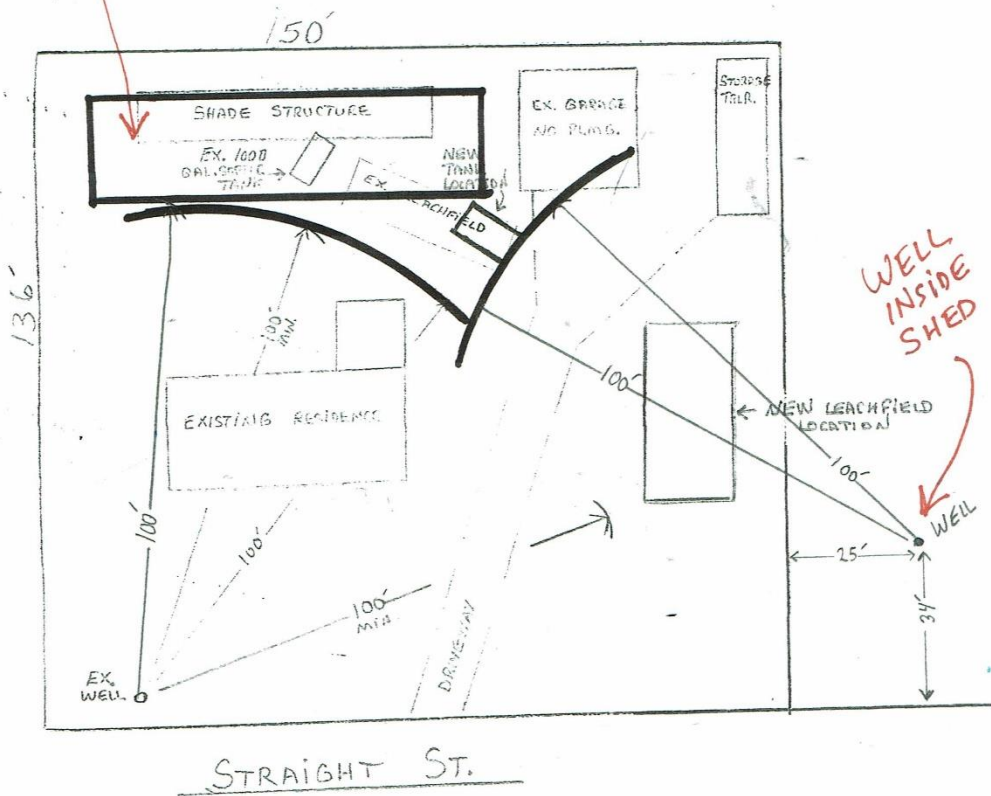
Attachment D: Proposed ISDS Plan (Page 1 of 2)

565 STRAIGHT ST.  
APN# 140-34-201-027  
SNHD PERMIT # S-# 1486



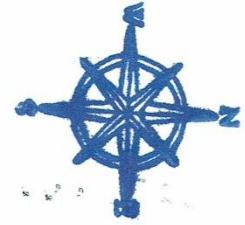
SCALE  
1" = 30'

ONLY USEABLE AREA LEFT

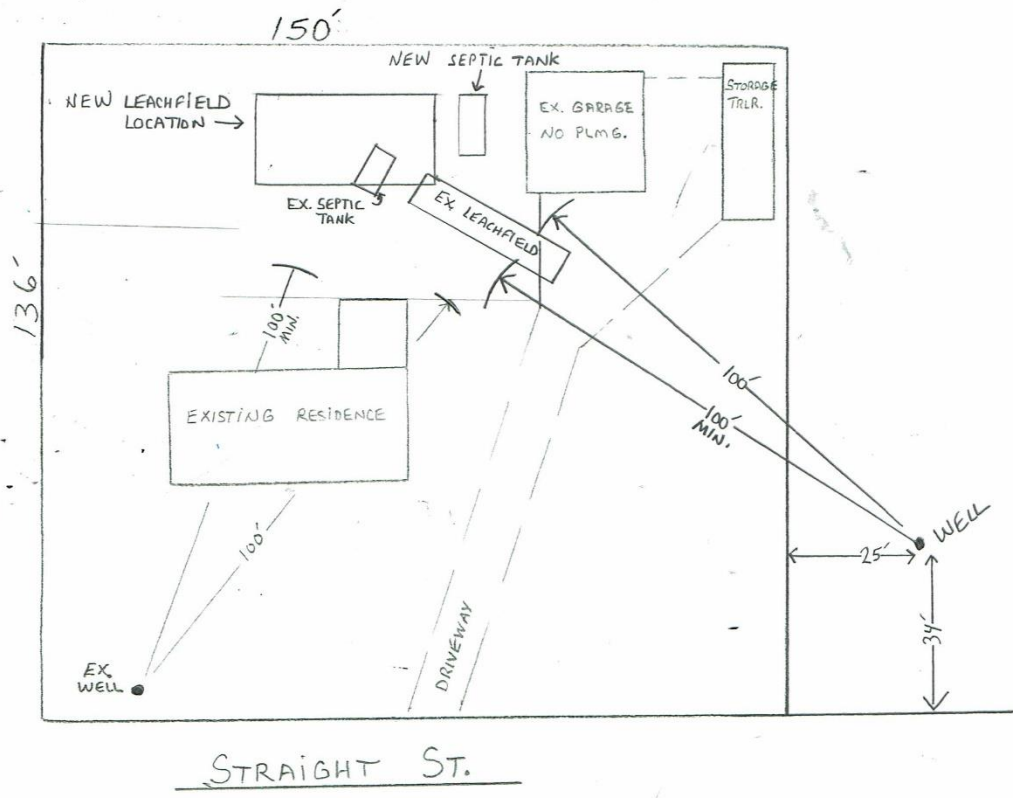


Attachment D: Proposed ISDS Plan (Page 2 of 2)

565 STRAIGHT ST.  
APN# 140-34-201-027



SCALE  
1" = 30'



Attachment E: Groundwater Analysis at 565 Straight conducted on 11/29/21  
(Page 1 of 2)



**Analytical Report**

WO#: **21111337**  
Date Reported: **12/7/2021**

**CLIENT:** Erik Trejo **Collection Date:** 11/29/2021 7:52:00 PM  
**Project:**  
**Lab ID:** 21111337-01 **Matrix:** DRINKING WATER  
**Client Sample ID:** Kitchen Sink

Analyses	Result	RL	Qual	Units	MCL	DF	Date Analyzed
<b>DOMESTIC WATER PANEL ANIONS-SDWA (CL, F, NO2, NO3, SO4)</b>				<b>EPA 300.0</b>		Analyst: DB	
Chloride	82.7	0.200		mg/L	400	2	12/1/2021 6:16:00 PM
Fluoride	0.923	0.100		mg/L	4.00	1	12/1/2021 5:55:00 PM
Nitrate as N	0.890	0.100		mg/L	10.0	1	11/30/2021 5:54:00 PM
Nitrite as N	1.08	0.100	*	mg/L	1.00	1	11/30/2021 5:54:00 PM
Sulfate	445	2.00		mg/L	500	20	12/1/2021 6:37:00 PM
<b>DOMESTIC WATER PANEL HARDNESS (TOTAL) - SDWA, CALCULATION ONLY.</b>				<b>SM 2340 B</b>		Analyst: KF	
Hardness (As CaCO3)	449	1.00		mg/L		1	12/6/2021 9:35:58 AM
Hardness, Calcium (As CaCO3)	71.9	1.00		mg/L		1	12/6/2021 9:35:58 AM
Hardness, Magnesium (As CaCO3)	377	1.00		mg/L		1	12/6/2021 9:35:58 AM
<b>DOMESTIC WATER PANEL PH - SDWA</b>				<b>SM 4500H+ B</b>		Analyst: JJF	
pH	8.67		*H	pH Units	8.50	1	11/30/2021 4:51:00 PM
<b>DOMESTIC WATER PANEL TOTAL DISSOLVED SOLIDS - SDWA</b>				<b>SM 2540C</b>		Analyst: DB	
Total Dissolved Solids	940	5.00		mg/L	1000	1	12/1/2021 1:06:00 PM
<b>DOMESTIC WATER PANEL METALS-SDWA 200.7</b>				<b>EPA 200.7</b>		Analyst: KF	
Calcium	28.8	1.00	L	mg/L		1	12/2/2021 3:06:01 PM
Iron	ND	0.100		mg/L	0.60	1	12/2/2021 3:06:01 PM
Magnesium	91.6	3.00	L	mg/L	150	3	12/2/2021 4:33:47 PM
Sodium	114	1.00	L	mg/L		1	12/2/2021 3:06:01 PM
<b>DOMESTIC WATER PANEL METALS-SDWA 200.8</b>				<b>EPA 200.8</b>		Analyst: KF	
Arsenic	14.8	1.00	*	µg/L	10.0	1	12/7/2021 10:25:12 AM
Copper	32.4	1.00		µg/L	1000	1	12/1/2021 4:03:19 PM
Lead	ND	1.00		µg/L	15.0	1	12/1/2021 4:03:19 PM

**Qualifiers:**  
(Qual)

- \* Value exceeds Maximum Contaminant Level.
- DF Dilution Factor.
- MCL Maximum Contaminant Level.
- PQL Practical Quantitation Limit.

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded.
- ND Not Detected at the PQL.

Original

\* = Exceedance of Safe Drinking Water Standard Max Contaminant Level (MCL)

Attachment E: Groundwater Analysis at 565 Straight conducted on 11/29/21  
(Page 2 of 2)



**Analytical Report**

WO#: 21111337  
Date Reported: 12/7/2021

**CLIENT:** Erik Trejo **Collection Date:** 11/29/2021 7:52:00 PM  
**Project:**  
**Lab ID:** 21111337-01 **Matrix:** DRINKING WATER  
**Client Sample ID:** Kitchen Sink

Analyses	Result	RL	Qual	Units	MCL	DF	Date Analyzed
<b>DOMESTIC WATER PANEL METALS-SDWA 200.8</b>				<b>EPA 200.8</b>		Analyst: KF	
Manganese	2.70	1.00		µg/L	100	1	12/1/2021 4:03:19 PM
Zinc	69.9	1.00		µg/L	5000	1	12/1/2021 4:03:19 PM
<b>DOMESTIC WATER PANEL COLIFORMS - P/A (DRINKING WATER)</b>				<b>COLILERT-18</b>		Analyst: AS	
Coliform, Total	Absent			P/A	1		11/30/2021 4:40:00 PM
Escherichia Coli	Absent			P/A	1		11/30/2021 4:40:00 PM

**Qualifiers:** \* Value exceeds Maximum Contaminant Level. B Analyte detected in the associated Method Blank  
(Qual) DF Dilution Factor. H Holding times for preparation or analysis exceeded.  
MCL Maximum Contaminant Level. ND Not Detected at the PQL.  
PQL Practical Quantitation Limit.

Original

\* = Exceedance of Safe Drinking Water Standard Max Contaminant Level (MCL)

Attachment F: Groundwater Analysis at 565 Straight conducted on 5/24/22



**Analytical Report**

WO#: **22051281**  
Date Reported: **6/1/2022**

**CLIENT:** Erik Trejo **Collection Date:** 5/24/2022 2:00:00 PM  
**Project:** 565 Straight St  
**Lab ID:** 22051281-01 **Matrix:** DRINKING WATER  
**Client Sample ID:** Kitchen Sink

Analyses	Result	PQL	Qual	Units	MCL	DF	Date Analyzed
<b>ANIONS-SDWA (CL, F, NO2, NO3, SO4)</b>				<b>EPA 300.0</b>		Analyst: DB	
Nitrate as N	2.05	0.100		mg/L	10.0	1	5/24/2022 9:50:00 PM
<b>PH - SDWA</b>				<b>SM 4500H+ B</b>		Analyst: LJ	
pH	7.87		H	pH Units	8.50	1	5/24/2022 4:02:00 PM
<b>ARSENIC-SDWA</b>				<b>EPA 200.8</b>		Analyst: KF	
Arsenic	23.1	1.00	*	µg/L	10.0	1	5/26/2022 2:53:06 PM

**Qualifiers:** \* Value exceeds Maximum Contaminant Level. DF Dilution Factor.  
 (Qual) H Holding times for preparation or analysis exceeded. MCL Maximum Contaminant Level.  
 ND Not Detected at the PQL. PQL Practical Quantitation Limit.

Original

\* = Exceedance of Safe Drinking Water Standard Max Contaminant Level (MCL)

Attachment G: Groundwater Analysis at 535 Straight conducted on 5/23/22



**Silver State**  
Analytical Laboratories

Sierra Environmental Monitoring

Silver State Labs-Las Vegas  
3626 E. Sunset Road, Suite 100  
Las Vegas, NV 89120  
(702) 873-4478 FAX: (702) 873-7967  
www.ssalabs.com

**Analytical Report**

WO#: 22051278  
Date Reported: 6/1/2022

**CLIENT:** Erik Trejo **Collection Date:** 5/23/2022 9:00:00 PM  
**Project:** 535 N Straight  
**Lab ID:** 22051278-01 **Matrix:** DRINKING WATER  
**Client Sample ID:** Kitchen Sink

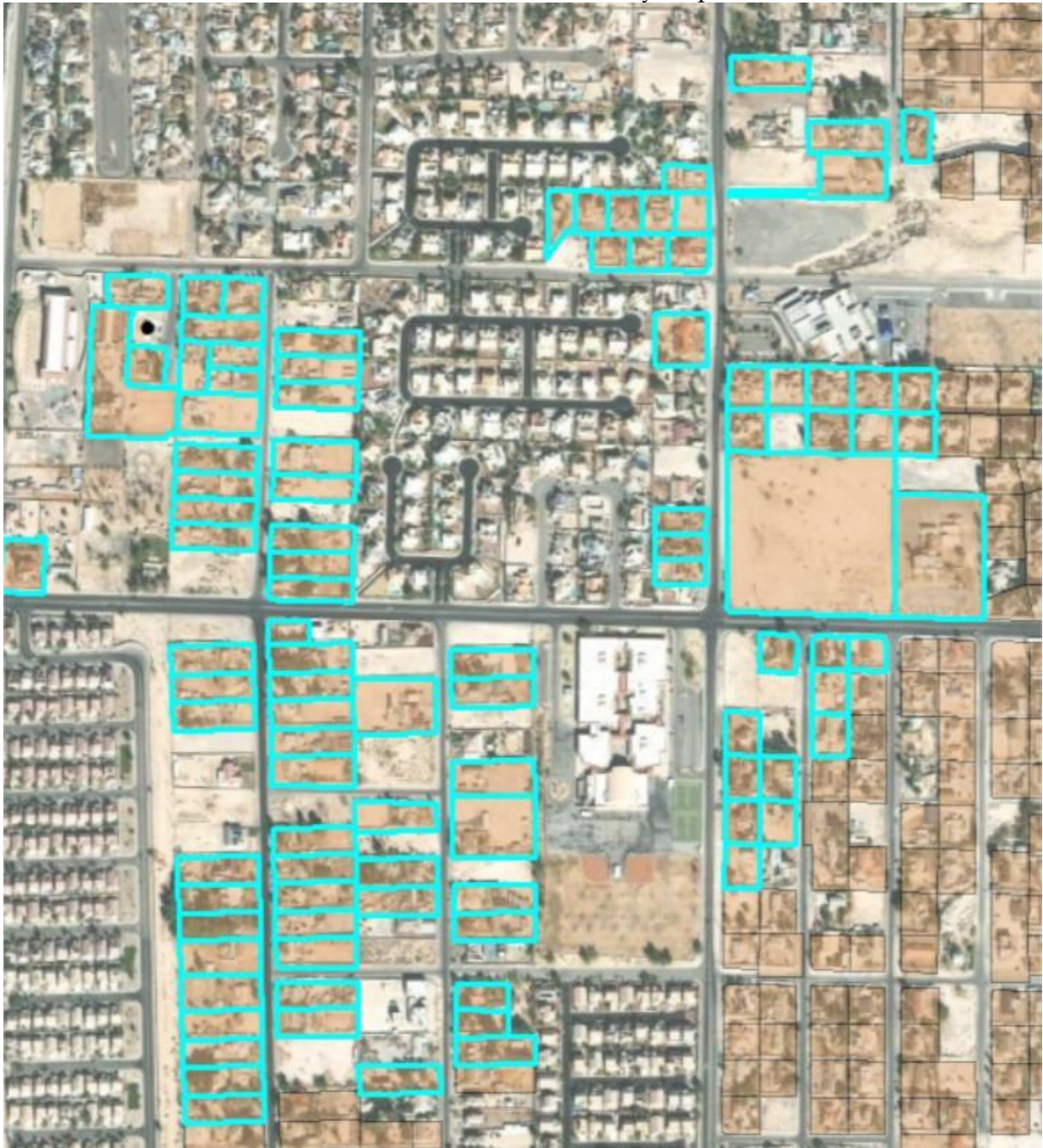
Analyses	Result	PQL	Qual	Units	MCL	DF	Date Analyzed
<b>ANIONS-SDWA (CL, F, NO2, NO3, SO4)</b>				<b>EPA 300.0</b>		Analyst: DB	
Nitrate as N	3.61	0.100		mg/L	10.0	1	5/24/2022 10:11:00 PM
<b>PH - SDWA</b>				<b>SM 4500H+ B</b>		Analyst: LJ	
pH	8.06		H	pH Units	8.50	1	5/24/2022 4:02:00 PM
<b>ARSENIC-SDWA</b>				<b>EPA 200.8</b>		Analyst: KF	
Arsenic	22.9	1.00	*	µg/L	10.0	1	5/26/2022 2:51:04 PM

**Qualifiers:** \* Value exceeds Maximum Contaminant Level. DF Dilution Factor.  
(Qual) H Holding times for preparation or analysis exceeded. MCL Maximum Contaminant Level.  
ND Not Detected at the PQL. PQL Practical Quantitation Limit.

Original

\* = Exceedance of Safe Drinking Water Standard Max Contaminant Level (MCL)

Attachment H: ISDS Density Map



There are 67 existing wells and 101 lots with an active, traceable ISDS permit within one square mile of the property boundaries.



Attachment J: Public Notice



**PUBLIC NOTICE**

The Southern Nevada District Board of Health will conduct a **PUBLIC HEARING** on Thursday, August 25, 2022 at 9:00 AM during its regular monthly meeting in the Red Rock Conference Room at the Southern Nevada Health District at 280 S. Decatur Blvd., Las Vegas, Nevada, to approve or deny a variance request filed by Erik Cardoso and Daisy Martinez (“Petitioners”), to permit and install a new individual sewage disposal system on the property located at 565 Straight St, Las Vegas, NV 89124, APN 140-34-201-027.

The variance request is made to allow the Petitioner to permit the installation of a septic system not in accordance with the *Southern Nevada District Board of Health Regulations Governing Individual Sewage Disposal Systems and Liquid Waste Management*. The variance will allow the Petitioners to install a septic system on an undersized lot.

All interested persons may appear at the hearing and state their positions. All written and oral submissions will be considered by the Southern Nevada District Board of Health. Written comments must be forwarded by August 23, 2022 to:

Robert Fyda, P.E., REHS  
Environmental Health Engineer/Supervisor  
Southern Nevada Health District  
P.O. Box 3902  
Las Vegas, Nevada 89127  
fyda@snhd.org

The variance application is available for review at the Southern Nevada Health District, 280 S Decatur Blvd, Las Vegas, Nevada 89107. Please contact Mallory Jett-Edwards at (702) 759-0660 to schedule an appointment to review the application during the normal business hours of 8:00 AM to 4:30 PM.

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Chris Saxton, MPH-EH, REHS  
Environmental Health Director

August 8, 2022  
Date