

**PUBLIC UTILITIES COMMISSION OF NEVADA
DRAFT NOTICE
(Applications, Tariff Filings, Complaints, and Petitions)**

Pursuant to Nevada Administrative Code (“NAC”) 703.162, the Commission requires that a draft notice be included with all applications, tariff filings, complaints and petitions. Please complete and include **ONE COPY** of this form with your filing. (Completion of this form may require the use of more than one page.)

A title that generally describes the relief requested (see NAC 703.160(4)(a)):

Application of Silver Springs Mutual Water Company for a permit under the Utility Environmental Protection Act to implement water system improvements.

The name of the applicant, complainant, petitioner or the name of the agent for the applicant, complainant or petitioner (see NAC 703.160(4)(b)):

Silver Springs Mutual Water Company

A brief description of the purpose of the filing or proceeding, including, without limitation, a clear and concise introductory statement that summarizes the relief requested or the type of proceeding scheduled **AND** the effect of the relief or proceeding upon consumers (see NAC 703.160(4)(c)):

Silver Springs Mutual Water Company is submitting pursuant to the Nevada Utility Environmental Protection Act (“UEPA”), an application to the Public Utilities Commission of Nevada (the “Commission) for authority to implement the following improvements:

- 1. Improving the existing Deodar well,**
- 2. Install variable frequency drives on the Idaho and Deodar wells.**
- 3. Install a backup generator at the booster site and purchase a trailer mounted backup generator for use at the Idaho and Deodar well sites.**
- 4. Purchase and upgrade a shop for equipment maintenance and storage.**
- 5. Construct a new million-gallon water storage tank at the existing north tank site.**
- 6. Install 8-inch waterline loops at the end of Fort Churchill, Pueblo, Donner, Thonopah, Tuscarora, and Eureka Streets on Elko Street. Also install 8-inch waterline loop on Virginia Ave/Truckee St. from Fort Churchill and Donner Trail.**

The effects of the project on consumers will be to improve their water system storage capacity, conveyance, emergency supply capability, and safety. It is also anticipated that the project will help reduce O&M costs.

A statement indicating whether a consumer session is required to be held pursuant to Nevada Revised Statute (“NRS”) 704.069(1)¹:

No consumer session is required for this application.

If the draft notice pertains to a tariff filing, please include the tariff number **AND** the section number(s) or schedule number(s) being revised.

¹NRS 704.069 states in pertinent part:

1. The Commission shall conduct a consumer session to solicit comments from the public in any matter pending before the Commission pursuant to NRS 704.061 to 704.110 inclusive, in which:
 - (a) A public utility has filed a general rate application, an application to recover the increased cost of purchased fuel, purchased power, or natural gas purchased for resale or an application to clear its deferred accounts; and
 - (b) The changes proposed in the application will result in an increase in annual gross operating revenue, as certified by the applicant, in an amount that will exceed \$50,000 or 10 percent of the applicant's annual gross operating revenue, whichever is less.



**PUBLIC UTILITIES COMMISSION OF NEVADA
UTILITY ENVIRONMENTAL PROTECTION ACT
PERMIT APPLICATION**

**Silver Springs Mutual Water Company
Water System Improvements**

Prepared for:

**Silver Springs Mutual Water Company
P.O. Box 285
Silver Springs, Nevada 89429
(775) 577-2223**

Prepared by:

FARR WEST
ENGINEERING

**5442 Longley Lane. Suite A
Reno, Nevada 89511
(775) 851-4788**

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1.0 INTRODUCTION

1.1 Background

Silver Springs Mutual Water Co. (SSMWC) currently owns four operational wells: Ft. Churchill, Lake, Idaho, and Deodar. Currently, three of the wells are used for public consumption and potable use. The Ft. Churchill well is out of service and will be abandoned as it has a low production capacity and does not meet the arsenic standard. Water is disinfected at each of the wells with a sodium hypochlorite solution (Note: once the water treatment plant is completed disinfection will take place at the plant for the Lake and Idaho wells, not the wellhead). The wells that are in service, as well as the location of the Ft. Churchill well, are shown in Figure 2–Well Locations.

There are two water storage tanks and two pressure zones in the system. All of the wells are located in the lower pressure zone (Zone 1), along with the North Tank, which has a capacity of one million gallons. The North Tank is located just to the east of US Hwy 95A North near the Hwy 95A and Hwy 50 intersection. Water is lifted from Zone 1 to Zone 2 via the Spruce St. Booster Pump Station. Zone 2 is supplied by the West Tank located near the Skyline Subdivision. The West Tank also has a capacity of one million gallons. Zone 2 is able to feed back to Zone 1 through a 2-inch pressure reducing valve (PRV). In the event of a fire in Zone 1, there is also an 8-inch PRV that will open to supply the needed flows to Zone 1.

The distribution system is generally made of C900 PVC pipe with the exception of a few older thin walled AC and PVC lines.

SSMWC owns a shop and office building. The shop is located on Deodar St. which also houses the Deodar St. Well. The shop stores miscellaneous spare parts, equipment and tools for maintenance, though space is limited. The new office building is located on Lahontan St.

1.2 Proposed Project

The proposed project for SSMWC includes the following six elements;

1. Deodar well site improvements including improving the existing well facilities.

The Deodar well is the oldest production well with the greatest facility deficiencies but is the only well in the system that is currently producing at or below the maximum contaminant level for all constituents. In addition to good water quality, the volume produced is adequate. The proposed site improvements include performing the down hole testing to ensure that the well is worth saving and which down hole improvements can be made. It also includes replacing the failed existing well house, rehabilitating the well, installing a pitless adaptor and submersible pump, installing a connection vault, replacing chemical equipment, and making electrical and SCADA improvements. Much of what is learned from this process will be documented so it can be utilized in the future design of a replacement well.

2. Installing variable frequency drives (VFD) on the Idaho and Deodar well.

VFD's can reduce inrush currents on well pumps which can require many starts per hour. The reduced starting currents can result in longer motor life and lower current demand, providing cost savings. VFD's can also vary the output frequency, allowing for setpoint control to maintain the constant flows and pressures required for efficient operation of the treatment plant.

SSMWC would benefit from the installation of variable frequency drives (VFD) at Deodar Street Well and Idaho Street Well. The VFD's will reduce the need for the pump-to-waste ponds at both sites, which are often full. A VFD will also allow for a constant flow to the Water Treatment Plant (WTP) and into the system. This will ensure proper chemical dosing aiding in the treatment process and a constant loading for the filters at the WTP.

3. Installation of a backup generator at the booster site and purchase a trailer mounted backup generator for use at both the Idaho and Deodar well sites.

The booster pump located on Spruce Ave. at the end of Aspen St. should have a backup generator onsite in the event there is a power outage and water needs to be moved from zone 1 to zone 2. Zone 2 receives its water from zone 1 where all three wells and water treatment plant are located. If there is an emergency in zone 2 and there is a power outage this will allow the booster station to continue to move water from zone 1 to zone 2.

A trailer mounted generator will provide SSMWC the ability to fill their system during power outages from either the Idaho or Deodar Well. The portable generator will be sized to handle the largest of the system wells.

4. Upgrade shop for equipment maintenance and storage.

SSMWC recently purchased a shop to replace the maintenance area located in the same building as the Deodar Street Well. The Deodar maintenance area is inadequately sized for equipment maintenance and storage of replacement equipment. The Deodar building is adequate to continue housing the well; however the new facility was necessary to provide improved storage space as well as an equipment maintenance area.

The new shop building is an out of service fire house facility located at Lahontan St and Fort Churchill St. The building is an ideal facility but will require upgrades to convert it into a maintenance shop. The cost of renovating the existing building is less than the cost of building a new building with the same size and amenities. Upgrades will include HVAC, roofing, painting, windows, removing fire department equipment, and lighting.

5. Construct a new one million gallon tank at the existing north tank site.

The existing storage requires SSMWC to pump during peak hour power rates. The addition of a 1 million gallon storage tank next to the North Tank would provide enough storage to pump only during off-peak hours and meet the commercial fire flow demand. This will save the community a considerable amount of money and provide more safety and operational flexibility in the system. Additionally, because of the rural nature of Silver Springs, the vulnerability of the treatment plant, and the age of the existing wells, a high amount of emergency storage is recommended. The project would include some site earthwork, site piping, a SCADA connection, fencing, constructing the welded steel tank, and providing interior and exterior coating.

6. Install 8" waterline loops in the residential neighborhood at the end of Fort Churchill St, Pueblo St, Donner St, Tonopah St, Tuscarora St, and Eureka St on Elko St. Also install an 8" waterline loop on Virginia Ave/Truckee St. from Fort Churchill and Donner Trail.

Distribution mains on the above-mentioned streets currently dead-end and should be looped back into the

system. Line looping helps maintain system pressures and reduces the potential occurrence of bacteria. Looping dead-ends will also reduce odor and taste complaints and eliminate the time consuming and wasteful flushing program currently in place.

2.0 REQUIREMENT OF NAC 703.421

2.1 Description of Location

1. A general description of the location of the proposed utility facility, including:
 - a) A regional map that identifies the location of the proposed utility facility;

Regional maps identifying the location of the proposed facilities are included in Attachment A.

The project includes elements at several locations. The locations of each project element are described as follows:

Deodar well site improvements including improving the existing well facilities.

The existing Deodar well is located at the southwest corner of the intersection of Deodar and Idaho Streets in Silver Springs, Nevada. The general location is: NE ¼, Section 25, Township 18 North, Range 25 East.

Installation of variable frequency drives (VFD) on the Idaho and Deodar well.

See above for location of Deodar well. The Idaho well is located at the northeast corner of Idaho and Elm Streets in Silver Springs, Nevada. The general location is NW ¼, Section 30, Township 18 North, Range 25 East.

Installation of a backup generator at the booster site and purchase a trailer mounted backup generator for use at both the Idaho and Deodar well sites.

#1 and #2 above for locations of Deodar and Idaho wells. The booster station is located at the northwest corner of Atkins St. and Spruce Ave. The general location is SE ¼, Section 26, Township 24 North, Range 24 East.

Upgrade of existing shop for equipment maintenance and storage.

The existing, recently purchased SSMWC shop building is located at the northwest corner of Lahontan and Fort Churchill streets. The general location is NW ¼, Section 19, Township 18 North, Range 25 East.

Construction of a new one million gallon water tank at the existing north tank site.

The new one million gallon water tank will be constructed 12-feet to the east of the existing tank located on the north side of Silver Springs. The general location of the proposed tank will be the center of Section 18, Township 18 North, Range 25 East.

Installation of 8" waterline loops in the residential neighborhood at the end of Fort Churchill St, Pueblo St, Donner St, Tonopah St, Tuscarora St, and Eureka St on Elko St. Also install an 8" waterline loop on Virginia Ave/Truckee St. from Fort Churchill and Donner Trail.

The general location of the existing water lines that will be looped into the system is at the locations listed above in the NE ¼, of Section 19, Township 18 North, Range 25 East.

b) Alternative locations for the proposed utility facility:

All of the proposed improvements are to existing facilities or are intentionally at locations of existing facilities that will be an integral part of the improvements. For this reason alternative sites were not considered.

c) The reasons why the location identified in paragraph (a) is best suited for the proposed utility facility.

All of the proposed improvements are to existing facilities or are integral to the proper function of existing facilities. For this reason the sites selected are best suited for the improvements.

2.2 General Description of the Facility

2. A general description of the proposed utility facility as required by subsection 2 of NRS 704.870, including:

a) The size and nature of the proposed utility facility:

Deodar well site improvements including improving the existing well facilities.

The proposed well improvements will include the construction of a new 10-foot x 16-foot well house. Improvements to the well itself include the addition of a VFD, and electrical and SCADA improvements.

Installation of variable frequency drives (VFD) on the Idaho and Deodar well.

VFD's will be installed on both the Idaho and Deodar wells at these existing locations.

Installation of a backup generator at the booster site and purchase a trailer mounted backup generator for use at both the Idaho and Deodar well sites.

A permanent backup generator with appurtenant electrical and SCADA improvements will be installed approximately 6-feet from the east side of the existing booster station building. A 17-foot x 12-foot chainlink security fence will be constructed around the generator area.

A portable, trailer-mounted generator will also be purchased to provide emergency backup power for the Deodar and Idaho wells.

Upgrade of existing shop for equipment maintenance and storage.

The proposed improvements to the 4,900 sq-ft shop include repair of existing block walls, replacement of existing window, a new metal roof, a new chainlink security fence with 36-foot wide-access gate, new office heating/AC unit, new shop heating units, new lighting, new flooring, and new paint.

Construction of a new one million gallon water tank at the existing north tank site.

The 75-foot diameter x tank work will include some site earthwork, site piping, two Hot Taps, a SCADA connection, perimeter security fencing, construction of the welded steel tank, and interior and exterior coating.

Installation of 8" waterline loops in the residential neighborhood at the end of Fort Churchill St, Pueblo St, Donner St, Tonopah St, Tuscarora St, and Eureka St on Elko St. Also install an 8" waterline loop on Virginia Ave/Truckee St. from Fort Churchill and Donner Trail.

Distribution mains on the above-mentioned streets will be looped back into the system. The line looping will include approximately 3,600 feet of 8-inch pipe with appurtenant fittings, valves, and thrust blocks. The work will also require approximately 400 feet of pavement cutting and 1,200 sq. ft of pavement patch.

- b) The natural resources that will be used during the construction and operation of the proposed utility facility.

Steel for tank skin

Fuel for vehicles to transport materials to the site and to operate equipment

Paint to coat interior and exterior of vessels and tanks and exterior of building

Chlorine for disinfection of tanks and pipes upon completion

Concrete for concrete pads and thrust blocks

Gravel, road base and structural fill for roads and parking space

PVC pipe to connect tank and pipes to water system

Water will be stored in the tank and conveyed through the pipes when construction is complete

2.3 Environmental Studies

3. A summary of any studies which the applicant anticipates will be made of the environmental impact of the proposed utility facility as required by subsection 2 of [NRS 704.870](#), including a copy of all corresponding studies filed with appropriate federal agencies.:

Attachment B is an Environmental Assessment (EA) completed for the U.S. Department of Agriculture (USDA). The EA includes the Finding of No Significant Impact (FONSI), FONSI cover letter, and proof of public notice.

Based on the FONSI, the proposed project will have no significant adverse impact on the following environmental elements:

- Land Use/Important Farmland/Formally Classified Lands
- Floodplain
- Wetlands

- Biological resources
- Cultural resources
- Water quality
- Socio-economic/ environmental justice
- Air quality
- Transportation
- Noise

Attachment C is a Preliminary Engineering Report (PER) created for the USDA. The report provides detailed information about the SSMWC water system including the facilities that require the proposed improvements.

2.4 Public Notice

4. A copy of the public notice of the application and proof of the publication of the public notice, as required by subsection 4 of NRS 704.870.

Attachment D is proof of publication.

2.5 State Clearinghouse

5. Proof that a copy of the application has been submitted to the Nevada State Clearinghouse within the Department of Administration to enable agency review and comment. (Added to NAC by Pub. Utilities Comm'n by R076-07, eff. 10-31-2007)

Attachment E is a proof of submission.

ATTACHMENTS

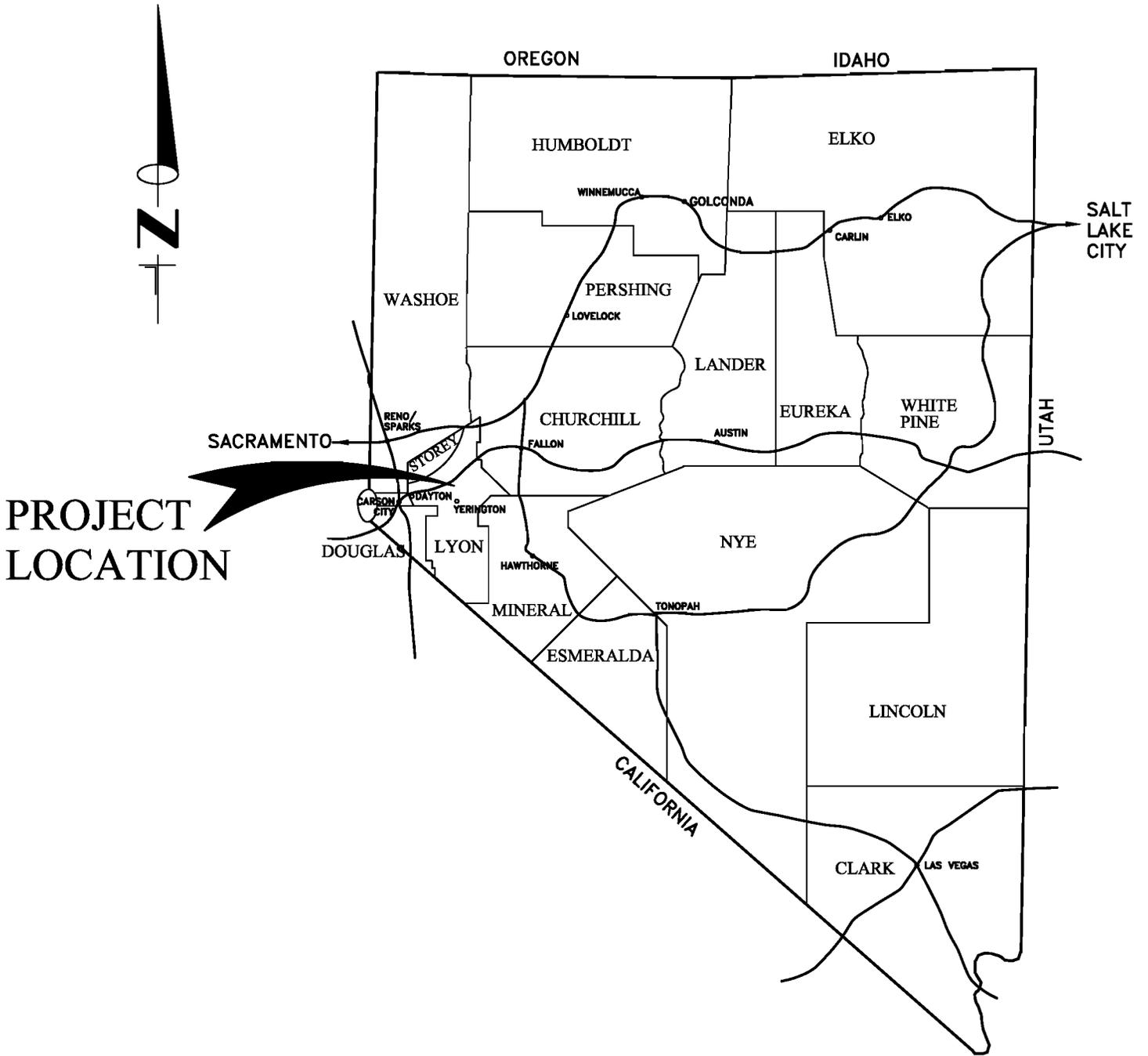
Attachment A – Maps

Attachment B – Environmental Assessment including FONSI

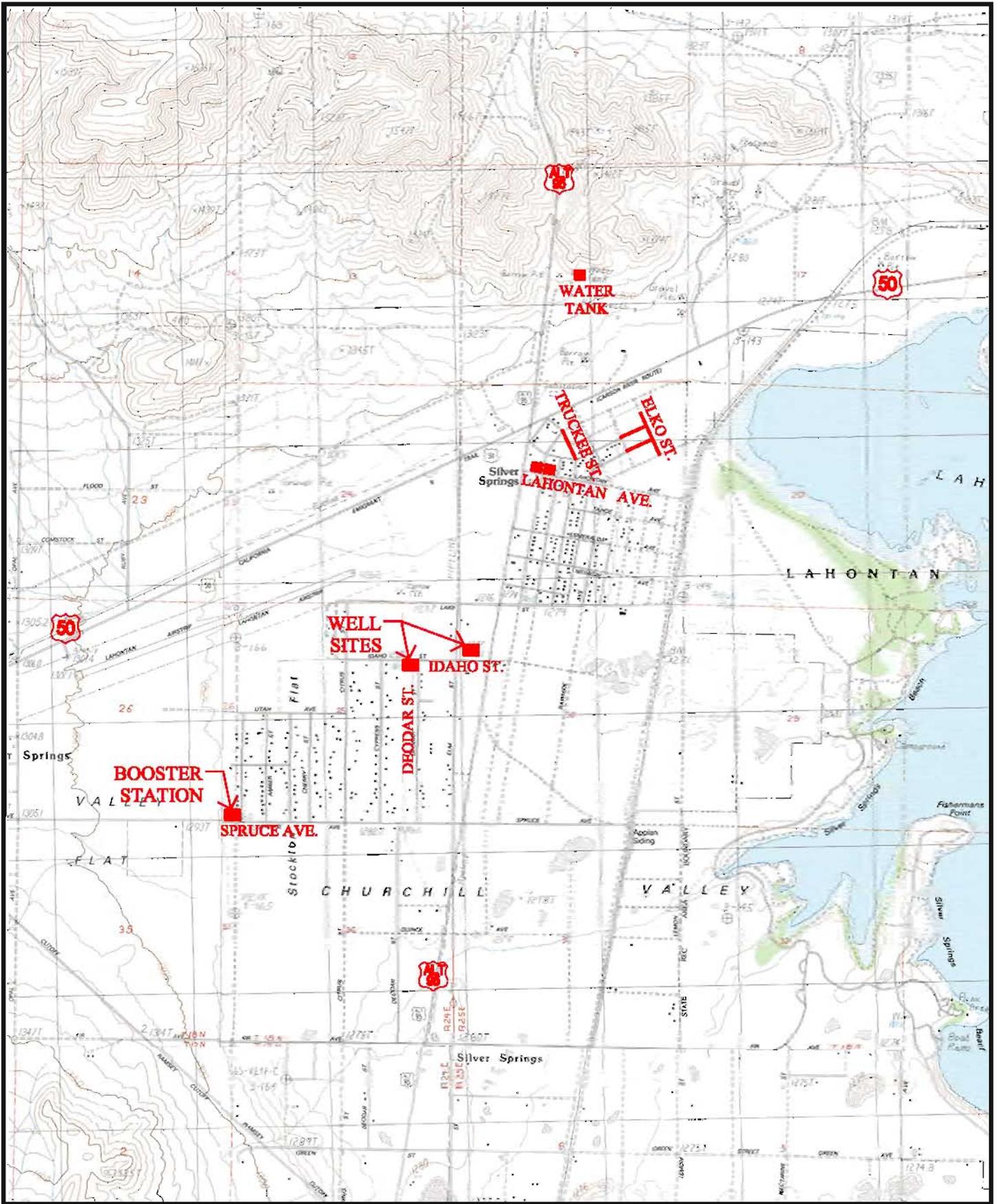
Attachment C – Preliminary Engineering Report

Attachment D – Proof of Publication

Attachment E – Proof of Submission to Clearinghouse



LOCATION MAP
N.T.S.



VICINITY MAP
N.T.S.

Attachment B – Environmental Assessment



United States Department of Agriculture
Rural Development
Nevada State Office

February 6, 2013

Silver Springs Mutual Water Company
Attn: Roy McDonald, General Manager
P.O. Box 285
Silver Springs, NV 89429

Re: USDA Rural Development's Finding of No Significant Impact

Dear Mr. McDonald:

USDA Rural Development has completed an Environmental Assessment on Silver Springs Mutual Water Company's Water Project. Rural Development has determined this action will not significantly affect the quality of the human environment.

Before further consideration can be given to your project, Rural Development regulations require that the FONSI (Finding of No Significant Impact), a copy of which is enclosed, be published in a newspaper of general circulation in the project vicinity and in any local or community oriented newspaper in the area. The notice should be of reasonable size and prominence and not be placed in the classified or legal section or an obscure portion of the newspaper. It must be published for three consecutive days if in a daily paper or two consecutive issues if other than a daily. It is the responsibility of Silver Springs Mutual Water Company to make the necessary arrangements to publish the enclosed notice.

You must provide USDA Rural Development with an affidavit of publication as soon after publication as possible but not later than the end of the 30 day comment period which begins on the day after the last date of publication. If you have any questions, contact me at 775-887-1222 ext. 114.

Sincerely,

A handwritten signature in cursive script that reads "Lisa Goodfellow". The signature is written in black ink and is positioned above the typed name.

Lisa Goodfellow
Community Programs Specialist

enclosure

cc: Shane Hastings, Community Programs Director, USDA RD

Notice of a Finding of No Significant Impact

The USDA Rural Development has received an application for financial assistance from the Silver Springs Mutual Water Company. The proposed project consists of well site improvements including improving the existing well facilities and drilling and equipping a new well at the Deodar well site, installing variable frequency drives (VFD) on the Idaho and Deodar wells, installing a backup generator at the booster site and purchase a trailer mounted backup generator for use at both the Idaho and Deodar well sites, purchase and upgrade the building at 2485 Fort Churchill Street to be used for equipment maintenance and storage, construct a new one million gallon tank at the existing north tank site, install 6" waterline loops in the residential neighborhood at the end of Fort Churchill Street, Pueblo Street, Donner Street, Tonopah Street, Tuscarora Street, and Eureka Street on Elko Street, also install a 6" waterline loop on Virginia Avenue/Truckee Street from Fort Churchill to Donner Trail, make ADA improvements to the existing office at 1315 Lahontan Street, including bathrooms and doorways, and abandon the existing 4" Fort Churchill Street water line and install with a new 10" line approximately 225' to the west inside the Highway 95A right-of-way from Virginia Street to Lake Street.

As required by the National Environmental Policy Act and agency regulations, Rural Development prepared an Environmental Assessment of the proposal that assessed the potential environmental effects of the proposal and the effect of the proposal may have on historic properties. Upon consideration of the applicant's proposal, federal and state environmental regulatory and natural resource agencies the agency has determined that the proposal will not have a significant effect on the human environment and for which an Environmental Impact Statement will not be prepared.

In order to avoid or minimize any adverse environmental impacts, Rural Development will require the applicant to incorporate the following mitigation measure into the proposal's contract:

- 1) Utilize consistent lighting mitigation measures that follow "Dark Sky" lighting practices. Effective lighting should have screens that do not allow the bulb to shine up or out. All proposed lighting shall be located to avoid light pollution onto any adjacent lands as viewed from a distance. All lighting fixtures shall be hooded and shielded, face downward, located within soffits and directed on to the pertinent site only, and away from adjacent parcels or areas.
- 2) Obtain the appropriate licenses and permits from local, state and federal agencies.
- 3) The project contractor is to verify that there are no nesting birds prior to land disturbance.
- 4) Measures must be taken to control runoff, erosion and fugitive dust during construction.

Copies of the Environmental Assessment can be reviewed at the USDA Rural Development State Office, 1390 South Curry St., Carson City, NV 89703. For further information, please contact Lisa Goodfellow, Community Programs Specialist at 775-887-1222, ext. 114.

A location map of the project can also be reviewed at the Silver Springs Mutual Water Company's Office located at 1315 Lahontan Drive, Silver Springs, Nevada.

Cyndie Mays

* Backup correspondence for FONSI Advertising #

From: noreply@production-ads.com
Sent: Monday, February 18, 2013 8:52 AM
To: CMAYS.SSMWC@SBCGLOBAL.NET
Subject: Confirmation of approval for your RGJ Media ad for 02/20/13, Order# RJ-0000441982, Ad Size: 3X10

Dear Valued Customer,

This is an automated response from RGJ Media to inform you that the proof of your ad #RJ-0000441982 has been approved for publication.

Approval Date and Time: **February 18, 2013 11:52**

Please know that by approving this ad to run, you are acknowledging that you have confirmed all information and elements in the ad are correct, that your ad is satisfactory and you accept full responsibility for its content. Once approved, your ad will be sent directly to press and/or online, and no further changes will be possible!

In the event that you have mistakenly approved the ad, notice errors, or have any additional questions, please contact a member of your sales team immediately and reference insertion order number RJ-0000441982.

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Notice of a Finding of No Significant Impact

The USDA Rural Development has received an application for financial assistance from the Silver Springs Mutual Water Company. The proposed project consists of well site improvements including improving the existing well facilities and drilling and equipping a new well at the Deodar well site, installing variable frequency drives (VFD) on the Idaho and Deodar wells, installing a backup generator at the booster site and purchase a trailer mounted backup generator for use at both the Idaho and Deodar well sites, purchase and upgrade the building at 2485 Fort Churchill Street to be used for equipment maintenance and storage, construct a new one million gallon tank at the existing north tank site, install 6" waterline loops in the residential neighborhood at the end of Fort Churchhill Street, Pueblo Street, Donner Street, Tonopah Street, Tuscarora Street, and Eureka Street on Elko Street, also install a 6" waterline loop on Virginia Avenue/Truckee Street from Fort Churchill to Donner Trail, make ADA improvements to the existing office at 1315 Lahontan Street, including bathrooms and doorways, and abandon the existing 4" Fort Churchill Street water line and install with a new 10" line approximately 225' to the west inside the Highway 95A right-of-way from Virginia Street to Lake Street.

As required by the National Environmental Policy Act and agency regulations, Rural Development prepared an Environmental Assessment of the proposal that assessed the potential environmental effects of the proposal and the effect of the proposal may have on historic properties. Upon consideration of the applicant's proposal, federal and state environmental regulatory and natural resource agencies the agency has determined that the proposal will not have a significant effect on the human environment and for which an Environmental Impact Statement will not be prepared.

In order to avoid or minimize any adverse environmental impacts, Rural Development will require the applicant to incorporate the following mitigation measure into the proposal's contract

- 1) Utilize consistent lighting mitigation measures that follow "Dark Sky" lighting practices. Effective lighting should have screens that do not allow the bulb to shine up or out. All proposed lighting shall be located to avoid light pollution onto any adjacent lands as viewed from a distance. All lighting fixtures shall be hooded and shielded, face downward, located within soffits and directed on to the pertinent site only, and away from adjacent parcels or areas.
- 2) Obtain the appropriate licenses and permits from local, state and federal agencies.
- 3) The project contractor is to verify that there are no nesting birds prior to land disturbance.
- 4) Measures must be taken to control runoff, erosion and fugitive dust during construction.

Copies of the Environmental Assessment can be reviewed at the USDA Rural Development State Office, 1390 South Curry St., Carson City, NV 89703. For further information, please contact Lisa Goodfellow, Community Programs Specialist at 775-887-1222, ext. 114.

A location map of the project can also be reviewed at the Silver Springs Mutual Water Company's Office located at 1315 Lahontan Drive, Silver Springs, Nevada

Introducing the newest expert

to join our Femley team

We're pleased to welcome Dr. Lucy Rice, OB/GYN, to our team of experts. She specializes in contraceptive care, gynecology, gynecological surgery, laparoscopic surgery, menopausal management, obstetrics, urinary incontinence management, physicals and exams. She looks forward to providing care for women in and around Femley.



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As required by the National Environmental Policy Act and agency regulations, Rural Development prepared an Environmental Assessment of the proposal that assessed the potential environmental effects of the proposal and the effect of the proposal may have on historic properties. Upon consideration of the applicant's proposal, federal and state environmental regulatory and natural resource agencies the agency has determined that the proposal will not have a significant effect on the human environment and for which an Environmental Impact Statement will not be prepared.

In order to avoid or minimize any adverse environmental impacts, Rural Development will require the applicant to incorporate the following mitigation measure into the proposal's contract:

- 1) Utilize consistent lighting mitigation measures that follow "Dark Sky" lighting practices. Effective lighting should have screens that do not allow the bulb to shine up or out. All proposed lighting shall be located to avoid light pollution onto any adjacent lands as viewed from a distance. All lighting fixtures shall be hooded and shielded, face downward, located within soffits and directed on to the pertinent site only, and away from adjacent parcels or areas.
- 2) Obtain the appropriate licenses and permits from local, state and federal agencies.
- 3) The project contractor is to verify that there are no nesting birds prior to land disturbance.
- 4) Measures must be taken to control runoff, erosion and fugitive dust during construction.

Copies of the Environmental Assessment can be reviewed at the USDA Rural Development State Office, 1390 South Curry St., Carson City, NV 89703. For further information, please contact Lisa Goodfellow, Community Programs Specialist at 775-887-1222, ext. 114.

A location map of the project can also be reviewed at the Silver Springs Mutual Water Company's Office located at 1315 Lahontan Drive, Silver Springs, Nevada.

by semi-trucks." Comstock Mining announced use of the existing haul road provides "a more efficient connection to a previously grant-

case involved Comstock's use of a road segment across the "Lot 51" parcel without authorization, BLM reported. Exclusive use and development of

company was trespassing on federal land. That prompted the company to haul ore along a stretch of Nevada 342 when mining commenced in August.

City reports stolen storm drain grates

Staff Report

FERNLEY — The City of Fernley's Public Works crews have placed barricades and hazard tape around locations where three storm drain grates were stolen, and residents are warned to keep a watchful eye when walking or driving in those areas.

According to the city, "Storm water catch ba-

sins can be over six feet deep. In addition, a missing storm drain grate can cause significant damage to a vehicle."

Grates are made of cast iron and weight over 60 pounds, and each grate costs about \$500 or more.

Thieves typically work in pairs to remove the grates to sell them to scrap yards. According to the city, "Sometimes these grates can be buried

at the bottom of a (truck) load, and they may be very difficult to spot."

Residents with information about the missing grates should contact the Public Works Department at 784-9910 or the Lyon County Sheriff's Office at 575-3350. People who witness grates being removed should call the Sheriff's Office Dispatch non-emergency number at 775-575-3383.

OBITUARIES

Lloyd Henderson Angier Jr.

Lloyd Henderson Angier Jr. was born June 8, 1943, in St. Paul, Minnesota, to Mary Rosalie and Lloyd Henderson Angier

St., who passed away many years ago.

He was the youngest of three children, including older brother George Maher and older sister Donnie Maher Kell, who also have passed away.

Lloyd married Georgianna Sue Miller on August 24, 1962, and she passed away in 2003.

He was in the Army from 1966-1968 and married his current wife Patricia Lynn Daley on June 17, 2006.

He is survived by wife Patricia Angier; daughters Adrienne (Walter) Huotari and Terri Bronk; grandchildren Lindsey Huotari, Christopher Huotari, Pamela (Andrew) Allen, Stever (Sophie) Angier, and Alex (Nicole) Huotari and great-grandchildren Shane Allen, Grace Nelson, Zachery Allen, Justin Allen, and Aria Angier.

Memorial services were held at Feb. 19, 2013 at the Veterans Cemetery in Fernley, NV. Lloyd was cremated at LaPaloma Funeral Home in Reno, NV. He has returned to St. Paul, Minnesota, to join his wife Georgianna and other family.

Community
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Located in the Scolari's Shopping Center

but said he didn't anticipate reaching that amount during the first couple of years.

"But we'll ramp up to it," he said.

Estell said the company will set up an employment office several months before the plant is opened, to allow time to hire and train staff.

Estell said the project includes in excess of 100

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A location map of the project can also be reviewed at the Silver Springs Mutual Water Company's Office located at 1315 Lahontan Drive, Silver Springs, Nevada.

Silver Springs Mutual Water Company

Environmental Assessment Addendum for Water System Improvements in Silver Springs, Nevada

January, 2013



OWNER:

SILVER SPRINGS MUTUAL WATER COMPANY
1315 Lahontan Dr., Silver Springs
Silver Springs, Nevada 89429
(775) 273-2387

ENGINEER:

FARR WEST
ENGINEERING

5442 LONGLEY LANE, SUITE B
RENO, NEVADA 89511
(775) 851-4788

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1.0 PURPOSE AND NEED FOR THE PROJECT

1.1 Proposed Action

The proposed project includes the replacement or new installation of water lines and other related facilities in Silver Springs, Nevada.

The proposed project would include the following components:

1. Deodar well site improvements including improving the existing well facilities and drilling and equipping a new well as funding allows.
2. Install Variable Frequency Drive on the Deodar and Idaho wells.
3. Purchase and install a backup generator at the booster Spruce Ave. site and one trailer mounted backup generator for use at both the Idaho or Deodar Well sites.
4. Purchase and remodel a shop at 2359 Ft Churchill.
5. Construct a new 1 million gallon tank at the existing north tank site.
6. Loop the end of Fort Churchill St, Pueblo St, Donner St, Tonopah St, Tuscarora St, and Eureka St on Elko St. with 6" lines. Also loop Ft Churchill, Pueblo, and Donner on Virginia Ave/Truckee St.

1.2 Purpose and Need for Project

1.2.1 Health and Safety.

Water Availability – The abandonment of Ft. Churchill well has left the system with three active wells. Anticipating growth in the future, SSMWC will need to maintain their capacity to provide adequate amounts of water to current and future customers. The Deodar well currently produces the best quality water of the active wells. However, the well is old and needs to be refurbished.

Back Up Power Supply – The new water treatment plant project includes a backup power supply. SSMWC would like to have backup power supplies for the booster pump station that supplies water from zone 1 to zone 2 and for both the Deodar and Idaho wells to prevent interruption of service in the event of an emergency.

1.2.2 System O&M.

Storage and Maintenance Space – The existing shop owned by SSMWC is not large enough to perform repairs on equipment and to store necessary parts and supplies. The existing shop also houses the Deodar well, further limiting work and storage space. A new building large enough for equipment maintenance and storage is needed. An existing building has become available for purchase across the street from the existing SSMWC office.

Water Storage – The existing North storage tank needs to be replaced. The tank is 33 years old and requires constant maintenance.

Waterline Replacement & Installation – A section of water main along Highway 95A, from Virginia to Pyramid, needs to be upgraded to 12-inch pipe to eliminate a bottleneck in the system. Also a number of loops in the system should be completed to eliminate dead end lines.

1.2.3 Growth

Moderate growth is projected in the Silver Springs area and will contribute to the project need. By 2030 SSMWC will be serving approximately 1,350 connections. Project improvements will encourage residential and industrial growth and development promoting economic stimulation in the area.

2.0 ALTERNATIVES TO PROPOSED ACTION

2.1 Design Criteria

2.1.1 Pressure Requirements

State pressure requirements include the following:

Pressures

According to NAC 445A.6672, Item 2, the public water system shall ensure that the residual pressure in the distribution system is:

- At least 20 psi during conditions of fire flow and fire demand experienced during maximum day demand;
- At least 30 psi during peak hour demand; and
- At least 40 psi during maximum day demand.

Furthermore, the zones of pressure in a distribution system must be designed in such a manner that the static pressure at the lowest ground elevation of the zone does not exceed 100 psi.

Velocities

NAC 445A.6672, Item 2 states that high head losses must be avoided by maintaining normal water velocities below 8 feet per second during all conditions of flow other than fire flow.

2.2 Alternatives Considered

Alternatives in this section deal with general preliminary project considerations. Specific project details such as pipe types or replacement methods will be determined during the design phase. Regardless of the alternative selected, the most economically feasible, environmentally sound principles will be applied to the design. Additionally, all construction will be done according to best management practices.

2.2.1 No Action. If no action is taken, the system will continue to operate as it is. Pressures will continue substandard, the potential for contamination will be a problem, and a power outage could prevent water from being distributed to Zone 2. The existing North Tank will continue to be a costly maintenance problem

2.2.2 New Source Production Well. This alternative includes the design and installation of a completely new and improved well. Of the well alternatives this is the most costly.

- 2.2.3 Replacement Well. This alternative includes the replacement of the existing Deodar well. The well would be a clone of the existing well. Occasionally this approach results in a well that yields water quality inferior to that in the original well.
- 2.2.4 Soft Starters for Deodar and Idaho Street Wells. The benefit of a soft starter on these wells would be a slower start up and slow down instead of a straight line start that draws excessive power. In comparison, a VFD provides the same power savings as a soft starter with the additional benefit of varying output frequency, allowing for setpoint control.
- 2.2.5 New Maintenance Shop at Deodar Well Site. The existing shop is located in the Deodar well house and is too small to serve as a maintenance/equipment storage facility. An alternative to this shop is the construction of a new shop near the well house on property already owned by SSMWC.
- 2.2.6 New Maintenance Shop near the SSMWC Office. The alternative would be ideal due to the advantage of having the shop close to the office and management personnel. However SSMWC does not currently own property near the office so a parcel would need to be purchased.
- 2.2.7 ADA Office Facility Upgrades. The office currently needs some ADA improvements. These improvements include exterior wheel chair ramp, interior access routes, and bathroom modifications including doors, fixtures and signage.
- 2.2.8 95A Waterline Replacement. This alternative would replace an existing 4-inch main located in an alleyway with a new 8-inch main along the highway 95A frontage. The project may be considered part of the proposed project if funding can be obtained. No USDA funds will be used for this alternative.
- 2.2.9 Airport Line Loop Installation. This alternative includes the elimination of the dead end at the airport, another connection between zone 1 and zone 2. The alternative would extend the airport waterline west to Opal then south to connect at Spruce.
- 2.2.10 Fire Hydrants. Fire hydrants are needed at the following corners:
- Truckee St. & Tahoe Ditch
 - Truckee St & Lahontan St.
 - Virginia & Donor Trail
 - Virginia & Pueblo St.
 - Winnemucca St. & Tahoe Ditch
 - Toiyabe St. & Esmeralda Ave.
 - Toiyabe St. & Lahontan St.
 - Ramsey St. & Tahoe Ditch
 - Talapoosa St. & Nevada St.

Hydrants that are contiguous to the proposed project will be installed as part of the project. No USDA funds will be used to install non-contiguous hydrants.

2.2.11 Gate Valves. Gate Valves are needed at the following corners:

- Esmeralda Ave. & Fort Churchill Road
- Esmeralda Ave. & Truckee St.
- Esmeralda Ave. & Tonopah
- Esmeralda Ave. & Rawhide St.
- Esmeralda Ave. & Winnemucca St.
- Esmeralda Ave. & Toiyabe St.
- Esmeralda Ave. & Ramsey St.
- Esmeralda Ave. & Talapoosa St.

Gate valves that are contiguous to the proposed project will be installed as part of the project. No USDA funds will be used to install non-contiguous gate valves.

2.2.12 Water Meters. There are some manual read meters in the service area that need to be replaced with touch read meters. Meters contiguous to the proposed project will be installed a part of the project. No USDA funds will be used to install non-contiguous meters.

2.2.13 SCADA. SCADA upgrades are integral to the proposed project. SCADA upgrades are not considered major construction and will only be done in relation to the proposed project.

2.2.14 Proposed Project. The proposed project includes the following elements:

New Well – The current Deodar Street well has no sanitary seal resulting in elevated nitrate levels. The proposed improvement includes down hole testing, replacement of the existing well house, rehabilitating the well, installation of a pitless adaptor, submersible pump, connection vault, new chemical equipment and electrical and SCADA improvements.

Backup Power at Booster Pump Station – The existing booster pump station moves water from Zone 1 to Zone 2. In the event of a power outage, the pump station needs a backup power source to continue water service to Zone 2.

Trailer Mounted Backup Generator – A mobile generator would insure that the Deodar and Idaho Street wells could remain in service in the event of power outages or an emergency.

New Maintenance Shop – The existing shop houses the Deodar Street well and a small maintenance area. Space within the existing structure is insufficient to allow for proper maintenance activities and storage of replacement parts. A new shop will be needed to meet the increasing space requirements. The proposed

shop site is an existing building next to the SSMWC office. The building would be renovated to meet SSMCC needs.

VFDs for Deodar and Idaho Street Wells – The benefits of VFDs at these wells include a reduction in energy costs, prevention of water hammer, and the elimination of the need for pump-to-waste ponds at both wells, which are often full. The VFDs will also provide constant flow into the system, ensuring proper chemical dosing.

New 1 Million Gallon Tank – The proposed new tank would be constructed at the site of the existing tank.

Line Looping – This element includes the looping of dead end lines into the system. It would include the ends of Fort Churchill St, Pueblo St, Donner St, Tonopah St, Tuscarora St, and Eureka St on Elko St. with 6" lines. Also loop Ft Churchill, Pueblo, and Donner on Virginia Ave/Truckee St.

2.2.15 Trenchless Technology vs. Open Trench. The traditional method of installing 6 and 8 inch water lines in northern Nevada is to excavate a trench and place PVC pipe in 20 foot segments. One alternative that has proven to be cost effective in certain situations is the semi-trenchless technology of pipe bursting. Pipe bursting is the only trenchless technology that allows pipes to be upsized. Pipe bursting is a preferred solution for installing new pipes in high-profile areas where disruption to surrounding businesses, residents and the environment is an important consideration.

In the pipe bursting process, a new polyethylene pipe is pulled through an old pipeline of equal or smaller size. The old pipeline is shattered as the new pipe is pulled through, with the pieces of the old pipe displaced into the surrounding soil.

2.3 Evaluation Criteria

2.3.1 Health and Sanitation. There are potential health hazards associated with low pressures, dead ends and continual repairs.

2.3.2 System O&M. An efficient water system requires less maintenance when there is a minimum amount of dead ends, water hammer, and pressure-related problems. In the event that maintenance activities are necessary, a proper shop facility is important.

2.4 Evaluation of Alternatives

2.4.1 Evaluation of Alternative 2.2.1 – No Action. If no action is taken, the system would continue to operate as it currently does. This includes all the problems associated with bottlenecks, dead ends, low pressures, high energy costs, and the potential loss of service due to lack of a backup power source.

2.4.2 Evaluation of Alternatives 2.2.2 through 2.2.13. All of these project elements were compared with the proposed project. Factors considered in the evaluation of these alternatives include cost, system priority, system benefits, and funding eligibility. The

2.4.3 Evaluation of Alternative 2.2.14 – Proposed Project. This option would eliminate the problems currently experienced in the system. It would increase pressure and allow for consistent distribution from zone one to zone 2. It would remove a bottleneck in the system and reduce O&M costs associated with the North Tank.

2.4.4 Evaluation of Alternative 2.2.15 – Trenchless Pipe Installation. The various methods of trenchless pipe installation are usually employed in urban areas where open cut construction is an undesirable option. Because it is often more expensive than open cut, it is generally more cost-effective in areas where restoration and environmental mitigation requirements are extensive, which is not a concern with this project since the majority of the project is next to rural roads in previously disturbed areas. Additional concerns include:

- Pipe lining reduces the existing diameter. The existing pipe is already too small.
- Pipe bursting can cause soil movements that damage other utilities and even roads.
- Directional boring can be inaccurate and include low spots in piping.
- All methods do not allow for visual inspection of grade and bedding.
- All methods are generally more expensive than traditional open cut.

A construction firm that has experience with pipe bursting was consulted regarding the procedure. It was eliminated as a feasible alternative for the following reasons:

Bursting pipe from smaller diameters to an 8 inch diameter at depths less than 6 feet may result in heaving at the surface. Also, the cost may be prohibitive. Any company that does pipe bursting must pay royalty fees. The estimates for pipe bursting 6 and 8 inch pipe would be in the range of \$60 to \$70 per foot, and that is just for the main line.

Alternative 2.2.3 would only be an option in areas where traditional open cut excavation is not possible including areas under existing structures. Since most of the construction would take place in existing, previously disturbed right-of-ways, trenchless installation would not be necessary.

2.5 Selected Alternative

Alternative 2.2.14, the proposed action, is the recommended alternative. It would address health and sanitation and O&M requirements related to low pressures, dead-ends, bottlenecks, and emergency supply of water.

3.0 AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES

3.1 Land Use/Important Farmland / Formally Classified Lands

3.1.1 Affected Environment. There are no important farmlands, forest lands, national landmarks or Wilderness areas located within the proposed project area. See Section 6 for forest map and Nevada Natural Landmark webpage. See Section 5 for correspondence with the NRCS.

Regarding rangelands, there are allotments and herd areas near the proposed project area but not in it. All of the project will take place in previously disturbed, populated areas, near existing roads and therefore will have no effect on nearby rangelands. See section 6 for BLM rangeland map.

In summary, the proposed project will not require any change of use for the land involved and the proposed project conforms to existing area land uses.

3.1.2 Environmental Consequences. No environmental consequences are anticipated.

3.1.3 Mitigation. No mitigation will be required.

3.2 Floodplains

3.2.1 Affected Environment. The flood zones for this area have been mapped by the Federal Emergency Management Agency (FEMA). The various project elements fall under Zones A, AE, and X and are found on the Flood Insurance Rate Maps for Lyon County, Nevada, Panel Numbers 32019C0 211E, 212E, and 213E with effective dates of January 16, 2009.

For reference, the following flood hazard zone designations are provided:

- **X (Unshaded)** - Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level. Zone C may have ponding and local drainage problems that don't warrant a detailed study or designation as base floodplain. Zone X is the area determined to be outside the 500-year flood and protected by levee from 100-year flood.
- **A** - Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.
- **AE** - The base floodplain where base flood elevations are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones.

See FEMA Firm maps for Silver Springs in Section 6. Note that the 500 year floodplain is not shown on the FEMA maps included in the Appendix. However, all

construction will be in conformance with local and federal floodplain requirements. See Section 5 for correspondence with Lyon County Floodplain manager Rob Loveberg.

3.2.2 Environmental Consequences. No environmental consequences are anticipated.

3.2.3 Mitigation. None of the construction will have any effect on the floodplain since all construction will be subsurface. Also none of the project elements I would be damaged in the event of a flood. No mitigation will be necessary.

3.3 Wetlands

3.3.1 Affected Environment. There are no wetlands located in the project area

3.3.2 Environmental Consequences. No environmental consequences are anticipated.

3.3.3 Mitigation. No mitigation will be necessary.

3.4 Cultural Resources

3.4.1 Affected Environment. The National Register of Historical Places lists the following locations as historical sites in Lyon County:

TABLE 3.1

Historical Sites in Lyon County		
Historic Place	Historic Significance	Location
Buckland Station	Building	Weeks vicinity
East Walker River Petro glyphs	Site	Yerington vicinity
Fernley and Lassen Railway Depot	Building	675 E Main Street, Fernley
Fernley Community Church	Building	80 South Center Street, Fernley
*Fort Churchill	District	US 95A, Weeks vicinity
I.O.O.F. Building	Building	1 S. Main Street, Yerington
Lyon County Courthouse	31 S. Main Street, Yerington	31 S. Main Street, Yerington
Yerington Grammar School	Building	112 N. California Street, Yerington
Yerington Main Post Office	PO's in NV MPS	28 N. Main Street, Yerington
**Caples Robert House	Building	175 Silver Street, Dayton
**Chinese Residence	Building	65 E Silver Street, Dayton
**Stockton Well Station	Site	Spruce Avenue, Silver Springs

Note:
 * NATIONAL HISTORIC LANDMARK
 ** STATE HISTORIC LANDMARK

3.4.2 Environmental Consequences. None of the historical sites listed in the national register of historic places are located in or near the proposed project area. The State Historic Preservation Office (SHPO) would concur with a determination of “no properties effected” from the USDA (see correspondence in Section 5). Additionally, the USDA contacted the local tribes and no concerns have been expressed regarding the project.

3.4.3 Mitigation. No mitigation will be required.

3.5 Biological Resources

3.5.1 Affected Environment

Animals, Plants and Lichens

The Nevada Department of Conservation and Natural Resources has developed a list of sensitive animals and sensitive plants and lichens. The list is divided by Counties in Nevada and gives a brief description of the endangered/threatened status, and whether or not the species is protected under NRS 501. It is not likely any natural habitats will be affected by the proposed project (see correspondence with Nevada Dept. of Wildlife in section 5.0). Two plant species are present in Lyon County which are protected under N.R.S. The *Opuntia pulchella* (Sand Cholla) is protected under N.R.S. 527.060-.120 as a cactus, yucca, or Christmas tree and the *Polycytenium williamsiae* (Williams Combleaf) is protected under N.R.S. 527.260-.300 as a critically endangered-species threatened with extinction. The following table summarizes those mammals and birds present in Lyon County that have been identified by the Nevada Department of Conservation and Natural Resources Natural Heritage Program as sensitive and that are protected under NRS 501. See Section 5 for correspondence with the Natural Resources Natural Heritage Program. Also see section 6 for a copy of the Lyon County Rare Species list.

Mark Freese of the Nevada Department of Wildlife (NDOW) indicated the NDOW has no wildlife concerns and directed that U.S. Fish and Wildlife (USFW) should be contacted regarding threatened, endangered, and critical habitat.

USFW was contacted and directed that the Nevada Natural Heritage Program (NNHP) should be consulted regarding the project. The heritage program indicated that there are no at risk taxa recorded within the project area. Eric Miskow of NNHP recommended that Chet Van Dellen of NDOW be contacted regarding the project. Mr. Van Dellen indicated that the area had had been analyzed for the environmental assessment revised August 2011. See correspondence in Section 5.

TABLE 3.2

Species	Taxon Name	Vernacular Name
MAMMALS	<i>Euderma maculatum</i>	Spotted Bat
	<i>Lontra canadensis</i>	River Otter
	<i>Ochotona princeps</i>	American Pika
BIRDS	<i>Accipiter gentilis</i>	Northern Goshawk
	<i>Athene cunicularia hypugaea</i>	Western Burrowing Owl
	<i>Buteo regalis</i>	Ferruginous Hawk
	<i>Buteo swainsoni</i>	Swainson's Hawk
	<i>Centrocercus urophasianus</i>	Sage Grouse
	<i>Coccyzus americanus occidentalis</i>	Western Yellow-billed Cuckoo
	<i>Charadrius alexandrinus nivosus</i>	Western Snowy Plover
	<i>Falco peregrinus</i>	Peregrine Falcon
	<i>Strix occidentalis</i>	California Spotted Owl
	<i>Baeolophus griseus</i>	Juniper Titmouse
	<i>Chlidonias niger</i>	Black Tern
	<i>Falco mexicanus</i>	Prairie Falcon
	<i>Gymnorhinus cyanocephalus</i>	Pinyon Jay
	<i>Charadrius montanus</i>	Mountain Plover
	<i>Wilsonia pusilla</i>	Wilson's Warbler
	<i>Haliaeetus leucocephalus</i>	Bald Eagle (contiguous US pop)
	<i>Otus flammeolus</i>	Flammulated Owl
	<i>Plegadis chihi</i>	White-faced Ibis
	<i>Lanius ludovicianus</i>	Loggerhead Shrike
	<i>Agelaius tricolor</i>	Tricolored Blackbird
	<i>Aquila chrysaetos</i>	Golden Eagle
	<i>Asio flammeus</i>	Short-eared Owl
	<i>Asio otus</i>	Long-eared Owl
	<i>Dendroica petechia</i>	Yellow Warbler
	<i>Geothlypis trichas</i>	Common Yellowthroat
	<i>Icteria virens</i>	Yellow-breasted Chat
	<i>Melanerpes lewis</i>	Lewis' Woodpecker
	<i>Numenius americanus</i>	Long-billed Curlew
	<i>Oporornis tolmiei</i>	Macgillivray's Warbler
	<i>Pandion haliaetus</i>	Osprey
	<i>Pelecanus erythrorhynchos</i>	American White Pelican
	<i>Pooecetes gramineus</i>	Vesper Sparrow
	<i>Sphyrapicus nuchalis</i>	Red-naped Sapsucker
<i>Vermivora celata</i>	Orange-crowned Warbler	

Weeds

The following summarizes the Nevada Department of Agriculture (NDOA) policy statement regarding noxious weed abatement statutes NRS 555.005-201:

A noxious weed is a plant that has been defined as a pest by law or regulation. In Nevada, if a plant is found to probably be "detrimental or destructive and difficult to control or eradicate" (Nevada Revised Statute 555.005), the NDOA, with approval of the Board of Agriculture, will designate the plant as a noxious weed.

It is the NDOA's policy to use the "Noxious Weed Tier System" to determine what action is to be taken consistent with existing statutes which include authority for: the promulgation of quarantine, abatement for eradication and/or control; holding and inspecting; establishing weed control districts; and for other regulatory activities. At the time that the NDOA lists a species, it will also give a rating of A, B, or C. These ratings reflect the NDOA's view of the statewide importance of the noxious weed, the likelihood that eradication or control efforts would be successful, and the present distribution of noxious weeds within the state. These lists will be in the Nevada Administrative Code (NAC 555.010).

The following defines the NDOA weed ratings:

"A" Weeds normally limited in distribution throughout the state; actively excluded from the state and actively eradicated wherever found; actively eradicated from nursery stock dealer premises; control required by the state

"B" Weeds more widespread throughout the state; actively excluded where possible, actively eradicated from nursery stock dealer premises; control required by the state in areas where populations are not well established or previously unknown to occur

"C" Weeds generally widespread throughout the state; actively eradicated from nursery stock dealer premises; abatement at the discretion of the state quarantine officer.

Table 3.3 is the NDOA weed list with weeds classified according to rating.

TABLE 3.3

Weeds		
	COMMON NAME	SCIENTIFIC NAME
CATEGORY A WEEDS	African Rue	Peganum harmala
	Austrian fieldcress	Rorippa austriaca
	Austrian peaweed	Sphaerophysa salsula / Swainsona salsula
	Camelthorn	Alhagi camelorum
	Common crupina	Crupina vulgaris
	Dalmation Toadflax	Linaria dalmatica
	Dyer's woad	Isatis tinctoria
	Eurasian water-milfoil	Myriophyllum spicatum
	Giant Reed	Arundo donax
	Giant Salvinia	Salvinia molesta
	Goats rue	Galega officinalis
	Houndstongue	Cynoglossum officinale
	Hydrilla	Hydrilla verticillata
	Iberian Star thistle	Centaurea iberica
	Klamath weed	Hypericum perforatum
	Leafy spurge	Euphorbia esula
	Malta Star thistle	Centaurea melitensis
	Mayweed chamomile	Anthemis cotula
	Mediterranean sage	Salvia aethiopis
	Purple loosestrife	Lythrum salicaria, L.virgatum and their cultivars
	Purple Star thistle	Centaurea calcitrapa
	Rush skeletonweed	Chondrilla juncea
	Sow Thistle	Sonchus arvensis
	Spotted Knapweed	Centaurea masculosa
	Squarrose star thistle	Centaurea virgata Lam. Var. squarrose
	Sulfur cinquefoil	Potentilla recta
	Syrian Bean Caper	Zygophyllum fabago
	Yellow Starthistle	Centaurea solstitialis
Yellow Toadflax	Linaria vulgaris	
CATEGORY B WEEDS	Carolina Horse-nettle	Solanum carolinense
	Diffuse Knapweed	Centaurea diffusa
	Medusahead	Taeniatherum caput-medusae
	Musk Thistle	Carduus nutans
	Russian Knapweed	Acroptilon repens
	Sahara Mustard	Brassica tournefortii
	Scotch Thistle	Onopordum acanthium
	White Horse-nettle	Solanum elaeagnifolium
CATEGORY C WEEDS	Black henbane	Hyoscyamus niger
	Canada Thistle	Cirsium arvense
	Green Fountain grass	Pennisetum setaceum
	Hoary cress	Cardaria draba
	Johnson grass	Sorghum halepense
	Perennial pepperweed	Lepidium latifolium
	Poison Hemlock	Conium maculatum
	Puncture vine	Tribulus terrestris
	Salt cedar (tamarisk)	Tamarix spp

3.5.2 Environmental Consequences. None of the proposed construction activities will have any environmental impact on any of the above listed species or their habitat.

3.5.3 Mitigation.

3.5.3.1 *Weeds*

Some mitigation may be required in order to prevent the spread of invasive weeds during and after construction of the proposed project. Mitigation may include the creation of a weed prevention plan to be implemented by the contractor. The plan should include provisions similar to the following:

- Identify and flag all noxious and invasive weed populations present in the project area
- Treat or contain any weed populations that may be impacted or disturbed by construction activity
- Provide training to construction workers and equipment operators on the identification of weeds to be avoided
- Certify that all construction material sources are weed-free
- Minimize ground disturbance and vegetation removal as much as possible and practical
- Re-vegetate or otherwise prevent the establishment of weeds in all areas of the job site.

3.5.3.2 *Carson Wandering Skipper (Pseudocopa eunus obscurus)*

The Carson wandering skipper is endangered under the ESA. The species is locally distributed in grassland habitats on alkaline substrates in Nevada and California. Habitat generally appears to be located east of the Sierra Nevada at elevations less than 5,000 feet with the presence of salt grass, nectar sources, and open areas near springs or geothermal water bodies. Nectar sources depend on various environmental conditions and are likely transitory (USFWS 2008j). The species is currently known from only two populations, one at Winnemucca Ranch in Washoe County, Nevada (observed 1998), and one in Lassen County, California (observed 1998) (BFCI 2008, USFWS 2008j).

The Carson wandering skipper would not be directly affected by habitat removal from pipeline construction activity and permanent facilities (no loss of habitat would occur). There are no springs in the proposed construction area and all areas have been previously disturbed (along roadways and at the airport). The disturbances would be minor; a total of approximately 2 acres spread out over 4 miles. Additionally, all areas disturbed as a result of the project would be returned to their original condition

3.5.3.3 Migratory Birds

Land disturbing construction and vegetation clearing activities will be scheduled outside of the breeding season (March 15 through July 30 - in upland desert habitats and ephemeral washes containing upland species and March 1 through August 30 – in riparian and higher elevation areas). Where construction is required during the breeding season, the area impacted will be surveyed for nests prior to construction. If no nests are found, construction could proceed. Project area surveys will be done to ensure 100 percent coverage. Methods will be selected based on the plant community and/or topography. Field notes and reports will thoroughly describe methodology and rationale for use and archived.

If active migratory bird nests (i.e. contains eggs or young) are encountered during the surveys, land disturbing construction activities will be avoided while the birds are allowed to fledge. An appropriate construction avoidance buffer area, to be determined for the species and in conjunction with the BLM, will apply to all active nests for migratory bird species.

3.6 Water Quality Issues

3.6.1 Affected Environment. One of the benefits of the project will be a reduction in potential contamination sources. The replacement of old water distribution lines would help reduce or eliminate potential contamination caused by dead ends and line breaks.

The Nevada Department of Environmental Protection (NDEP) requires construction stormwater permits under the following conditions:

- Construction activity defined under Category X of 40 CFR §122.26(b)(14).

40 CFR 122.26(b)(14)(X) states:

“Construction activity including clearing, grading and excavation, except operations that result in the disturbance of less than five acres of total land area. Construction activity also includes the disturbance of less than five acres of total land area that is a part of a larger common plan of development or sale if the larger common plan will ultimately disturb five acres or more;”

The project will include less than 5 acres and thus will not require a storm water permit.

See Section 5 for correspondence with the Nevada Division of Environmental Protection Bureau’s of Water Pollution Control and Safe Drinking Water.

Sole Source Aquifers According to the U.S. EPA, there are no designated sole source aquifers in Nevada. See maps in Section 6.

3.6.2 Environmental Consequences. No environmental consequences are anticipated.

3.6.3 Mitigation. No mitigation will be required.

3.7 Coastal Resources

3.7.1 Affected Environment. Not applicable as the project location is over 200 miles from the nearest coastline.

3.7.2 Environmental Consequences. No environmental consequences are anticipated.

3.7.3 Mitigation. No mitigation will be required.

3.8 Socio-Economic/Environmental Justice Issues

3.8.1 Affected Environment. The proposed project includes the replacement of existing deteriorated water distribution lines and appurtenances. The project will have no disproportionately high or adverse human health or environmental effects to minority or low-income populations. In fact it will improve the water distribution system to the extent that all Silver Springs residents will benefit from its implementation.

The socio-economic make-up of the area will not be affected. No part of the project will require a land use change. With few exceptions, new proposed pipelines will be installed in the alignments of the existing lines running parallel to roads. Land uses in the area of the project are commercial and residential. All pipelines will be installed in existing right-of-ways.

3.8.2 Environmental Consequences. No environmental consequences are anticipated.

3.8.3 Mitigation. No mitigation will be required.

3.9 Miscellaneous Issues

3.9.1 Air Quality. It is not anticipated that air quality will be adversely affected in any way. Equipment emissions will have an initial effect on air quality but it will be temporary. Table 3.4 is a list of the equipment and vehicles used during the project. Note that generally no more than three of these is in operation at the same time. Dust generated by project activity is also expected to be minimal. This is because the amount of soil being disturbed at any time will be less than 1/10 of an acre and will be accompanied by dust suppression activities. The project conforms to the EPA-approved State Implementation Plan (SIP) per the Nevada Department of Conservation and Natural Resources, Division of Environmental Protection. See Section 5 for correspondence.

TABLE 3.4

1) Loader
2) Mini Excavator
3) 10 Wheel (haul truck)
4) Double Drum Vibratory Roller
5) Motor Grader
6) Asphalt Grinder
7) Fuel Truck

3.9.2 Transportation. Most of the pipeline will be installed along the road shoulders. While undergoing improvements, the road will be kept open to all traffic unless otherwise provided for in the contract documents.

Project activities will take place on roads with very little traffic. Any interruption caused by construction will be temporary. None of the project elements will have a long-term effect on transportation.

Part of the project will pass through NDOT road shoulders. This will also require permitting.

See Section 5 for transportation related correspondence.

3.9.2.1 Environmental Consequences. No environmental consequences are anticipated.

3.9.2.2 Mitigation. If the usable roadway is not sufficient to safely accommodate two-way traffic, one-way traffic will be maintained. Work will be conducted in such a manner as to obstruct and inconvenience traffic as little as possible. Existing travel roads and streets adjacent to or within the limits of the improvement will be kept open and in a good, dust free and safe condition for traffic at all times. Work will be performed in a manner to assure full compliance with all applicable Federal, State and local laws and regulations governing safety, health and sanitation. Adequate safeguards, safety devices, and protective equipment will be provided to conform to the MUTCD. Safe, temporary access to business and residence driveways will be provided by temporary intersections, and temporary connections with roads, streets, bikeways, sidewalks, and footpaths.

If the design requires that any of the work take place within Nevada Department of Transportation Right-of-Ways, all necessary permits will be obtained prior to construction. Likewise, all permits required for work within railroad property will be obtained prior to construction.

3.9.3 Noise. Except for the construction activities none of the alternatives are expected to cause long term noise problems. Regarding noise resulting from construction activities, most of the construction will be done in areas that are far from residential and/or commercial structures. Additionally the following practices will be observed during construction:

1. Construction activities will be done during normal working hours between 7:00 am and 5:00 pm.
2. Quieter methods or equipment will be used when possible
3. All equipment will be required to have efficient mufflers
4. Only equipment of necessary size and power will be used
5. All equipment will be properly lubricated and well maintained.

3.9.4 Hazardous Material and Waste. All of the project elements will take place in previously disturbed areas. No hazardous materials or waste are known to exist within the project area nor will any be generated in the construction process.

3.9.4.1 Environmental Consequences. No environmental consequences are anticipated.

3.9.4.2 Mitigation. No mitigation will be required.

4.0 SUMMARY OF MITIGATION

Some biological mitigation may be required for weeds. Also, some traffic mitigation may be necessary during construction (see Section 3.9.2.2). Otherwise, no potentially significant environmental impacts were discovered during the environmental investigation for this project. Therefore, standard construction practices and permitting should be sufficient to protect the affected environment. These practices include halt and notify provisions for the discovery of historic artifacts, limits on hours of operation, and noise, air, and traffic abatement procedures.

5.0 CORRESPONDENCE

This section included correspondence from the following State and Federal entities:

- Lyon County Floodplain Manager
- Nevada Historic Preservation Office
- Nevada State Division of Water Resources, Engineering
- Nevada Division of Environmental Protection (Safe Drinking Water)
- Nevada Division of Environmental Protection, Division of Clean Air
- Nevada Department of Wildlife
- Nevada Natural Heritage Program
- United States Fish and Wildlife Service
- Nevada Division of Environmental Protection (Water Pollution Control)
- Natural Resources Conservation Service (NRCS)
- Nevada Department of Transportation
- Nevada Public Utilities Commission



LYON COUNTY
PLANNING DEPARTMENT

27 SOUTH MAIN STREET, YERINGTON, NEVADA 89447
(775) 463-6592 (775) 463-6596 FAX

ROBERT G. LOVEBERG
PLANNING DIRECTOR

October 11, 2012

VIA EMAIL

Dan Sommers
Farr West Engineering
5442 Longley Lane, Suite B
Reno, Nevada 89511

RE: Silver Springs Mutual Water Company (SSMWC) Water System Improvements Project

Dear Dan:

In response to your letter of August 31, 2012, the following information is provided:

- The project area contains portions that are within the AE Special Flood Hazard Zone, portions within a Floodway in the AE Special Flood Hazard Zone, and portions that are within the X Flood Hazard Zone. The project area is contained on Flood Insurance Rate Map (FIRM) Panels 32019C0211E, 32019C0212E and 32019C0213E for Lyon County, Nevada. The FIRMs have an effective date of January 16, 2009.
- There do not appear to be significant potential environmental effects from the proposed project. The project area lies within a developed community. The proposed project components do not entail substantial disturbance to undeveloped areas.
- All new construction within the Special Flood Hazard zones must comply with Title 12 of the Lyon County Code. A Floodplain Development permit(s) may be required for some locations and proposed improvements of the project.
- All construction must comply with adopted building codes, public works standards and other regulations. At a minimum, building and encroachment permits must be issued prior to construction.

The proposed SSMWC Water System Improvements Project is compatible with State and local government and private programs and policies regarding construction within the proposed project area and designated floodplains.

Please contact me if you have any questions or need additional information.

Sincerely,

/s/ Rob Loveberg

Robert G. Loveberg
Planning Director

FARR WEST

ENGINEERING

August 31, 2011

Rob Loveberg
Lyon County Planning Director
27 S. Main Street
Yerington, Nevada 89447

RE: Silver Springs Mutual Water Company (SSMWC) Water System Improvements Project

Dear Mr. Loveberg,

SSMWC is in the process of performing an environmental review pursuant to the National Environmental Policy Act for the USDA, Rural Utilities Service in order that it may assess the environmental impacts of distribution system improvements in Silver Springs, Nevada. The project is being proposed to replace old water lines and improve water delivery capacity. Enclosed is a map that depicts the proposed projects area of potential effect for all construction activities.

We are requesting information pertaining to floodplains within the proposed project area and any potential effects of the proposed project and any recommendations you have to minimize or avoid these effects. We also seek your assessment of the compatibility of the proposed project with State and local government or any private programs and policies regarding construction within the proposed project area and designated floodplains.

The project components are as follows:

1. Drill a new well at the Deodar well site with new connection vaults, pump controls and a submersible pump/motor.
2. Install VFD on the Idaho well.
3. Purchase and install a backup generator at the booster site and one trailer mounted backup generator for use at both the Idaho or Deodar Well sites.
4. Purchase and remodel a shop at 2359 Ft Churchill.
5. Construct a new 1 million gallon tank at the existing north tank site.
6. Loop the end of Fort Churchill St, Pueblo St, Donner St, Tonopah St, Tuscarora St, and Eureka St on Elko St. with 6" lines. Also loop Ft Churchill, Pueblo, and Donner on Virginia Ave/Truckee St.
7. Make ADA improvements to existing office including bathrooms and doorways.
8. As an alternate, replace the existing 4" Ft Churchill Line with a new 12" line

We would appreciate a response within 30 days. If you need further information or wish to discuss the project, please contact Mr. Dan Sommers of Farr West Engineering at 775-851-4788

Sincerely,

A handwritten signature in black ink that reads "Dan Sommers". The signature is written in a cursive, flowing style with a large initial "D".

Dan Sommers
Farr West Engineering

Enc.

c: Roy Macdonald, SSMWC
USDA Rural Utilities Service

LEO M. DROZDOFF, P.E.
Director
Department of Conservation and
Natural Resources

RONALD M. JAMES
State Historic Preservation Officer

BRIAN SANDOVAL
Governor

STATE OF NEVADA



Address Reply to:
901 S Stewart Street, Suite 5004
Carson City, NV 89701-5248
Phone: (775) 684-3448
Fax: (775) 684-3442

www.nvshpo.org

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION OFFICE

October 5, 2012

Dan Sommers
Farr West Engineering
5442 Longley Lane, Suite B
Reno, NV 89511

RE: *Silver Springs Mutual Water Company (SSMWC) Water System Improvements Project, Lyon County, Nevada.*
Undertaking #2011-1562.

Dear Mr. Sommers:

The Nevada State Historic Preservation Office (SHPO) reviewed the subject undertaking. In order to determine the archaeological sensitivity of the project area, the SHPO consulted the online statewide archaeological inventory, historic documents, and the Lyon County Assessors Records. According to these records, the project area has not been completely inventoried for cultural resources and no sites have been recorded in the project area. According to your letter, the property is disturbed. The SHPO would not recommend an archaeological inventory for the proposed undertaking. According to the Lyon County Assessors' records, the two properties that will have aboveground improvements to buildings (the existing office on Ft Churchill St and the shop at 2359 Ft Churchill St) are not 50 years of age nor are any structures/buildings on the associated blocks. The project area has been recently developed and no historic architectural resources are likely to be present in the project area.

The SHPO would concur with a USDA Rural Utility Service determination that the proposed undertaking will not pose an effect to any historic properties.

If you have any questions concerning this correspondence, please contact Jessica Axsom by phone at (775) 684-3445 or by e-mail at jaxsom@shpo.nv.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Rebecca Lynn Palmer".

Rebecca Lynn Palmer, Deputy
State Historic Preservation Officer



August 31, 2011

Rebecca Lynn Palmer, Historic Preservation Specialist
Nevada State Historic Preservation Office
100 N. Stewart Street
Carson City, NV 89701

RE: Silver Springs Mutual Water Company (SSMWC) Water System Improvements Project

Dear Ms. Palmer,

SSMWC is in the process of performing an environmental review pursuant to the National Environmental Policy Act for the USDA, Rural Utilities Service in order that it may assess the environmental impacts of water distribution system improvements in Silver Springs, Nevada. The project is being proposed to replace old water lines and improve water delivery capacity. Enclosed is a map that depicts the proposed projects area of potential effect for all construction activities.

The project components are as follows.

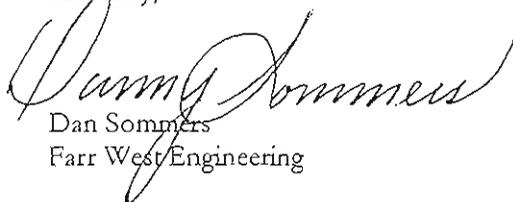
1. Drill a new well at the Deodar well site with new connection vaults, pump controls and a submersible pump/motor.
2. Install Variable Frequency Drive on the Idaho well pump.
3. Purchase and install a backup generator at the booster site and one trailer mounted backup generator for use at both the Idaho or Deodar Well sites.
4. Purchase and remodel a shop at 2359 Ft Churchill.
5. Construct a new 1 million gallon tank at the existing north tank site.
6. Loop the end of Fort Churchill St, Pueblo St, Donner St, Tonopah St, Tuscarora St, and Eureka St on Elko St. with 6" lines. Also loop Ft Churchill, Pueblo, and Donner on Virginia Ave/Truckee St.
7. Make ADA improvements to existing office including bathrooms and doorways.
8. As an alternate, replace the existing 4" Ft Churchill Line with a new 12" line

After the new pipe is installed it will be invisible to the public. All pipe installation will take place in previously disturbed areas in existing right-of-ways. All construction will be subsurface and there will be no visual impact to the surrounding environment.

SSMWC requests the assistance of your office in identifying historic properties that are listed or eligible for listing on the National Register of Historic Places and that may be affected by the project elements. Please provide any recommendations you may have to mitigate or avoid these impacts, to properties that may be affected.

We would appreciate a response within 30 days. If you need further information or wish to discuss the project, please contact Dan Sommers of Farr West Engineering at 775-851-4788.

Sincerely,

A handwritten signature in cursive script that reads "Dan Sommers". The signature is written in black ink and is positioned above the printed name and company information.

Dan Sommers
Farr West Engineering

Enc.

c: Roy Macdonald, SSMWC
USDA Rural Utilities Service



**DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF WATER RESOURCES**

901 South Stewart Street, Suite 2002

Carson City, Nevada 89701-5250

(775) 684-2800 • Fax (775) 684-2811

<http://water.nv.gov>

September 12, 2012

Dan Sommers
Farr West Engineering
5442 Longley Lane, Suite B
Reno, NV 89511

Re: Silver Springs Mutual Water Company (SSMWC) Water System Improvements Project

Dear Mr. Sommers:

This letter is in response to your letter received September 7, 2012, regarding the Silver Springs Mutual Water Company (SSMWC) Water System Improvements Project, being a request for information on possible impacts resulting from the upcoming construction.

If a replacement well is drilled, then the existing well must be plugged and sealed as required under Nevada Administrative Code (NAC) § 534.300. All drilling and plugging must be performed by a licensed well driller in accordance with Nevada Revised Statutes (NRS) Chapter 534 and NAC Chapter 534, who must submit to this office a notice of intent to drill for their activity. The replacement well must be within 300 feet of and in the same quarter-quarter section as the point of diversion of the water right permits authorizing the diversion, and well construction must comply with the terms of said permits.

It appears from the description in the letter and the enclosed map that all improvements are being performed within the place of use of SSMWC's existing water rights. If work would expand the service area, it must remain within the place of use of the existing water rights or a water right permit would have to be approved prior to serving water to the new area.

Please be aware that all waters of the State belong to the public and may be appropriated for beneficial use pursuant to the provisions under Chapters 533 and 534 of the NRS, and not otherwise. Any water developments constructed and utilized for a beneficial use whether surface or underground must be done so in compliance with the referenced chapters of the NRS.

If you have any questions, please contact the undersigned at (775) 684-2806.

Sincerely,

A handwritten signature in cursive script that reads "Malcolm J. Wilson, P.E.".

Malcolm J. Wilson, P.E.
Water Planning Engineer

MJW/mt



August 31, 2011

Kelvin Hickenbottom, Deputy State Engineer
Nevada Division of Water Resources
Nevada Department of Conservation and Natural Resources
901 S. Stewart St., Suite 2002
Carson City, NV 89701

RE: Silver Springs Mutual Water Company (SSMWC) Water System Improvements Project

Dear Mr. Hickenbottom,

SSMWC is in the process of performing an environmental review pursuant to the National Environmental Policy Act for the USDA, Rural Utilities Service in order that it may assess the environmental impacts of water distribution system improvements in Silver Springs, Nevada. The project is being proposed to replace old water lines and improve water delivery capacity. Enclosed is a map that depicts the proposed projects area of potential effect for all construction activities.

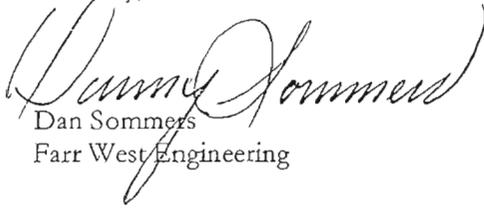
We are requesting information on the possible effects of the proposed project with regard to water rights, water quality, water availability, and any other potential effects of the proposed project. We would appreciate any recommendations you have to minimize or avoid these effects. We also seek your assessment of the compatibility of the proposed project with State and local government or any private programs and policies regarding the environmental impacts of construction within the proposed project area.

The project components are as follows:

1. Drill a new well at the Deodar well site with new connection vaults, pump controls and a submersible pump/motor.
2. Install VFD on the Idaho well.
3. Purchase and install a backup generator at the booster site and one trailer mounted backup generator for use at both the Idaho or Deodar Well sites.
4. Purchase and remodel a shop at 2359 Ft Churchill.
5. Construct a new 1 million gallon tank at the existing north tank site.
6. Loop the end of Fort Churchill St, Pueblo St, Donner St, Tonopah St, Tuscarora St, and Eureka St on Elko St. with 6" lines. Also loop Ft Churchill, Pueblo, and Donner on Virginia Ave/Truckee St.
7. Make ADA improvements to existing office including bathrooms and doorways.
8. As an alternate, replace the existing 4" Ft Churchill Line with a new 12" line

We would appreciate a response within 30 days. If you need further information or wish to discuss the project, please contact Mr. Dan Sommers of Farr West Engineering at 775-851-4788

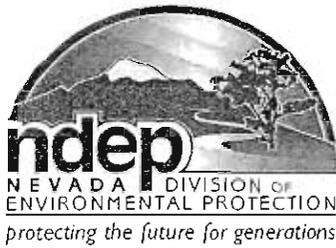
Sincerely,



Dan Sommers
Farr West Engineering

Enc.

c: Roy Macdonald, SSMWC
USDA Rural Utilities Service



STATE OF NEVADA

Department of Conservation & Natural Resources

DIVISION OF ENVIRONMENTAL PROTECTION

Brian Sandoval, Governor

Leo M. Drozdoff, P.E., Director

Colleen Cripps, Ph.D., Administrator

September 28, 2012

Dan Sommers
Farr West Engineering
5442 Longley Lane, Suite B
Reno, Nevada 89511

RE: Environmental Review: Silver Springs Water System Improvements Project
In reply, please refer to plan review number (LY-4362-12)

Dear Mr. Sommers:

The Bureau of Safe Drinking Water (BSDW) has reviewed the information provided by Farr West Engineering on the above referenced project and offers the following comments:

Based on the information provided, the BSDW does not anticipate any negative environmental impacts to the groundwater quality from the construction of the projects that include (1) drilling a new well at the Deodar well site, (2) installing a VFD on the Idaho well, (3) remodeling the shop building, (4) constructing a new 1 million gallon water storage tank, (5) installing new 6-inch water mains, (6) making ADA improvements to existing the office, and (7) abandoning 4-inch water mains and installing a 12-inch water main. However, please be advised that the disposal of any heavily chlorinated water from the disinfection of the new water mains and the water storage tank must be coordinated with the Bureau of Water Pollution Control.

Please be aware that plans and specifications for the project will need to be submitted to the BSDW for review and approval prior to construction.

Please feel free to contact me at (775) 687-9517 if you have any questions or comments. Thank you.

Sincerely,

James R. Balderson, P.E. Engineering Supervisor,
Bureau of Safe Drinking Water
Nevada Division of Environmental Protection

cc: Jennifer Carr, Chief, Bureau of Safe Drinking Water



FARR WEST

ENGINEERING

August 31, 2011

Jim Balderson, Safe Drinking Water Engineering Supervisor
Division of Water Resources
Nevada Department of Conservation and Natural Resources
901 So. Stewart Street, Suite 4001
Carson City, Nevada 89701

RE: Silver Springs Mutual Water Company (SSMWC) Water System Improvements Project

Dear Jim,

SSMWC is in the process of performing an environmental review pursuant to the National Environmental Policy Act for the USDA, Rural Utilities Service in order that it may assess the environmental impacts of water distribution system improvements in Silver Springs, Nevada. The project is being proposed to replace old water lines and improve water delivery capacity. Enclosed is a map that depicts the proposed projects area of potential effect for all construction activities.

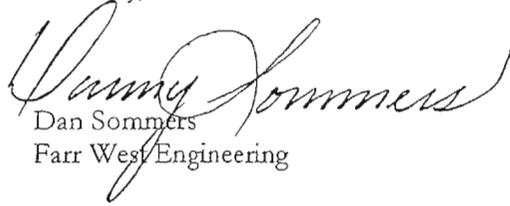
We are requesting information on the possible effects of the above proposed project in which the Bureau determines if the project will have a negative environmental impact and/or any other potential effects with regard to water quality. We would appreciate any recommendations you have to minimize or avoid these effects. We also seek your assessment of the compatibility of the proposed project with State and local government or any private programs and policies regarding the environmental impacts of construction within the proposed project area.

The project components are as follows:

1. Drill a new well at the Deodar well site with new connection vaults, pump controls and a submersible pump/motor.
2. Install VFD on the Idaho well.
3. Purchase and install a backup generator at the booster site and one trailer mounted backup generator for use at both the Idaho or Deodar Well sites.
4. Purchase and remodel a shop at 2359 Ft Churchill.
5. Construct a new 1 million gallon tank at the existing north tank site.
6. Loop the end of Fort Churchill St, Pueblo St, Donner St, Tonopah St, Tuscarora St, and Eureka St on Elko St. with 6" lines. Also loop Ft Churchill, Pueblo, and Donner on Virginia Ave/Truckee St.
7. Make ADA improvements to existing office including bathrooms and doorways.
8. As an alternate, replace the existing 4" Ft Churchill Line with a new 12" line

We would appreciate a response within 30 days. If you need further information or wish to discuss the project, please contact Dan Sommers of Farr West Engineering at 775-851-4788.

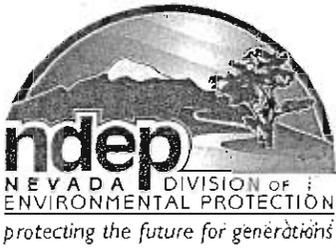
Sincerely,

A handwritten signature in cursive script that reads "Dan Sommers". The signature is written in black ink and is positioned above the printed name and company information.

Dan Sommers
Farr West Engineering

Enc.

c: Roy Macdonald, SSMWC
USDA Rural Utilities Service



STATE OF NEVADA

Department of Conservation & Natural Resources

DIVISION OF ENVIRONMENTAL PROTECTION

Brian Sandoval, Governor

Leo M. Drazdoff, P.E., Director

Colleen Cripps, Ph.D., Administrator

September 17, 2012

Mr. Dan Sommers
Farr West Engineering
5442 Longley Lane, Suite B
Reno, NV 89511

RE: Environmental Review: Water System Improvements Project, Lyon County

Dear Mr. Sommers:

Enclosed you will find the signed environmental review form for the Water System Improvements Project proposed by the Silver Springs Mutual Water Company. The Nevada Division of Environmental Protection, Bureau of Air Quality Planning has reviewed this project for conformance with federal air quality standards, and it will conform to Nevada's Applicable State Implementation Plan. Please note the following requirements that must be complied with during the planning and implementation phases of this project:

1. If during the course of a project an area in excess of five (5) acres is disturbed, a surface area disturbance permit is required from the Bureau of Air Pollution Control (BAPC). If needed, you should contact Jeff Denison, Supervisor, BAPC Permitting Branch at (775) 687-9336 to apply for a permit.
2. Regardless of the size of the disturbed area, fugitive dust emitted from the project must be controlled at all times through the use of best practical methods. These methods can include, but are not limited to: paving, chemical stabilization, watering, phased construction, and revegetation. For assistance with controlling fugitive dust, you may contact Francisco Vega, Supervisor, BAPC Compliance Branch at (775) 687-9343.

If you have any questions on this review you may call me at (775) 687-9356, or e-mail at amalone@ndep.nv.gov.

Sincerely,

Adele K. Malone, Supervisor
Planning and Modeling Branch



ENVIRONMENTAL REVIEW: AIR QUALITY ACT

Grantee: Silver Springs Mutual Water Company Project Name: Water Systems Improvements Project

Pursuant to U.S. Department of Housing and Urban Development, U.S. Department of Commerce, Economic Development Administration or other federal department or agency requirements, as applicable, the grant recipient assumes the responsibility for environmental review, decision making and actions required by local, state, and federal environmental laws or authorities. In order to complete the environmental review requirements, we are requesting the Nevada Division of Environmental Protection's (NDEP) review of the project with respect to the threshold for Air Quality. The pertinent standards for Air Quality include the following criteria, standards, policies and/or regulations:

1. The Clean Air Act (42 U.S.C. 7401 et seq.) as amended; particularly Section 176 (c) and (d) (42 U.S.C. 7506 (c) and (d)).

Please check either line A or B below and add any applicable comments in the space provided. Please feel free to attach any additional comments.

- A. The project conforms to the EPA-approved State Implementation Plan (SIP), per contract with the State Air Quality Management District or Board.
- B. The environmental threshold for Air Quality is exceeded. The project is not in conformance with the Clean Air Act. Negotiate suitable mitigation measures with the Air Quality Management District or Board.

NDEP Comments:

If this project will disturb an area in excess of five (5) acres, a surface area disturbance permit is required before this project is started.

In the event a surface area disturbance permit is required, contact Jeff Dennison, Supervisor, BAPC Permitting Branch at (775) 687-9336.

In accordance with NAC 445B.22037, fugitive dust must be controlled at all times during the implementation of this project.



Signature/Title Adele Malone / Supervisor

9/14/12

Date

Nevada Division of Environmental Protection

FARR WEST

ENGINEERING

August 31, 2011

Adele Malone
Nevada Bureau of Air Quality Planning
901 So. Stewart St., Suite 4001
Carson City, NV 89701

RE: Silver Springs Mutual Water Company (SSMWC) Water System Improvements Project

Dear Ms. Malone,

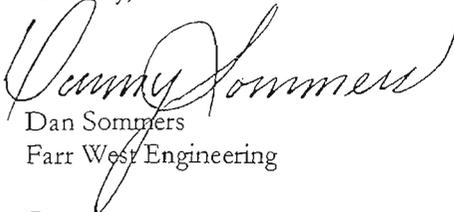
SSMWC is in the process of performing an environmental review pursuant to the National Environmental Policy Act for the USDA, Rural Utilities Service in order that it may assess the environmental impacts of distribution system improvements in Silver Springs, Nevada. The project is being proposed to replace old water lines and improve water delivery capacity. Enclosed is a map that depicts the proposed projects area of potential effect for all construction activities.

We are requesting information on the possible effects of the above proposed project in which the Bureau determines if the project will have a negative environmental impact and/or any other potential effects with regard to air quality. We would appreciate any recommendations you have to minimize or avoid these effects. We also seek your assessment of the compatibility of the proposed project with State and local government or any private programs and policies regarding the environmental impacts of construction within the proposed project area.

The total soil area that will be disturbed during construction is approximately 2.5 acres. Only a small segment (about 0.1 acres) of the total acreage will be disturbed at any one time.

We would appreciate a response within 30 days. If you need further information or wish to discuss the project, please contact Dan Sommers of Farr West Engineering at 775-851-4788.

Sincerely,



Dan Sommers
Farr West Engineering

Enc.

c: Roy Macdonald, SSMWC
USDA Rural Utilities Service

Danny Sommers

From: Mark Freese [markfreese@ndow.org]
Sent: Tuesday, September 11, 2012 8:13 AM
To: Danny Sommers
Subject: Silver Springs Mutual Water Company Water System Improvements Project
Attachments: SC452_WR12091108070.pdf; SC452_WR12091108080.pdf

Danny,

I received your letter regarding the Silver Springs Mutual Water Company Water System Improvements Project. Please direct comments to Steve Abele at US Fish and Wildlife Service regarding threatened, endangered, and critical habitat.

Steve's contact info is:

Steve_Abele@fws.gov; 775 - 861-6300.

NDOW does not have any additional wildlife concerns.

Thanks

Mark Freese
Western Region Supervising Habitat Biologist
Nevada Department of Wildlife
1100 Valley Road
Reno, NV 89512
P: (775) 688-1145
F: (775) 688-1889

"This message is intended only for the named recipient. If you are not the intended recipient you are notified that disclosing, copying, distributing or taking any action in reliance on the contents of this information is strictly prohibited."

From: ndowvalleymfp1@ndow.org [<mailto:ndowvalleymfp1@ndow.org>]
Sent: Tuesday, September 11, 2012 8:09 AM
To: Mark Freese
Subject: NDOW MFP

FARR WEST

ENGINEERING

August 31, 2011

Mark Freese
Western Region Supervising Habitat Biologist
Nevada Department of Wildlife
1100 Valley Road
Reno, NV 89512

RE: Silver Springs Mutual Water Company (SSMWC) Water System Improvements Project

Dear Mr. Freese,

SSMWC is in the process of performing an environmental review pursuant to the National Environmental Policy Act for the USDA, Rural Utilities Service in order that it may assess the environmental impacts of water distribution system improvements in Silver Springs, Nevada. The project is being proposed to replace old water lines and improve water delivery capacity. Enclosed is a map that depicts the proposed projects area of potential effect for all construction activities.

The proposed project additions do not represent a "major construction activity" as defined in 50 CFR 402.02. We request a list of any Federally-listed or proposed threatened or endangered species and designated or proposed critical habitat that may be present in the project area. In addition, please advise us of any present concerns you may have related to possible effects of the project listed below on such species or critical habitat, as well as any other wildlife concerns.

The project components are as follows:

1. Drill a new well at the Deodar well site with new connection vaults, pump controls and a submersible pump/motor.
2. Install VFD on the Idaho well.
3. Purchase and install a backup generator at the booster site and one trailer mounted backup generator for use at both the Idaho or Deodar Well sites.
4. Purchase and remodel a shop at 2359 Ft Churchill.
5. Construct a new 1 million gallon tank at the existing north tank site.
6. Loop the end of Fort Churchill St, Pueblo St, Donner St, Tonopah St, Tuscarora St, and Eureka St on Elko St. with 6" lines. Also loop Ft Churchill, Pueblo, and Donner on Virginia Ave/Truckee St.
7. Make ADA improvements to existing office including bathrooms and doorways.
8. As an alternate, replace the existing 4" Ft Churchill Line with a new 12" line

We would appreciate a response within 30 days. If you need further information or wish to discuss the project, please contact Dan Sommers of Farr West Engineering at 775-851-4788.

Sincerely,



Dan Sommers
Farr West Engineering

Enc.

c: Roy Macdonald, SSMWC
USDA Rural Utilities Service

Danny Sommers

From: Danny Sommers
Sent: Monday, October 22, 2012 11:10 AM
To: 'Chet VanDellen'
Subject: RE: Silver Springs water system improvements adendum

Hi Chet,

Your first analysis is fine. We made some minor changes to the project and I just wanted to run it by you. Also we never have shape files for these at this point in the project. I usually just use sections to make sure the area is sufficiently covered when you do your check.

Thanks for the help,

Danny

From: Chet VanDellen [<mailto:cvandellen@ndow.org>]
Sent: Monday, October 22, 2012 10:32 AM
To: Danny Sommers
Subject: RE: Silver Springs water system improvements adendum

Danny,

It looks like we analyzed this project in May of 2011. I've attached the response we provided then. Do you need another analysis? If so, do you have shapefiles for the project area?

Thanks,

Chet Van Dellen
GIS Coordinator
Nevada Department of Wildlife
1100 Valley Road
Reno, Nevada 89512
775.688.1565

From: Danny Sommers [<mailto:Danny@farrwestengineering.com>]
Sent: Monday, October 15, 2012 3:48 PM
To: Chet VanDellen
Subject: Silver Springs water system improvements adendum

Hi Chet,

I've attached a data request form and map for the above project. Let me know if you have any questions.

Thanks,

Dannycvandellen@ndow.org



Danny Sommers

Farr West Engineering

5442 Longley Lane, Suite B

Reno, Nevada 89511

(775) 851-4788 Main

(775) 853-7265 Direct

(775) 284-3408 Fax



BRIAN SANDOVAL
Governor

STATE OF NEVADA

DEPARTMENT OF WILDLIFE

1100 Valley Road

Reno, Nevada 89512

(775) 688-1500 • Fax (775) 688-1595

KENNETH E. MAYER
Director

RICHARD L. HASKINS, II
Deputy Director

PATRICK O. CATES
Deputy Director

May 24, 2011

Danny Sommers
Farr West Engineering
5442 Longley Lane, Suite B
Reno, Nevada 89511

Re: Silver Springs Water Line Project

Dear Mr. Sommers:

I am responding to your request for information from the Nevada Department of Wildlife (NDOW) on the known or potential occurrence of wildlife resources in the vicinity of the Silver Springs Water Line Project located in Lyon County, Nevada. In order to fulfill your request an analysis was performed using the best available data from the NDOW's wildlife sight records, commercial reptile collections, scientific collections, raptor nest sites and ranges, greater sage-grouse leks and habitat, and big game distributions databases. No warranty is made by the NDOW as to the accuracy, reliability, or completeness of the data for individual use or aggregate use with other data. These data should be considered sensitive and may contain information regarding the location of sensitive wildlife species or resources. All appropriate measures should be taken to ensure that the use of this data is strictly limited to serve the needs of the project described on your GIS Data Request Form. Abuse of this information has the potential to adversely affect the existing ecological status of Nevada's wildlife resources and could be cause for the denial of future data requests.

To adequately provide wildlife resource information in the vicinity of the proposed project the NDOW delineated an area of interest that included a three-mile buffer around the project area provided by you via email (May 19, 2011). Wildlife resource data was queried from the NDOW databases based on this area of interest. The results of this analysis are summarized below.

Big Game – Occupied mule deer distribution exists outside of the project area in the northwestern corner of the three-mile buffer area. Please refer to the attached map for details regarding mule deer distributions relative to the proposed project area. There are no known bighorn sheep, elk, or pronghorn antelope distributions in the vicinity of the project area.

Greater Sage-Grouse – There are no known greater sage-grouse distributions or lek sites in the vicinity of the project area.

Raptors – Various species of raptors, which use diverse habitat types, are known to reside in the vicinity of the project area. American kestrel, bald eagle, barn owl, burrowing owl, Cooper's hawk, ferruginous hawk, golden eagle, great horned owl, long-eared owl, merlin, northern goshawk, northern harrier, northern saw-whet owl, osprey, peregrine falcon, prairie falcon, red-tailed hawk, rough-legged hawk, sharp-shinned hawk, short-eared owl, Swainson's hawk, turkey vulture, and western screech owl have distribution ranges that include the project area and three-mile buffer area. Furthermore, American kestrel, bald eagle, golden eagle, great horned owl, osprey, and red-tailed hawk have been directly observed in the vicinity of the project area.

Raptor species are protected by State and Federal laws. In addition, bald eagle, burrowing owl, ferruginous hawk, northern goshawk, peregrine falcon, short-eared owl, and Swainson's hawk are NDOW species of special concern and are target species for conservation as outlined by the Nevada Wildlife Action Plan.

There are no known raptor nest sites in the vicinity of the project area. However, per the *Interim Golden Eagle Technical Guidance: Inventory and Monitoring Protocols; and Other Recommendations in Support of Golden Eagle Management and Permit Issuance* (United States Fish and Wildlife Service 2010) we have extended our raptor nest database analysis for bald and golden eagle nest site locations to within ten miles of the proposed project area. Three golden eagle nests and no known bald eagle nests exist within ten miles of the project area. The golden eagle nests are located in Township 16 North, Range 24 East, Sections 13 and 15; and Township 19 North, Range 24 East, Section 34.

Other Wildlife Resources

The following species have also been observed in the vicinity of the project area:

bank swallow	Great Basin gophersnake	tiger whiptail
black-crowned night-heron	Great Basin rattlesnake	Townsend's big-eared bat
California gull	Great Basin whiptail	walleye
California kingsnake	greater short-horned lizard	western fence lizard
channel catfish	largemouth bass	western patch-nosed snake
coachwhip	long-nosed leopard lizard	western pipistrelle
common carp	Nevada side-blotched lizard	western rattlesnake
common side-blotched lizard	northern desert horned lizard	western small-footed myotis
desert horned lizard	ring-billed gull	white bass
desert spiny lizard	Sacramento blackfish	white catfish
gophersnake	Sacramento perch	white crappie
gray fox	snowy egret	willet
Great Basin collared lizard	striped bass	yellow perch
Great Basin fence lizard	Tahoe sucker	yellow-backed spiny lizard
	terrestrial gartersnake	zebra-tailed lizard

The above information is based on data stored at our Reno Headquarters Office, and does not necessarily incorporate the most up to date wildlife resource information collected in the field. Please contact the Habitat Division biologist supervisor at our Western Region Reno Office (775.688.1500) to discuss the current environmental conditions for your project area and the interpretation of our analysis.

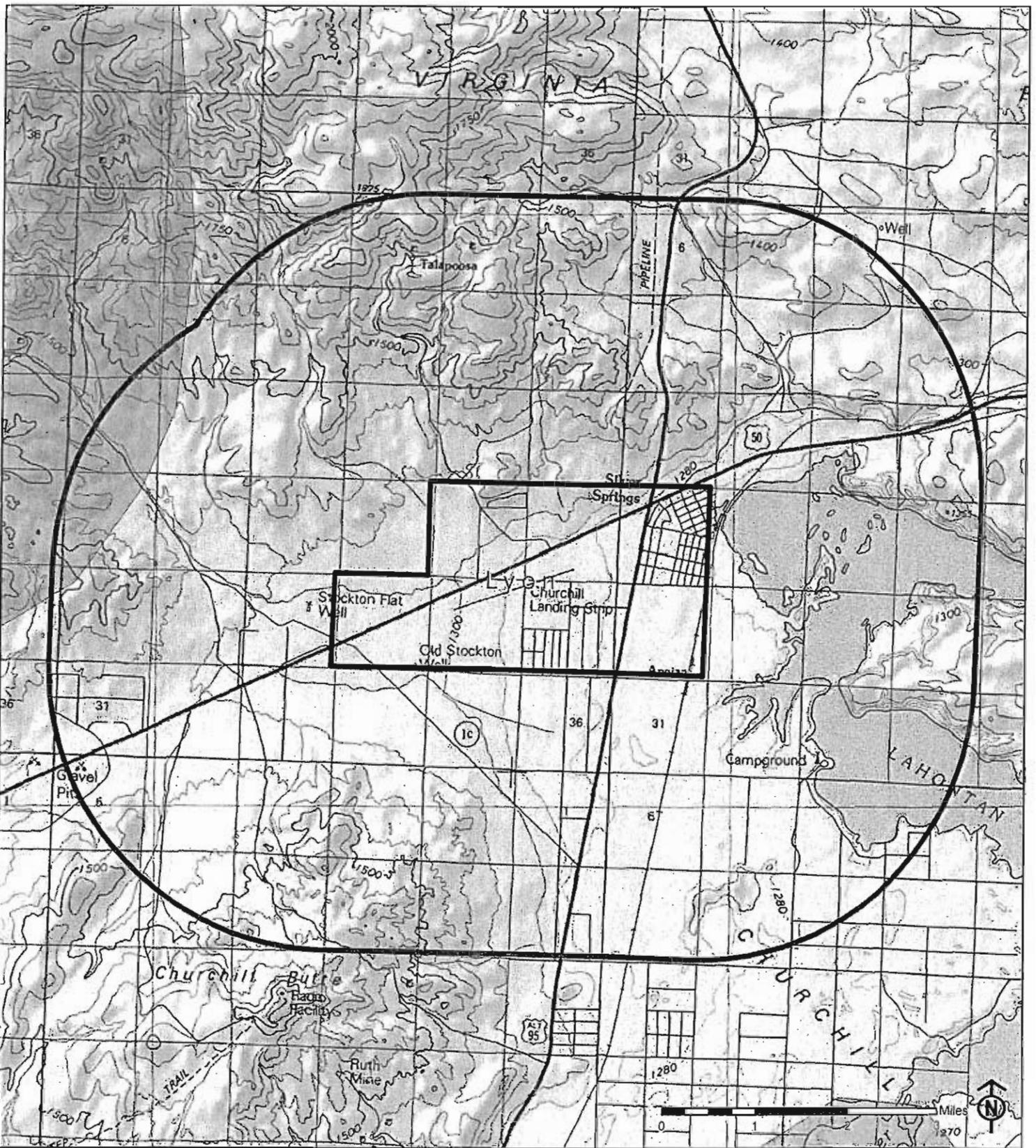
Mark Freese – Western Region Habitat Biologist Supervisor (775.688.1145).

Federally listed Threatened and Endangered species are also under the jurisdiction of the United States Fish and Wildlife Service. Please contact them for more information regarding these species.

If you have any questions regarding the results or methodology of this analysis please do not hesitate to contact our GIS office at (775) 688-1565.

Sincerely,

Timothy Herrick
 Conservation Aide III
 Wildlife Diversity Division



Legend

-  ProjectArea_PLSS
-  ProjectArea_3milebuff
-  Mule Deer Distribution
-  County Boundary



Silver Springs Water Line Project Mule Deer Distribution



May 23, 2011

Projection: UTM Zone 11 North, NAD83

No warranty is made by the Nevada Department of Wildlife as to the accuracy, reliability, or completeness of the data for individual use or aggregate use with other data.



LEO DROZDOFF
Director

Department of Conservation
and Natural Resources

JENNIFER E. NEWMARK
Administrator

BRIAN SANDOVAL
Governor



Nevada Natural Heritage Program
Richard H. Bryan Building
901 S. Stewart Street, suite 5002
Carson City, Nevada 89701-5245
U.S.A.

tel: (775) 684-2900
fax: (775) 684-2909



STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
Nevada Natural Heritage Program
<http://heritage.nv.gov>

04 September 2012

Danny Sommers
Farr West Engineering
5442 Longley Lane, Ste. B
Reno, NV 89511

RE: Data request received 31 August 2012

Dear Mr. Sommers:

We are pleased to provide the information you requested on endangered, threatened, candidate, and/or at risk plant and animal taxa recorded within or near the Silver Springs Water System Improvements Project area in Lyon County. We searched our database and maps for the following, a three kilometer radius around:

Township 18N Range 24E Sections 25 and 26
Township 18N Range 25E Sections 18, 19 and 30

There are no at risk taxa recorded within the given area. However, habitat may be available for: the Nevada suncup, *Camissonia nevadensis*, a Taxon determined to be Vulnerable by the Nevada Natural Heritage Program (NNHP); the western small-footed myotis, *Myotis ciliolabrum*, a Nevada Bureau of Land Management (BLM) Sensitive Species; the Lemmon buckwheat, *Eriogonum lemmonii*, a Taxon determined to be Vulnerable by the NNHP; and the Townsend's big-eared bat, *Corynorhinus townsendii*, a Nevada BLM Sensitive Species. The Nevada Department of Wildlife (NDOW) manages, protects, and restores Nevada's wildlife resources and associated habitat. Please contact Chet Van Dellen, NDOW GIS Coordinator (775.688.1565) to obtain further information regarding wildlife resources within and near your area of interest. Removal or destruction of state protected flora species (NAC 527.010) requires a special permit from Nevada Division of Forestry (NRS 527.270).

Please note that our data are dependent on the research and observations of many individuals and organizations, and in most cases are not the result of comprehensive or site-specific field surveys. Natural Heritage reports should never be regarded as final statements on the taxa or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

Thank you for checking with our program. Please contact us for additional information or further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "Eric S. Miskow".

Eric S. Miskow
Biologist/Data Manager

NEVADA NATURAL HERITAGE PROGRAM DATA REQUEST FORM

rev. W97-2010-11

Use this form to query the Nevada Natural Heritage Program database for sensitive species location information. Please fill out this form as completely and specifically as possible, attaching additional sheets as needed. For more information on available species and data fields, fees, limitations, and restrictions, please visit our web site <<http://heritage.nv.gov>> or contact us for printed information. We cannot guarantee our response time; normal time is about two weeks, and we will strive to (and usually can) meet more urgent deadlines.

Date signed: 8/30/12 Date needed: 9/7/12

Organization: Farr West Engineering

Mailing Address: 5442 Longley Lane, Reno, NV 89511

Phone: 775-853-7265 FAX: 775-284-3408 email: danny@farrwestengineering.com

Project or Site Name: Silver Springs Water System Improvements

How will the information be used? USDA Environmental Assessment

KIND OF SEARCH

(see current fee schedule <<http://heritage.nv.gov/fees.htm>> for descriptions, costs, and examples)

Standard (one-time), OR Annual Subscription: first year continuation

LIMIT SEARCH BY THE FOLLOWING CRITERIA

(check or complete all that apply to ensure you purchase only the records you want)

Location (please specify by township-range-section, map quadrangle, watershed, or other boundaries, and attach map(s) when possible; for GIS requests, submit polygon(s) of area(s) in unprojected [decimal-degree] NAD27 coordinates as ArcView® shapefiles if possible):

T18N, R25E, sect. 18, 19, 30
T18N, R24E, sect. 25, 26

Species: all plants all animals all vertebrates all invertebrates
other (specify groups/taxa): _____

Status: all sensitive all federal T/E/candidate all state T/E all watch list

Additional Limiting Criteria (please specify; see data catalog <<http://heritage.nv.gov/dataflds.htm>> for searchable fields):

FORMAT AND CONTENT OF SEARCH RESULTS

(see fee schedule <<http://heritage.nv.gov/fees.htm>> and data catalog <.../dataflds.htm> for format descriptions and available fields)

Standard Summary Records (name, status, location, precision, date), specify: printed ASCII text file
 OR Complete or Customized (enter desired fields below) Records, specify: printed ASCII text file
 OR ArcView® GIS shapefile (complete records only, excludes long-text fields unless requested below), specify:
projection (none=geographic decimal-degrees): _____ datum (blank=NAD27): _____

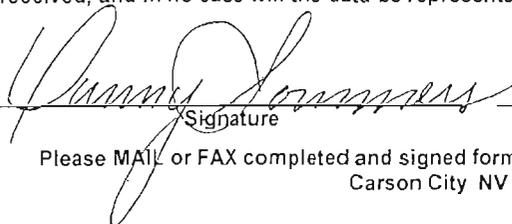
Custom Fields (enter names or types of ALL data fields to include for custom records, or specify "GIS text fields" if needed):

HOW YOU WANT THE RESULTS SENT

Please Send: search results immediately cost estimate first exact cost first
Send by any of the following checked methods: U.S. Mail FAX email FedEx

For FedEx, include PHYSICAL address above, and specify account to charge:

BY SIGNING BELOW, I acknowledge that I have read and agreed to abide by the Nevada Natural Heritage Program's (NNHP's) current fee schedule <<http://heritage.nv.gov/fees.htm>> and its data license agreement <<http://heritage.nv.gov/limitats.htm>>. I also agree that (1) all data supplied, and the analytic tools and processes from which they are derived, are the privileged, confidential property of NNHP, and/or NatureServe Inc., and/or those who supplied the data to NNHP, and will not be provided to any other party without our consent; (2) in any use of the data, NNHP will be cited as a source, along with the year and month it supplied the data; and (3) while NNHP strives for accuracy and completeness, the data it supplies depend on the observations and research of many individuals and organizations, new data are constantly received, and in no case will the data be represented as a complete survey of any species or area.


Signature

Danny Sommers
Name (please print)

Senior Project Manager
Title

Please MAIL or FAX completed and signed form to: Nevada Natural Heritage Program, attn: Data Manager, 901 S. Stewart St, ste. 5002, Carson City NV 89701-5245. FAX (775) 684-2909, phone (775) 684-2900.

Date/Time: Aug. 31. 2012 1:30PM

File No. Mode	Destination	Pg(s)	Result	Page Not Sent
9183 Memory TX	6842909	P. 1	OK	

Reason for error
 E. 1) Hang up or line fail
 E. 2) Busy
 E. 3) No answer
 E. 4) No facsimile connection
 E. 5) Exceeded max. E-mail size

NEVADA NATURAL HERITAGE PROGRAM DATA REQUEST FORM

Use this form to query the Nevada Natural Heritage Program database for sensitive species location information. Please fill out this form as completely and specifically as possible, attaching additional sheets as needed. For more information on available species and data fields, fees, limitations, and restrictions, please visit our web site <http://nheritage.nv.gov> or contact us for printed information. We cannot guarantee our response time; normal time is about two weeks, and we will strive to (and usually can) meet more urgent deadlines.

Date signed: 8/30/12 Date needed: 9/7/12
 Organization: Farr West Engineering
 Mailing Address: 5442 Longley Lane, Reno, NV 89511
 Phone: 775-853-7285 FAX: 775-284-3468 email: danny@farrwestengineering.com
 Project or Site Name: Silver Springs Water System Improvements
 How will the information be used? USDA Environmental Assessment

KIND OF SEARCH
(see current fee schedule <http://nheritage.nv.gov/fees.htm> for descriptions, costs, and examples)
 Standard (one-time), Annual Subscription, first year, continuation

LIMIT SEARCH BY THE FOLLOWING CRITERIA
(check or complete all that apply to ensure you purchase only the records you want)

Location (please specify by town/ship-range section, map quadrangle, watershed, or other boundaries, and attach map(s) when possible; for GIS requests, submit polygon(s) of area(s) in unprojected (decimal degree) NAD27 coordinates as ArcView® shapefiles if possible):
T18N, R25E, sect. 19, 19, 30
T18N, R24E, sect. 25, 26

Species: all plants all animals all vertebrates all invertebrates
 other (specify group(s)): _____
Status: all sensitive all federal TIE/candidate all state T/E all watch list

Additional Limiting Criteria (please specify; see data catalog <http://nheritage.nv.gov/data/fields.htm> for searchable fields): _____

FORMAT AND CONTENT OF SEARCH RESULTS
(see fee schedule <http://nheritage.nv.gov/fees.htm> and data catalog <.../data/fields.htm> for formal descriptions and available fields)

Standard Summary Record(s) (name, status, location, precision, date), specify: printed ASCII text file
 OR Complete or Customized (enter desired fields below) Records, specify: printed ASCII text file
 OR ArcView® GIS shapefile (complete records only, excludes long text fields unless requested below); specify: _____
 projection (nongeographic decimal degrees): datum (NAD83) NAD27
Custom Fields (enter names or types of ALL data fields to include for custom records, or specify "GIS text fields" if needed): _____

HOW YOU WANT THE RESULTS SENT

Please Send: search results immediately cost estimate first exact cost first
 Send by any of the following checked methods: U.S. Mail FAX email FedEx
 For FedEx, include PHYSICAL address above, and specify account to charge: _____

BY SIGNING BELOW, I acknowledge that I have read and agreed to abide by the Nevada Natural Heritage Program's (NNHP's) current fee schedule <http://nheritage.nv.gov/fees.htm> and its data license agreement <http://nheritage.nv.gov/data/fields.htm>. I also agree that (1) all data supplied, and the analytic tools and processes from which they are derived, are the privileged, confidential property of NNHP, and/or NatureServe, Inc., and/or those who supplied the data to NNHP, and will not be provided to any other party without our consent; (2) in any use of the data, NNHP will be cited as a source, along with the year and month it supplied the data; and (3) while NNHP strives for accuracy and completeness, the data it supplies depend on the observations and research of many individuals and organizations, new data are constantly received, and in no case will the data be represented as a complete survey of any species or area.

Danny Scrimners

 Name (please print) Danny Scrimners Title Senior Project Manager

Please FAX or FAX completed and signed form to: Nevada Natural Heritage Program, c/o: Data manager, 901 S. Stewart St, ste. 6092, Carson City, NV 89701-5245, FAX (775) 884-2309, phone (775) 884-2308.



United States Department of the Interior

Pacific Southwest Region
FISH AND WILDLIFE SERVICE

Nevada Fish and Wildlife Office
1340 Financial Blvd., Suite 234
Reno, Nevada 89502

Ph: (775) 861-6300 ~ Fax: (775) 861-6301



October 2, 2012
File No. 2012-SL-0359

Mr. Dan Sommers
Farr West Engineering
5442 Longley Lane, Suite B
Reno, Nevada 89511

Dear Mr. Sommers:

Subject: Species List Request for the Silver Springs Mutual Water Company Water System Improvements Project, Lyon County, Nevada

This responds to your letter received on September 7, 2012, requesting a species list for the Silver Springs Mutual Water Company Water System Improvements Project, Lyon County, Nevada. To the best of our knowledge, no listed, proposed, or candidate species occur in the subject project area. This list fulfills the requirement of the Fish and Wildlife Service (Service) to provide information on listed species pursuant to section 7(c) of the Endangered Species Act of 1973, as amended (ESA), for projects that are authorized, funded, or carried out by a Federal agency.

The Nevada Fish and Wildlife Office no longer provides species of concern lists. Most of these species for which we have concern are also on the Animal and Plant At-Risk Tracking List for Nevada (At-Risk list) maintained by the State of Nevada's Natural Heritage Program (Heritage). Instead of maintaining our own list, we adopted Heritage's At-Risk list and are partnering with them to provide distribution data and information on the conservation needs for at-risk species to agencies or project proponents. The mission of Heritage is to continually evaluate the conservation priorities of native plants, animals, and their habitats, particularly those most vulnerable to extinction or in serious decline. In addition, in order to avoid future conflicts, we ask that you consider these at-risk species early in your project planning and explore management alternatives that provide for their long-term conservation.

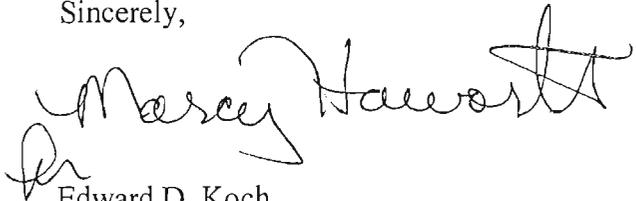
TAKE PRIDE
IN AMERICA 

For a list of at-risk species by county, visit Heritage's website (<http://heritage.nv.gov>). For a specific list of at-risk species that may occur in the project area, you can obtain a data request form from the website (<http://heritage.nv.gov/forms.htm>) or by contacting the Administrator of Heritage at 901 South Stewart Street, Suite 5002, Carson City, Nevada 89701-5245, (775) 684-2900. Please indicate on the form that your request is being obtained as part of your coordination with the Service under the ESA. During your project analysis, if you obtain new information or data for any Nevada sensitive species, we request that you provide the information to Heritage at the above address.

Furthermore, certain species of fish and wildlife are classified as protected by the State of Nevada (<http://www.leg.state.nv.us/NAC/NAC-503.html>). You must first obtain the appropriate license, permit, or written authorization from the Nevada Department of Wildlife (NDOW) to take, or possess any parts of protected wildlife species. Please visit <http://www.ndow.org> or contact NDOW at (775) 688-1500.

Please reference File No. 2012-SL-0359 in future correspondence concerning this species list. If you have any questions regarding this correspondence or require additional information, please contact me or Kerensa King at (775) 861-6300.

Sincerely,

A handwritten signature in black ink, appearing to read "Edward D. Koch". The signature is written in a cursive style with a large, stylized "E" and "K".

Edward D. Koch
State Supervisor

FARR WEST

ENGINEERING

August 31, 2011

Robert Williams, Field Supervisor
U.S. Fish and Wildlife Service
Reno Fish and Wildlife Office
1340 Financial Blvd., Suite 234
Reno, NV 89502

RE: Silver Springs Mutual Water Company (SSMWC) Water System Improvements Project

Dear Mr. Williams,

SSMWC is in the process of performing an environmental review pursuant to the National Environmental Policy Act for the USDA, Rural Utilities Service in order that it may assess the environmental impacts of water distribution system improvements in Silver Springs, Nevada. The project is being proposed to replace old water lines and improve water delivery capacity. Enclosed is a map that depicts the proposed projects area of potential effect for all construction activities.

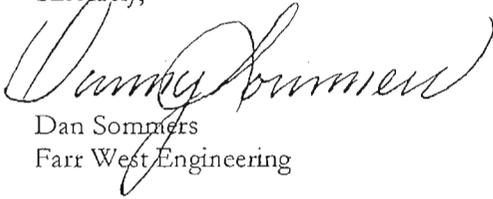
The proposed project does not represent a "major construction activity" as defined in 50 CFR 402.02. Please advise us of any present concerns you may have regarding possible effects of the project listed below on any Federally-listed or proposed threatened or endangered species or critical habitat, as well as any other wildlife concerns.

The project components are as follows:

1. Drill a new well at the Deodar well site with new connection vaults, pump controls and a submersible pump/motor.
2. Install VFD on the Idaho well.
3. Purchase and install a backup generator at the booster site and one trailer mounted backup generator for use at both the Idaho or Deodar Well sites.
4. Purchase and remodel a shop at 2359 Ft Churchill.
5. Construct a new 1 million gallon tank at the existing north tank site.
6. Loop the end of Fort Churchill St, Pueblo St, Donner St, Tonopah St, Tuscarora St, and Eureka St on Elko St. with 6" lines. Also loop Ft Churchill, Pueblo, and Donner on Virginia Ave/Truckee St.
7. Make ADA improvements to existing office including bathrooms and doorways.
8. As an alternate, replace the existing 4" Ft Churchill Line with a new 12" line

We would appreciate a response within 30 days. If you need further information or wish to discuss the project, please contact Dan Sommers of Farr West Engineering at 775-851-4788.

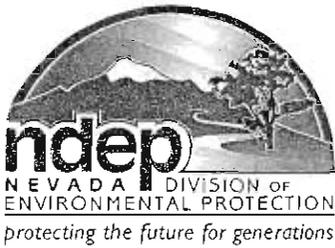
Sincerely,

A handwritten signature in cursive script that reads "Dan Sommers". The signature is written in black ink and is positioned above the printed name and company information.

Dan Sommers
Farr West Engineering

Enc.

c: Roy Macdonald, SSMWC
USDA Rural Utilities Service



STATE OF NEVADA

Department of Conservation & Natural Resources

DIVISION OF ENVIRONMENTAL PROTECTION

Brian Sandoval, Governor

Leo M. Drozdoff, P.E., Director

Colleen Cripps, Ph.D., Administrator

September 13, 2012

Dan Sommers
Farr West Engineering
5442 Longley Lane, Suite B
Reno, NV 89511

RE: Silver Springs Mutual Water Company (SSMWC) Water System Improvements Project

Dear Mr. Sommers:

The Nevada Division of Environmental Protection (NDEP) received your letter describing the work that will be done as part of the water system improvements for SSMWC. NDEP's Bureau of Water Pollution Control (BWPC) has no authority over approving the design of the water system improvements, but the following two permits may be needed as part of this project:

- ❖ If this project will disturb more than one acre, a construction stormwater permit will be needed before any earth is disturbed. A Notice of Intent for permit coverage and other information can be found at: http://ndep.nv.gov/bwpc/storm_cont03.htm;
- ❖ This project may need a DeMinimis Permit that deals with the discharge of clean water as part of dewatering operations during construction to waters of the U.S. More information can be found on our website at: <http://ndep.nv.gov/bwpc/diminimis.htm>.

If you have any questions or comments about this letter, please call me at (775) 687-9429.

Sincerely,

Steve McGoff, P.E.
Staff Engineer III
Technical Services Branch
Bureau of Water Pollution Control

CC: Joe Maez, P.E., Supervisor, NDEP's Compliance & Enforcement Branch
Alex Lanza, P.E., NDEP

* If you are unable to reach the person listed above, please contact the Bureau of Water Pollution Control at (775) 687-9429.

Environmental Protection Agency (EPA) Region 9, 2700 K Street, Suite 100, Las Vegas, NV 89129
NDEP, 901 S. Stewart Street, Suite 4001, Carson City, NV 89701





August 31, 2011

Joseph L. Maez, P.E.
Bureau of Water Pollution Control
901 So. Stewart Street, Suite 4001
Carson City, Nevada 89701

RE: Silver Springs Mutual Water Company (SSMWC) Water System Improvements Project

Dear Mr. Maez,

SSMWD is in the process of performing an environmental review pursuant to the National Environmental Policy Act for the USDA, Rural Utilities Service in order that it may assess the environmental impacts of distribution system improvements in Silver Springs, Nevada. The project is being proposed to replace old water lines and improve water delivery capacity. Enclosed is a map that depicts the proposed projects area of potential effect for all construction activities.

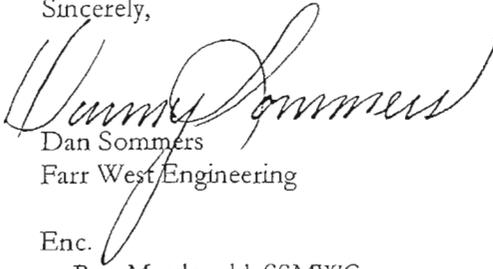
The proposed project does not represent a "major construction activity," as defined in 50 C.F.R. 102.02. We are requesting information on the possible effects of the proposed project which the Bureau determines to have a negative environmental impact with regards to water quality and/or any other potential effects. We also seek your assessment of the compatibility of the proposed project with State and local government or any private programs and policies regarding the environmental impacts of construction within the proposed project area.

The project components are as follows:

1. Drill a new well at the Deodar well site with new connection vaults, pump controls and a submersible pump/motor.
2. Install VFD on the Idaho well.
3. Purchase and install a backup generator at the booster site and one trailer mounted backup generator for use at both the Idaho or Deodar Well sites.
4. Purchase and remodel a shop at 2359 Ft Churchill.
5. Construct a new 1 million gallon tank at the existing north tank site.
6. Loop the end of Fort Churchill St, Pueblo St, Donner St, Tonopah St, Tuscarora St, and Eureka St on Elko St. with 6" lines. Also loop Ft Churchill, Pueblo, and Donner on Virginia Ave/Truckee St.
7. Make ADA improvements to existing office including bathrooms and doorways.
8. As an alternate, replace the existing 4" Ft Churchill Line with a new 12" line

We would appreciate a response within 30 days. If you need further information or wish to discuss the project, please contact Mr. Dan Sommers of Farr West Engineering at 775-851-4788.

Sincerely,

A handwritten signature in cursive script that reads "Dan Sommers". The signature is written in black ink and is positioned above the printed name and company information.

Dan Sommers
Farr West Engineering

Enc.

c: Roy Macdonald, SSMWC
USDA Rural Utilities Service



215 W. Bridge Street, Suite 11-A • Yerington, NV 89447 • (775) 463-2265

September 7, 2012

Dan Sommers
Farr West Engineering .
5442 Longley Lane, Suite B
Reno, NV 89511

Dear Dan,

I am enclosing Form CPA-1006, "Farmland Conversion Impact Rating" for the Silver Springs Mutual Water Company Water System Improvements Project. The form documents that the project site contains no prime, unique, statewide or local important farmland. The project will have no adverse impact to important farmland. Soil Map Unit Descriptions indicate there are no hydric soils / wetlands. Let me know if you have questions.

Sincerely,



Edward W. Biggs
District Conservationist

FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date Of Land Evaluation Request	8/31/12
Name Of Project	Silver Springs MWC Water System Improvements	Federal Agency Involved	Rural Utilities Service
Proposed Land Use	Rural Housing & Associated Infrastructure	County And State	Lyon County Nevada

PART II (To be completed by NRCS)		Date Request Received By NRCS	9/7/12
Does the site contain prime, unique, statewide or local important farmland? <i>(If no, the FPPA does not apply -- do not complete additional parts of this form).</i>		Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Major Crop(s)		Acres Irrigated	Average Farm Size
Name Of Land Evaluation System Used		Acres	%
Name Of Local Site Assessment System		Amount Of Farmland As Defined in FPPA	%
		Date Land Evaluation Returned By NRCS	

PART III (To be completed by Federal Agency)	Alternative Site Rating			
	Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly				
B. Total Acres To Be Converted Indirectly				
C. Total Acres In Site	0.0	0.0	0.0	0.0

PART IV (To be completed by NRCS) Land Evaluation Information				
A. Total Acres Prime And Unique Farmland				
B. Total Acres Statewide And Local Important Farmland				
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value				

PART V (To be completed by NRCS) Land Evaluation Criterion				
Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)	0	0	0	0

PART VI (To be completed by Federal Agency)	Maximum Points				
Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))					
1. Area In Nonurban Use					
2. Perimeter In Nonurban Use					
3. Percent Of Site Being Farmed					
4. Protection Provided By State And Local Government					
5. Distance From Urban Builtup Area					
6. Distance To Urban Support Services					
7. Size Of Present Farm Unit Compared To Average					
8. Creation Of Nonfarmable Farmland					
9. Availability Of Farm Support Services					
10. On-Farm Investments					
11. Effects Of Conversion On Farm Support Services					
12. Compatibility With Existing Agricultural Use					
TOTAL SITE ASSESSMENT POINTS	160	0	0	0	0

PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)	100	0	0	0	0
Total Site Assessment (From Part VI above or a local site assessment)	160	0	0	0	0
TOTAL POINTS (Total of above 2 lines)	260	0	0	0	0

Site Selected:	Date Of Selection	Was A Local Site Assessment Used?
		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Reason For Selection:		

FARR WEST

ENGINEERING

August 31, 2011

Ed Biggs, District Conservationist
215 West Bridge St., Suite 11-A
Yerington, NV 89447-2554

RE: Silver Springs Mutual Water Company (SSMWC) Water System Improvements Project

Dear Mr. Biggs:

SSMWC is in the process of performing an environmental review pursuant to the National Environmental Policy Act for the USDA, Rural Utilities Service in order that it may assess the environmental impacts of water distribution system improvements in Silver Springs, Nevada. The project is being proposed to replace old water lines and improve water delivery capacity. Enclosed is a map that depicts the proposed addition's area of potential effect for all construction activities.

We are seeking information on environmental possible effects of the proposed project on important farmland and any recommendations you have to minimize or avoid these effects. We also seek your assessment of the compatibility of the proposed project with State and local government or any private programs and policies to protect important farmland.

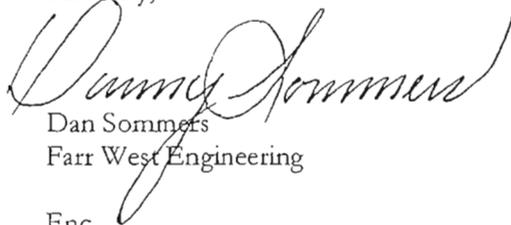
The project components are as follows:

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7. Make ADA improvements to existing office including bathrooms and doorways.
8. As an alternate, replace the existing 4" Ft Churchill Line with a new 12" line

Please note that all pipe installations will occur within existing right-of-ways beside roads in previously disturbed areas.

We would appreciate a response within 30 days. If you need further information or wish to discuss the project, please contact Dan Sommers of Farr West Engineering at 775-851-4788.

Sincerely,

A handwritten signature in cursive script that reads "Dan Sommers". The signature is written in black ink and is positioned to the left of the typed name.

Dan Sommers
Farr West Engineering

Enc.

c: Roy Macdonald, SSMWC
USDA Rural Utilities Service



STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION
1263 S. Stewart Street
Carson City, Nevada 89712

BRIAN SANDOVAL
Governor

RUDY MALFABON, P.E., Director

September 19, 2012

In Reply Refer to:

MR. DAN SOMMERS
FARR WEST ENGINEERING
5442 LONGLEY LANE, SUITE B
RENO, NV 89511

SILVER SPRINGS MUTUAL WATER CO.
WATER SYSTEM IMPROVEMENTS
PROJECT

Dear Mr. Sommers:

Thank you for the opportunity to review the Silver Springs Mutual Water Company Water System Improvements Project in Silver Springs, NV. Currently, the project appears to be near or within Nevada Department of Transportation (NDOT) right-of-way. Based on the level of detail provided in the plan, it cannot be determined if there will be any direct impacts to NDOT right-of-way along US 95.

If the project will require the use of any NDOT right-of-way for either temporary construction activities or new or modified permanent easements for items such as utility lines, an encroachment permit will be required. Contact the NDOT District 2 office in Reno, NV (775-834-8300) to apply for this permit. No use of NDOT right-of-way is authorized until an encroachment permit has been processed and approved.

Additionally, as needed, appropriate Oversize/Overweight Permits should also be obtained.

Please inform NDOT if there are any changes to the project which would further involve our Department.

Sincerely,

A handwritten signature in cursive script that reads "Steve M. Cooke".

Steve M. Cooke, P.E., Chief
Environmental Services Division

SMC/DRN/tkb



FARR WEST

ENGINEERING

August 31, 2011

Steve M. Cooke, P.E., Chief
Environmental Services
Nevada Department of Transportation
1263 South Stewart St., Room 104
Carson City, Nevada 89712

RE: Silver Springs Mutual Water Company (SSMWC) Water System Improvements Project

Dear Mr. Cooke:

SSMWC is in the process of performing an environmental review pursuant to the National Environmental Policy Act for the USDA, Rural Utilities Service in order that it may assess the environmental impacts of water distribution system improvements in Silver Springs, Nevada. The project is being proposed to replace old water lines and improve water delivery capacity. Enclosed is a map that depicts the proposed projects area of potential effect for all construction activities.

Some of the water line along U.S. 50 and Hwy 95A may come close to the NDOT Right-of-Way. We are requesting information on the possible effects of the proposed project in which the Nevada Department of Transportation determines to have a negative environmental impact and any other potential effects of the proposed project (traffic patterns, impairment of highway safety, etc.). We would appreciate any recommendations you have to minimize or avoid these effects.

The project components are as follows:

1. Drill a new well at the Deodar well site with new connection vaults, pump controls and a submersible pump/motor.
2. Install VFD on the Idaho well.
3. Purchase and install a backup generator at the booster site and one trailer mounted backup generator for use at both the Idaho or Deodar Well sites.
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We would appreciate a response within 30 days. If you need further information or wish to discuss the project, please contact Dan Sommers of Farr West Engineering at 775-851-4788.

Sincerely,



Dan Sommers
Farr West Engineering

Enc.

c: Roy Macdonald, SSMWC
USDA Rural Utilities Service



BRIAN SANDOVAL
Governor

STATE OF NEVADA
PUBLIC UTILITIES COMMISSION

ALAINA BURTENSHAW
Chairman

REBECCA WAGNER
Commissioner

DAVID NOBLE
Commissioner

CRYSTAL JACKSON
Executive Director

September 24, 2012

Skip Canfield, Clearinghouse Coordinator
Nevada Division of State Lands
901 S. Stewart St., Suite 5003
Carson City, NV 89701-5246

Re: *Nevada State Clearinghouse Notice E2013-069; Silver Springs Water Company
Improvements*

Dear Mr. Canfield:

The Regulatory Operations Staff ("Staff") of the Public Utilities Commission of Nevada ("Commission") has reviewed the above noted project notice and has the following comments.

Nevada Revised Statute ("NRS") 704.860 defines "utility facility" as relates to water utilities as, "Water storage, transmission and treatment facilities, other than facilities for the storage, transmission or treatment of water from mining operations." NRS 704.860 (4). As the above noted project plans to construct both water storage (tanks) and transmission (street lines), it implicates the Utility Environmental Protection Act ("UEPA"). Therefore, pursuant to NRS 704.865, prior to the commencement of construction, Silver Springs Mutual Water Company must obtain a UEPA permit from the Commission. The UEPA process is outlined in NRS 704.820-900, *et seq.*

Please do not hesitate to contact me with any questions or concerns you may have.

Sincerely,

Samuel S. Crano, Esq.
Assistant Staff Counsel
1150 E. William St.
Carson City, NV 89701-3109
(775) 684-6151

6.0 EXHIBITS

This section includes the following exhibits:

- Map of the proposed project
- Lyon County Rare Species List
- FEMA Firm
- Wetlands Map
- Sole Source Aquifer Map/locations
- BLM Rangeland Map
- Natural Landmarks Webpage
- Wilderness Map



State of Nevada
 Department of Conservation & Natural Resources
Natural Heritage Program



901 South Stewart Street, suite 5002 • Carson City, Nevada 89701-5245, U.S.A.
 tel: (775) 684-2900 • fax: (775) 684-2909 • <http://heritage.nv.gov>

LYON COUNTY RARE SPECIES LIST

(18 March 2004)

As of the date above, this list provides information for the 80 Lyon County plants and animals included on the Nevada [At-risk Animal](#) and [At-risk Plant and Lichen](#) tracking lists and on the [Nevada Plant and Animal Watch List](#). These data reflect **only what was entered in our computer databases** as of the above date; additional information for some species may await processing in paper files, or may have been entered subsequently.

Information provided for each taxon in the columns below include the various agency status and rank designations, sand and wetland habitat indicators, and endemic status within Nevada. A new **Occurrence Status (OCC)** column has been added to the left side of the list to show any special status within the county: ?=possible or predicted in the county but not yet confirmed, e=endemic in-state (known in Nevada only from this county), E=endemic (known worldwide only from this county), and I=only introduced or re-introduced occurrence(s) present in this county.

More detailed state-wide information for these taxa is available in our [Detailed Rare Plant and Lichen](#) and [Detailed Rare Animal](#) lists, and in the [Nevada Rare Plant Atlas](#), which provides comprehensive information on **habitat, life-history, description, threats, survey status, literature sources, and known locations** for most plant taxa. Further information may be available on-line for some taxa in [other lists](#) or [reports](#), or as [maps](#) or [images](#), and general information is available for nearly all taxa on the [NatureServe Explorer](#) web site.

Click on a column heading for an explanation of that column. You may need to scroll horizontally in your browser to see all columns. You may also jump to the [at-risk taxa](#) or the [watch-list taxa](#).

[OCC](#) [RANKS](#)..... [ESA](#). [BLM](#) [FS](#). TAXON NAME AND (VERNACULAR NAME)..... [NV](#). [2N](#) [HAB](#) [END](#)

AT-RISK TAXA TRACKED

***** Plants - Pteridophytes (fern allies)

?	G3	xC2	n	si	Botrychium crenulatum		W	W
	S1?				(dainty moonwort)			

***** Plants - Flowering Dicots

	T2G5				Astragalus convallarius var. margaretiae		D	Y
	S2				(Margaret's rushy milkvetch)			

	T2G4 S2	xC2	n	sw	Astragalus oophorus var. lavinii (Lavin eggvetch)		W			
?	G2Q S2			c	w	Astragalus pseudiodanthus (Tonopah milkvetch)		D	S	
	G2 S2	xC2	nc	sw	Cusickiella quadricostata (Bodie Hills draba)		W			
	G2G3 S1?					Cymopterus cinerarius (gray wavewing)		W		
E	G1 S1				n	Eriogonum diatomaceum (Churchill Narrows buckwheat)	CE#	T	Y	
?	G2G3Q S2					Helianthus deserticola (dune sunflower)		W	S	
	G4 S2S3					Opuntia pulchella (sand cholla)	CY	D	S	
	G3Q S3	xC2	nc	si		Phacelia monoensis (Mono County phacelia)		T		
	G2Q S2				sc	i	Polyctenium williamsiae (Williams combleaf)	CE	T	W
?	G2 S1					w	Senecio pattersonensis (Mono ragwort)		W	
	G3 S2	xC2	nc	si		Streptanthus oliganthus (Masonic Mountain jewelflower)		W		
E	G2 S2	xC2	n			Stroganowia tiehmii (Tiehm peppergrass)		W	Y	

***** Insects

	T3?G5 S1	xC2	n			Euphydryas editha monoensis (Mono checkerspot)			
	T1T2G5 S1S2	xC2				Limenitis archippus lahontani (Nevada viceroy)			Y
	T2G3 S2					Speyeria nokomis apacheana (Apache silverspot butterfly)			

***** Mammals

	G4 S3B			nc	si	Corynorhinus townsendii (Townsend's big-eared bat)			
	G4 S1S2	xC2		s	s	Euderma maculatum (spotted bat)		yes	
	G5 S2			n		Lontra canadensis (river otter)		yes	
	G5 S3B			n		Myotis californicus (California myotis)			
	G5 S3B	xC2	nc			Myotis ciliolabrum (western small-footed myotis)			
	G5 S1S2			n		Myotis lucifugus (little brown myotis)			
	G4G5 S2B	xC2	nc			Myotis thysanodes (fringed myotis)			

***** Birds

G5 S3	xC2	n	si	Accipiter gentilis (Northern Goshawk)	yes	
TUG4 S3B	xC2	nc		Athene cunicularia hypugaea (Western Burrowing Owl)	yes	
G4 S3	xC2	n		Buteo regalis (Ferruginous Hawk)	yes	
G5 S2B		n	i	Buteo swainsoni (Swainson's Hawk)	yes	
G4 S3S4B		nc		Centrocercus urophasianus (Sage Grouse)	yes	
T3G4 S1B	LTNL	n		Charadrius alexandrinus nivosus (Western Snowy Plover)	yes	W
G4 S2S3B	xC2	n		Chlidonias niger (Black Tern)	yes	W
T3G5 S1B	C	s	i	Coccyzus americanus occidentalis (Western Yellow-billed Cuckoo)	yes	W
G4 S2	LENL	n	e	Falco peregrinus (Peregrine Falcon)	yes	
G4 S1B	LTPD L	s	t	Haliaeetus leucocephalus (Bald Eagle (contiguous US pop))	yes	W
G4 S4?B		n	s	Otus flammeolus (Flammulated Owl)	yes	
G5 S3B	xC2	p		Plegadis chihi (White-faced Ibis)	yes	W
T3G3 S1N	xC2	c	si	Strix occidentalis occidentalis (California Spotted Owl)	yes	

WATCH-LIST TAXA

***** Plants - Flowering Dicots

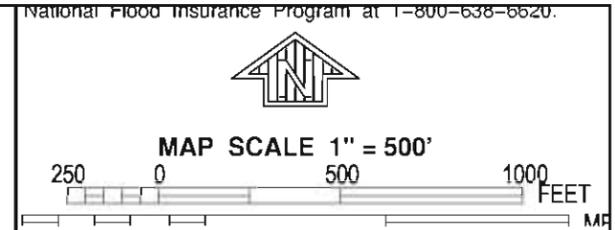
T3G3G4 S3		w		Arabis fernaldiana var. stylosa (stylose rockcress)		P
G3? S3?				Astragalus porrectus (Lahontan milkvetch)	D	Y
G3 S3				Camissonia nevadensis (Nevada suncup)	D	Y
G3? S3?				Eriogonum lemmonii (Lemmon buckwheat)	D	Y
G3 S3				Eriogonum rubricaula (Lahontan Basin buckwheat)	D	Y
T2T3G5 S1S2		c		Loeflingia squarrosa ssp. artemisiarum (sagebrush pygmyleaf)		s
G3? S3?				Lupinus malacophyllus (soft lupine)	D	Y
? G4?				Perideridia lemmonii		

	S3?			(tuni)			
?	G3 S2S3			Plagiobothrys salsus (salt marsh allocarya)		W	W
***** Amphibians							
	T4G4 S2S3			Bufo boreas halophilus (California toad)			W
	G5 S2S3	n	il	Rana pipiens (northern leopard frog)			W
***** Reptiles							
	G5 S4			Charina bottae (rubber boa)			
	T3T4G3G4 S3	xC2	c	Emys marmorata marmorata (northwestern pond turtle)			W
***** Mammals							
	G5 S3B	nc	i	Antrozous pallidus (pallid bat)			
	G5 S3?		n	Lasiurus cinereus (hoary bat)			
	G3 S2			Microdipodops pallidus (pale kangaroo mouse)			s
?	G5 S4B	xC2	nc	Myotis evotis (long-eared myotis)			
	G5 S4B	xC2	n	Myotis volans (long-legged myotis)			
	G5 S4B	xC2	nc	Myotis yumanensis (Yuma myotis)			
	G5 S3			Ochotona princeps (American pika)		yes	
	G3G4 S2			Sorex tenellus (Inyo shrew)			
	G5 S4B		n	Tadarida brasiliensis (Brazilian free-tailed bat)			
***** Birds							
	G3 S2B	xC2	nc	Agelaius tricolor (Tricolored Blackbird)		yes	W
	G5 S4		n	Aquila chrysaetos (Golden Eagle)		yes	
	G5 S4		n	Asio flammeus (Short-eared Owl)		yes	
	G5 S4		n	Asio otus (Long-eared Owl)		yes	
	G5 S5B		n	Baeolophus griseus (Juniper Titmouse)		yes	

G2 SZN	PT	s	Charadrius montanus (Mountain Plover)	yes	
G5 S3B		p	Dendroica petechia (Yellow Warbler)	yes	W
G5 S4		n	Falco mexicanus (Prairie Falcon)	yes	
G5 S3B		p	Geothlypis trichas (Common Yellowthroat)	yes	W
G5 S4		n	Gymnorhinus cyanocephalus (Pinyon Jay)	yes	
G5 S3B		n	Icteria virens (Yellow-breasted Chat)	yes	
G4 S3	xC2N L	n	Lanius ludovicianus (Loggerhead Shrike)	yes	
G4 S4		n	Melanerpes lewis (Lewis' Woodpecker)	yes	
G5 S3?B		n	Numenius americanus (Long-billed Curlew)	yes	W
G5 S4B		p	Oporornis tolmiei (Macgillivray's Warbler)	yes	
G5 S2B		p	Pandion haliaetus (Osprey)	yes	W
G3 S2B		p	Pelecanus erythrorhynchos (American White Pelican)	yes	W
G5 S4B		n	Poocetes gramineus (Vesper Sparrow)	yes	
G5 S4S5B		n	Sphyrapicus nuchalis (Red-naped Sapsucker)	yes	
G5 S4B		p	Vermivora celata (Orange-crowned Warbler)	yes	
G5 S4?B		p	Wilsonia pusilla (Wilson's Warbler)	yes	W

Last updated on 03/18/2004

[Return to Nevada Natural Heritage Program home page](#)



PANEL 0211E

FIRM
FLOOD INSURANCE RATE MAP
LYON COUNTY,
NEVADA
AND INCORPORATED AREAS

PANEL 211 OF 1375
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

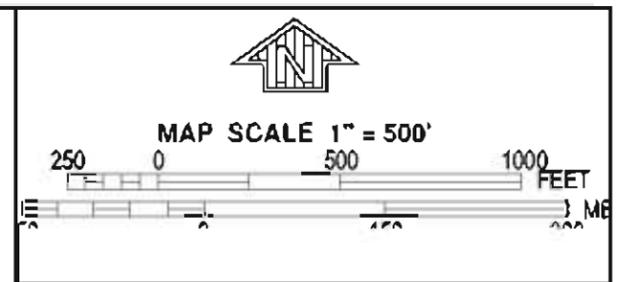
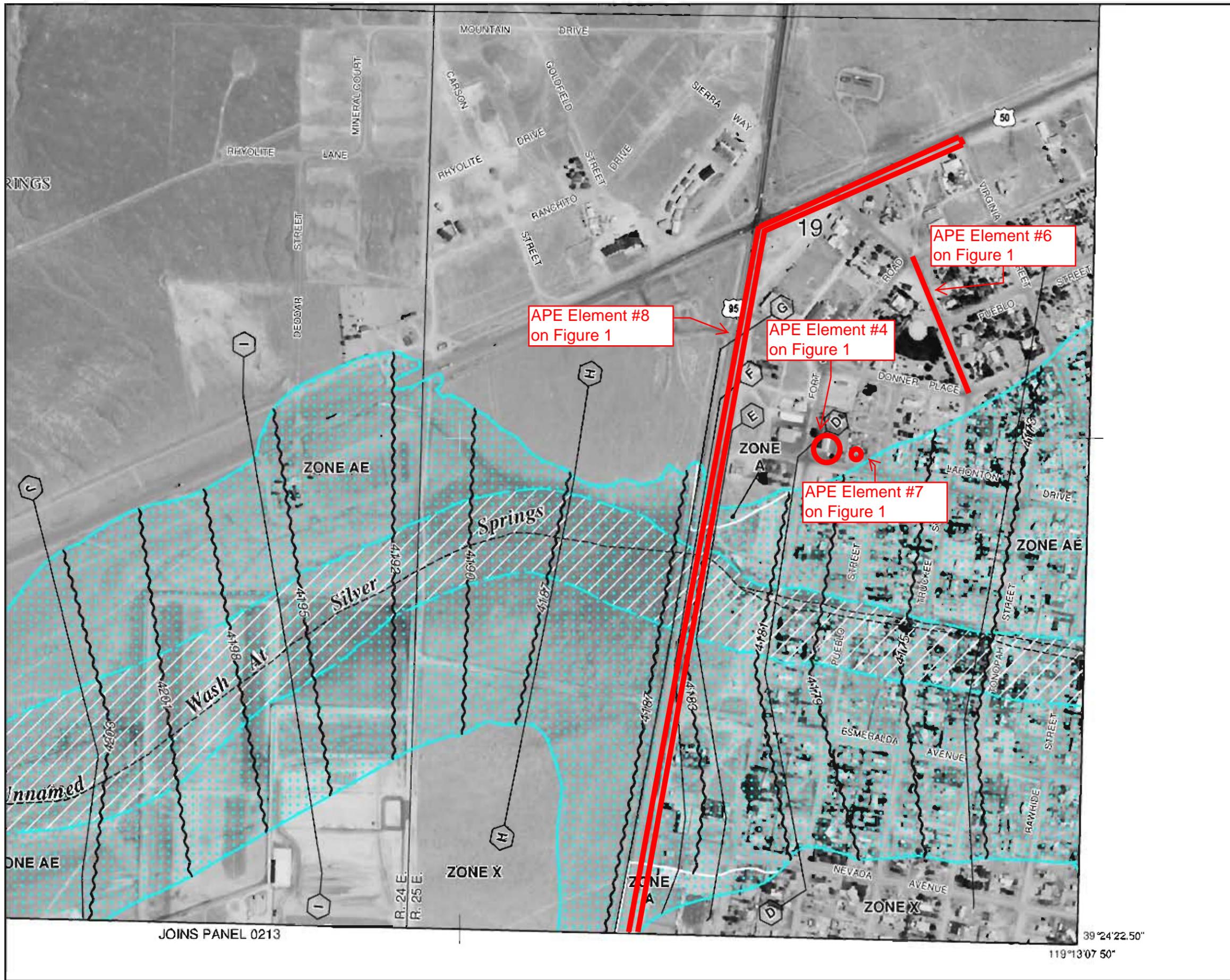
COMMUNITY	NUMBER	PANEL	SUFFIX
LYON COUNTY	320029	0211	E

Notice to User. The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
32019C0211E
EFFECTIVE DATE
JANUARY 16, 2009

Federal Emergency Management Agency

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PANEL 0211E

FIRM
FLOOD INSURANCE RATE MAP
LYON COUNTY,
NEVADA
AND INCORPORATED AREAS

PANEL 211 OF 1375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS	COMMUNITY	NUMBER	PANEL SUFFIX
	170A COUNTY	32029	0211 E

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MAP NUMBER
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EFFECTIVE DATE
JANUARY 16, 2009

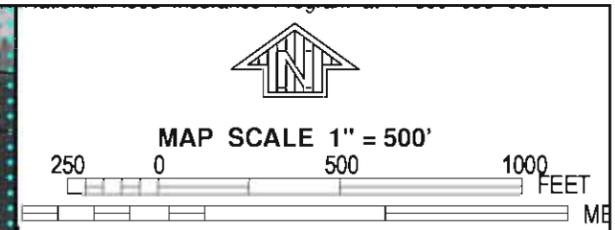
Federal Emergency Management Agency

JOINS PANEL 0213

39°24'22.50"

119°13'07.50"

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LA
RE

PANEL 0212E

FIRM
FLOOD INSURANCE RATE MAP
LYON COUNTY,
NEVADA
AND INCORPORATED AREAS

PANEL 212 OF 1375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LYON COUNTY	320029	0212	E

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MAP NUMBER
32019C0212E

EFFECTIVE DATE
JANUARY 16, 2009

Federal Emergency Management Agency

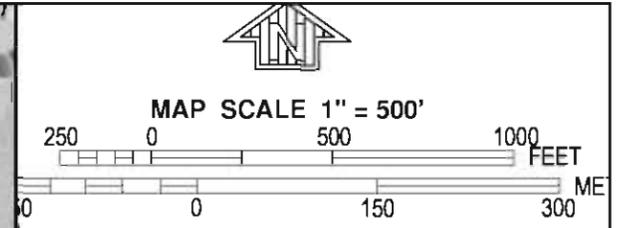
NATIONAL FLOOD INSURANCE PROGRAM

39°24'22.50"
119°13'07.50"

JOINS PANEL 0214

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43° 63' 00.00m N



JOINS PANEL 0200

APE for Element #3
on Figure 1

**LYON COUNTY
UNINCORPORATED AREAS
320029**

43° 62' 00.00m N

35

36

QUINCE AVENUE

NFP

PANEL 0213E

FIRM
FLOOD INSURANCE RATE MAP
LYON COUNTY,
NEVADA
AND INCORPORATED AREAS

PANEL 213 OF 1375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LYON COUNTY	320029	0213	E

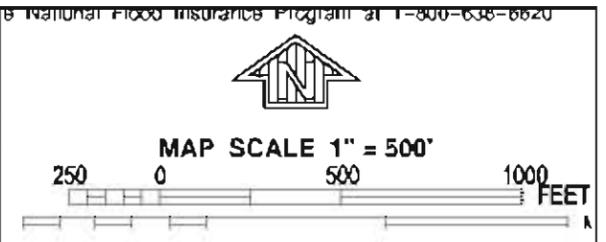
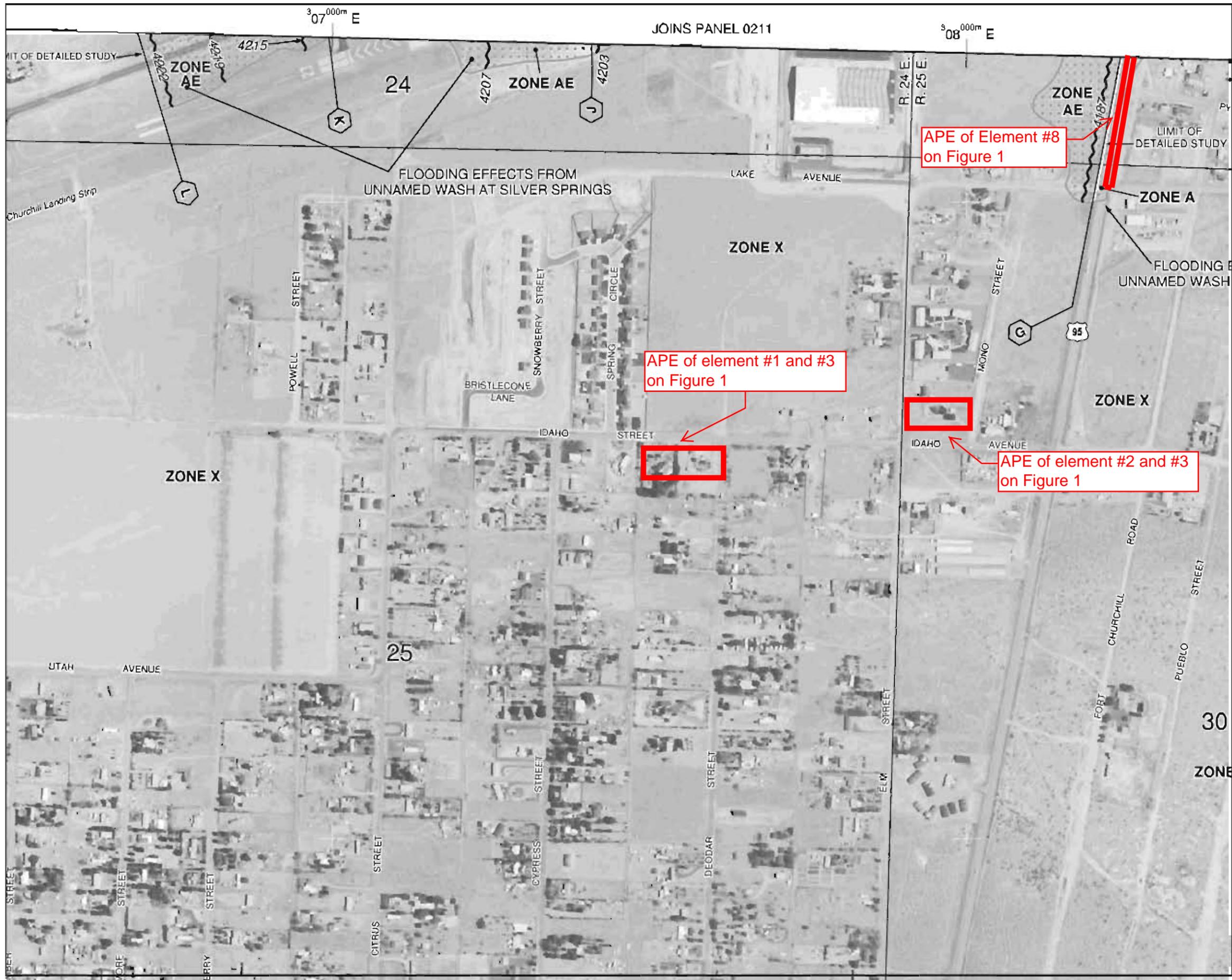
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MAP NUMBER
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EFFECTIVE DATE
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Federal Emergency Management Agency

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U.S. National Flood Insurance Program at 1-800-638-6620

PANEL 0213E

FIRM
FLOOD INSURANCE RATE MAP
 LYON COUNTY,
 NEVADA
 AND INCORPORATED AREAS

PANEL 213 OF 1375
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

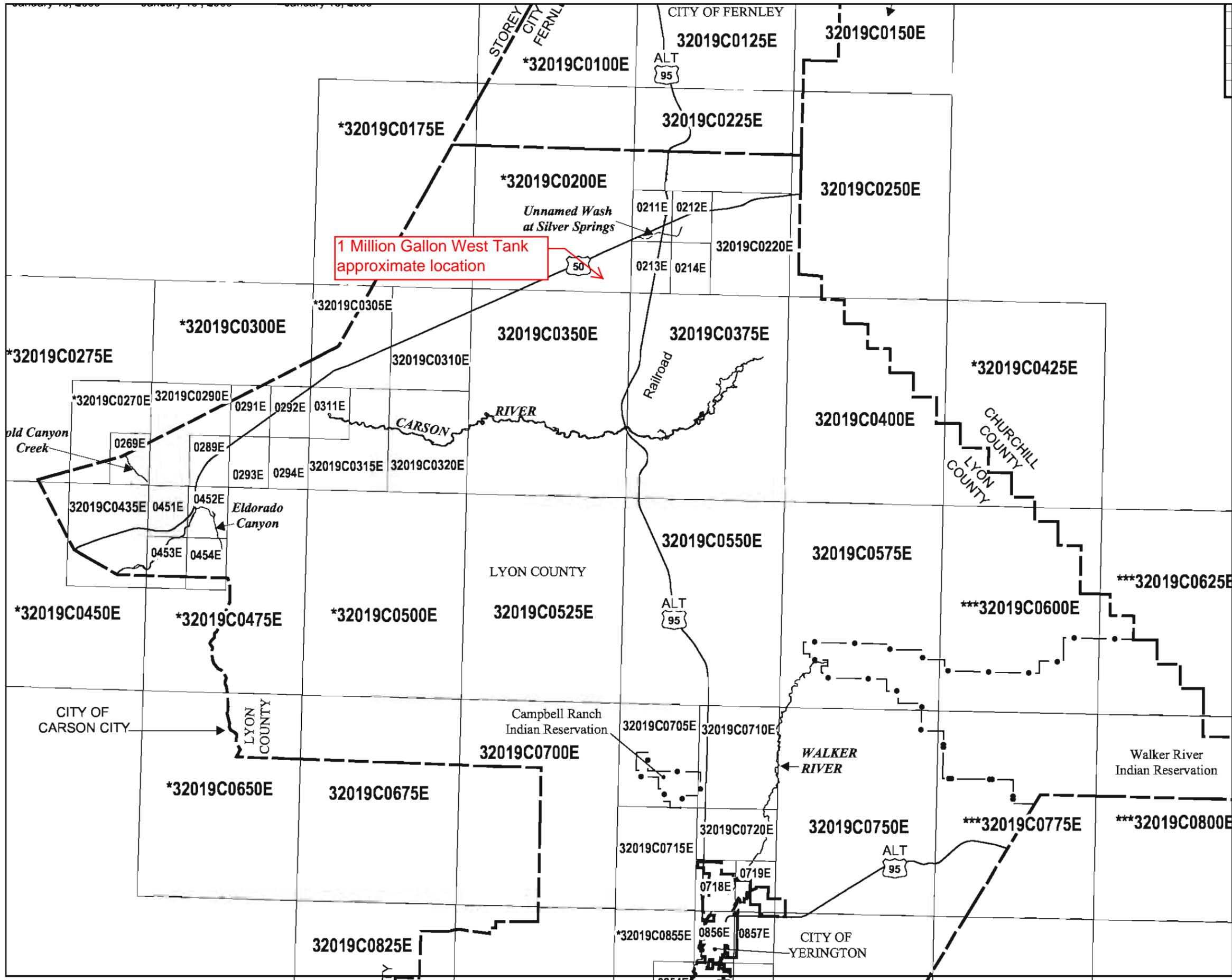
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	LYON COUNTY	320178	0213	E

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Federal Emergency Management Agency

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NATIONAL FLOOD INSURANCE PROGRAM

MAP INDEX

FIRM
 FLOOD INSURANCE RATE MAP
 LYON COUNTY,
 NEVADA
 AND INCORPORATED AREAS
 (SEE LISTING OF COMMUNITIES TABLE)

MAP INDEX

PANELS PRINTED: 50, 75, 82, 84, 105, 110, 125, 150, 211, 212, 213, 214, 220, 225, 250, 269, 289, 290, 291, 292, 293, 294, 310, 311, 315, 320, 350, 375, 400, 435, 451, 452, 453, 454, 525, 550, 575, 675, 700, 705, 710, 715, 718, 719, 720, 750, 825, 850, 854, 856, 857, 858, 859, 865, 870, 950, 975, 1000, 1025, 1075, 1100, 1150, 1175, 1250, 1275, 1350, 1375



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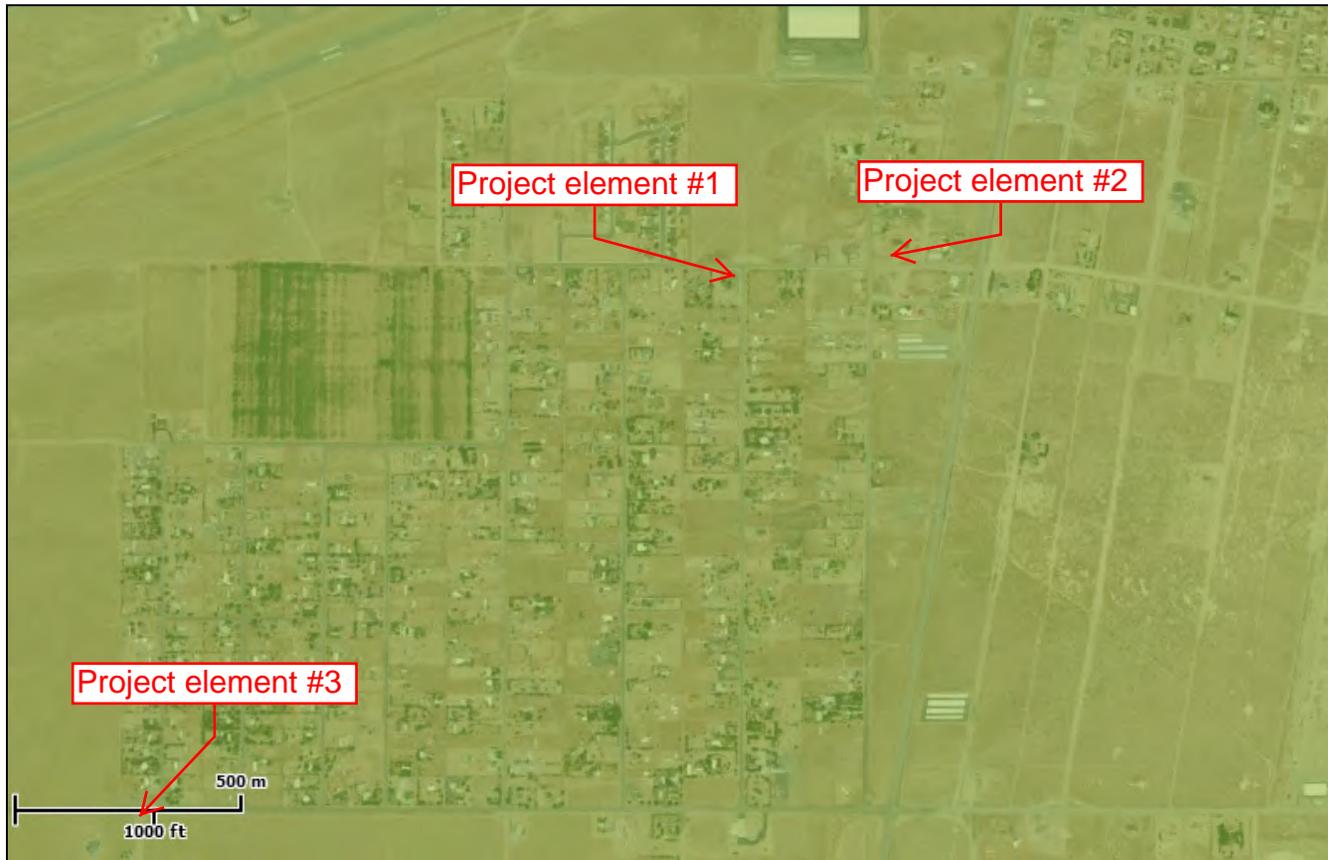
U.S. Fish and Wildlife Service National Wetlands Inventory

SSMWC System

Jan 23, 2013

Status

- Digital
- Scan
- Non-Digital
- No Data



This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

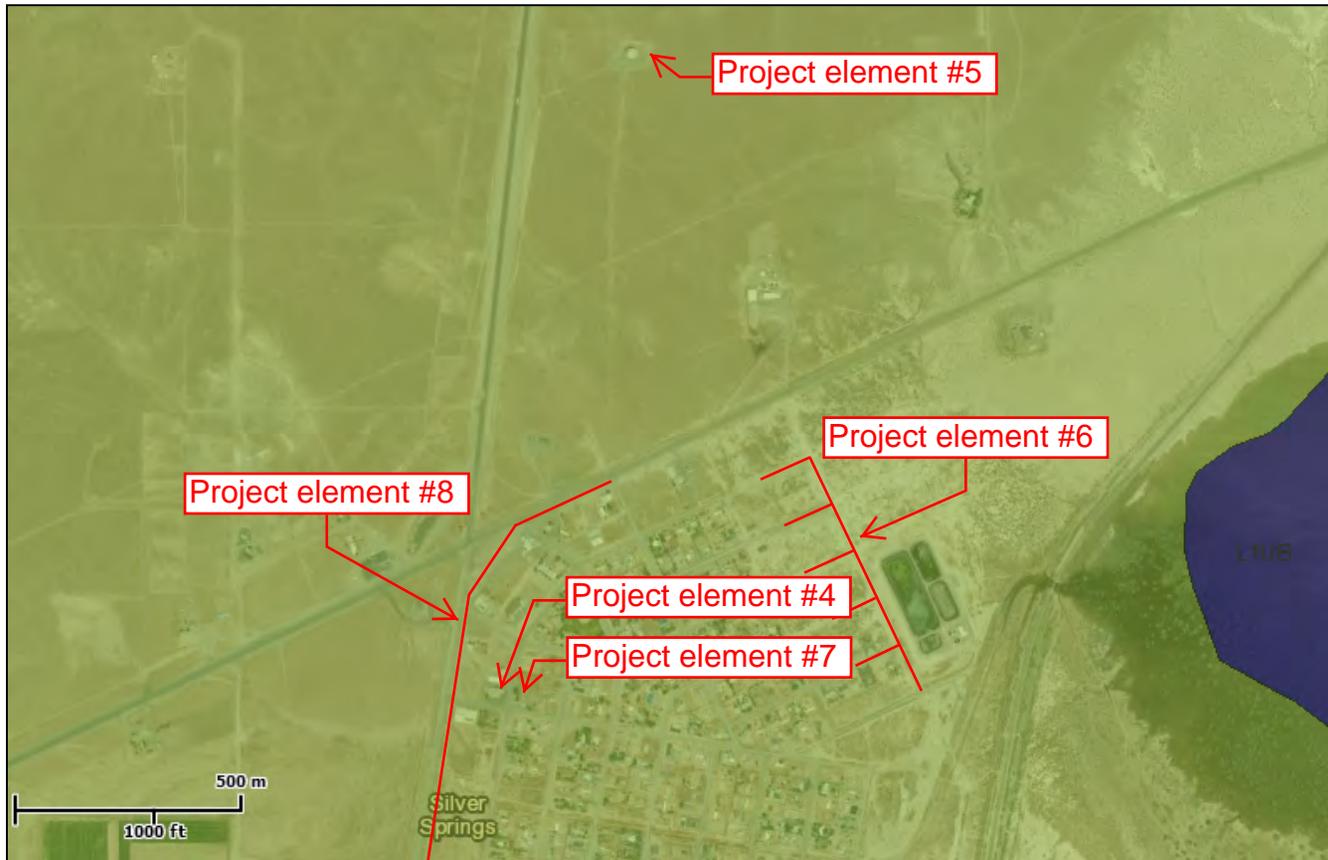
User Remarks:



U.S. Fish and Wildlife Service National Wetlands Inventory

SSMWC System

Jan 23, 2013



Wetlands

- Freshwater Emergent
- Freshwater Forested/Shrub
- Estuarine and Marine Deepwater
- Estuarine and Marine
- Freshwater Pond
- Lake
- Riverine
- Other

Status

- Digital
- Scan
- Non-Digital
- No Data

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

User Remarks:

Sole Source Aquifer Designations in EPA, Region 9

The U.S. EPA's Sole Source Aquifer Program was established under Section 1424(e) of the U.S. Safe Drinking Water Act (SDWA.) Since 1977, it has been used by communities to help prevent contamination of groundwater from federally-funded projects. It has increased public awareness of the vulnerability of groundwater resources.

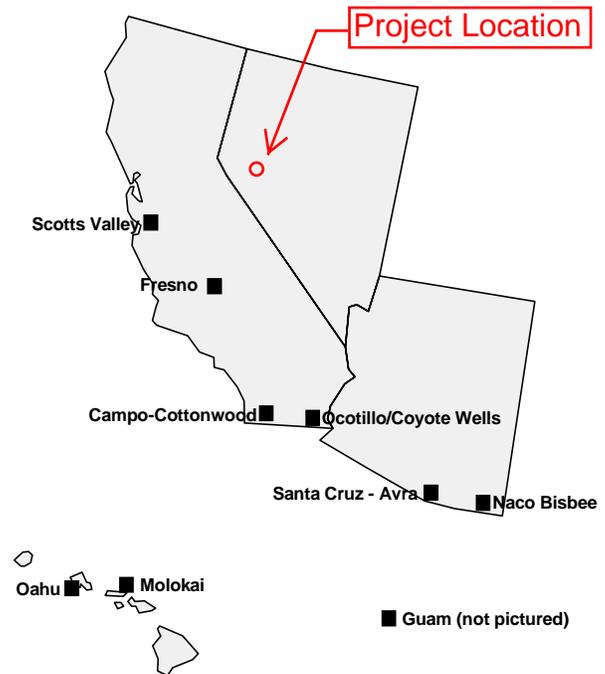
How did this program start? SDWA regulations implementing the sole source aquifer statute were first proposed in 1977 for the Edwards Underground Reservoir in San Antonio, Texas. These regulations guided U.S. EPA in the subsequent designation of 64 sole source aquifers across the United States.

What does the Sole Source Aquifer Program do? The Sole Source Aquifer program allows for EPA environmental review of any project which is financially assisted by federal grants or federal loan guarantees. These projects are evaluated to determine whether they have the potential to contaminate a sole source aquifer. If there is such a potential, the project should be modified to reduce or eliminate the risk, or federal financial support may be withdrawn. This doesn't mean that the Sole Source Aquifer program can delay or stop development of landfills, roads, publicly owned wastewater treatment works or other facilities. Nor can it impact any direct federal environmental regulatory or remedial programs, such as permit decisions.

The Sole Source Aquifer Program's review authority extends only to projects funded with **federal assistance** that are to be implemented in designated sole source aquifer areas. (For regulations applicable to new private development, you should consult with your local, county or state environmental health agency.)

Typical projects reviewed by the U.S. EPA include housing projects undertaken by Housing and Urban Development, and highway construction and expansion projects undertaken by the Federal Highway Administration. In 1991, the U.S. EPA reviewed 152 federal assistance projects totaling \$571 million; of these projects, 25 had to be modified to prevent contamination of sole source aquifers. Modifications included the redesign of bridges and highways to prevent spills of hazardous materials.

How do you designate an aquifer as a "Sole Source" Aquifer? As the name implies, only a "sole source" aquifer can qualify for the program. To be a sole source, the aquifer must supply more than 50% of a community's drinking water. Any individual, corporation, association, or federal, state or



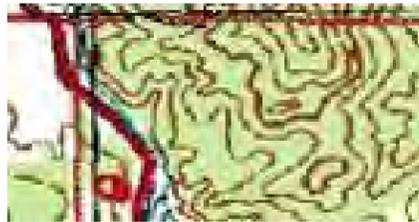
local agency may petition the U.S. EPA for sole source aquifer designation, provided the petition includes sufficient hydrogeologic information. An outline describing how such petitions should be prepared is contained in *The Sole Source Aquifer Designation Petitioner Guidance*, copies of which are available at EPA Regional offices (see contact information below.)

What about Boundaries? Determination of sole source aquifer boundaries is a difficult aspect of the designation process since the "designated area includes the surface area above the aquifer and its recharge area." Thus, some sole source aquifers extend across state boundaries. The 10,000 square-mile Eastern Snake River Aquifer, for example, includes portions of Idaho, Nevada, Utah, and Wyoming.

In Region 9: nine sole source aquifers have been designated in the following areas as shown on the map: Upper Santa Cruz and Avra Basin Aquifer, covering parts of Pima, Pinal, and Santa Cruz Counties, Arizona; Naco-Bisbee Aquifer, Arizona; Ocotillo-Coyote Wells, Imperial County, California; Fresno Aquifer, California; Scotts Valley Aquifer, Santa Cruz County, California; Campo-Cottonwood Aquifer, San Diego County, California; Northern Guam Aquifer, Guam; Southern Oahu Aquifer, Hawaii; and Molokai Aquifer, Hawaii.

Region 9 SSA maps are on the web at www.epa.gov/safewater/ssanp.html. For more information about SSA designation and project reviews, please call David Albright, manager of the Ground Water Office, at (415) 972-3971 or email albright.david@epa.gov.

Legend

Downloadable PLSS Data		Reference Themes		Base Map		Mining Claims	
Townships(BLM) 	Township Boundaries 	State Boundaries 	Roads  	USGS Topos 	Mining Claims by Type    		
Township Labels 	Sections 	Major Roads and Highways 	County Boundaries 	Ortho Aerial Photography 	Mining Claims - Active 		
Quarter-Quarters 	Quarter-Quarter Labels 	Lakes 	Rivers 	PLSS Principal Meridians 	Mining Claims - Closed 		
		Urban Areas 		Surface Management Agency 			
				Shaded Relief 			



8/4/2011

No warranty is made by the BLM for the use of the data for purposes not intended by the BLM.



For the more information about the air resources of the National Park Service, please visit <http://www.nature.nps.gov/air/>.

Nevada

There are six National Natural Landmark sites within the state of Nevada. Natural features represented include the only known site containing fossil remains of 37 of the largest forms of Ichthyosaur, one of the largest and finest natural wetlands in Nevada, and an area that supports gila monsters at the most northern extreme of their range. All six sites received the NNL designation during a five-year period from 1968 to 1973. Sites range in size from 15 acres to nearly 264,000 acres and are owned by a variety of landowners including U.S. Forest Service, U.S. Fish and Wildlife Service, U.S. Department of Defense, Bureau of Land Management, Nevada State Parks, Nevada Department of Wildlife, and private individuals.



Lunar Crater, a National Natural Landmark in Nevada.

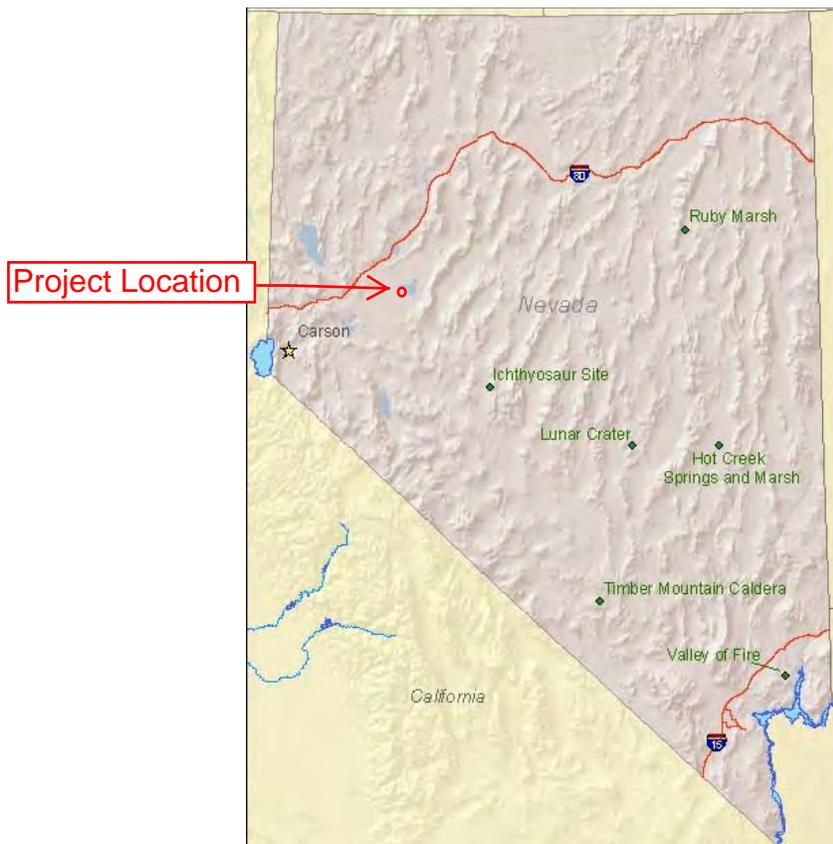
Below is a [map of sites in Nevada](#).

National Natural Landmark sites are located in the following counties: [Clark](#), [Elko](#), [Nye](#), and [White Pine](#).

[← Back to listing of all states and territories.](#)

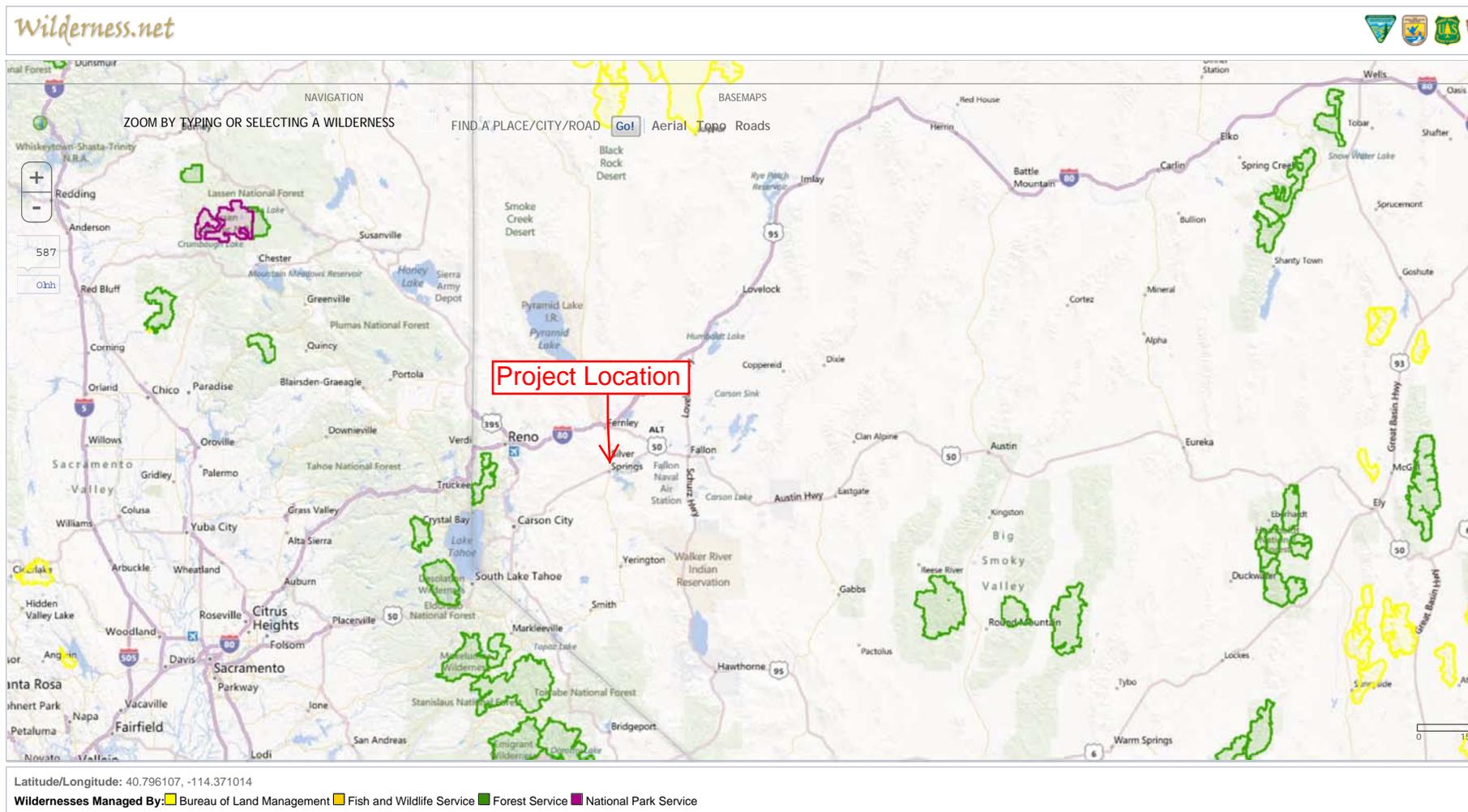
To learn more about National Natural Landmarks in Nevada, select a site from the list or the map below:

Hot Creek Springs and Marsh



Please remember, National Natural Landmarks (NNLs) are not national parks. NNL status does not indicate public ownership, and many sites are not open for visitation.

[↑ TOP OF PAGE](#)



7.0 LIST OF PREPARERS

This environmental assessment was prepared by:

Danny Sommers
Project Manager, Farr West Engineering
5442 Longley Lane, Suite B
Reno, NV 89511
Email: danny@fweng.com
Phone: 775.851.4788
Fax: 775.851.0766

Attachment C – Preliminary Engineering Report

Silver Springs Mutual Water Company

Preliminary Engineering Report

May 2004
Modified in May 2005
Updated in December 2010
Updated in November 2012
Updated in January 2013

OWNER:
SILVER SPRINGS MUTUAL WATER COMPANY
PO BOX 285
SILVER SPRINGS, NEVADA 89429
(775) 577-2223

ENGINEER:
FARR WEST ENGINEERING
5442 LONGLEY LANE, SUITE B
RENO, NEVADA 89511
(775) 851-4788

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I. EXECUTIVE SUMMARY

1.1 Introduction

This Preliminary Engineering Report (PER) has been prepared for the Silver Springs Mutual Water Company (SSMWC) by Farr West Engineering. The purpose of the PER is to describe the existing water system and associated facilities and their deficiencies and to make recommendations for improvements. The water purveyor has identified a need for infrastructure repairs and development within the existing water system area. The PER specifically addresses SSMWC's existing water system facilities which include wells, treatment, storage, and a distribution system and its adequacy to continue to provide quality service to its customers and meet future demands. The PER also addresses the water systems needs in terms of shop space to maintain equipment and store necessary parts for repairs and replacements. The PER provides cost estimates for the various proposed projects as well as possible timelines for completion. The PER will be used for community planning and project financing.

The PER is required by the United States Department of Agriculture (USDA), Rural Development (RD) as well as the Nevada Drinking Water State Revolving Fund program as a precursor to obtaining grants or loans from those agencies. The PER follows the general guidelines set forth in the USDA Rural Utility Service (RUS) Bulletin 1780-2, "Preliminary Engineering Report-Water Facilities."

1.2 Proposed Project

The proposed project for Silver Springs Mutual Water Company consists of the following;

Deodar well site improvements including improving the existing well facilities and drilling and equipping a new well as funding allows.

Installing variable frequency drives (VFD) on the Idaho and Deodar well.

Installing a backup generator at the booster site and purchase a trailer mounted backup generator for use at both the Idaho and Deodar well sites.

Purchase and upgrade a shop for equipment maintenance and storage.

Construct a new one million gallon tank at the existing north tank site.

Install 6" waterline loops in the residential neighborhood at the end of Fort Churchill St, Pueblo St, Donner St, Tonopah St, Tuscarora St, and Eureka St on Elko St. Also install a 6" waterline loop on Virginia Ave/Truckee St. from Fort Churchill and Donner Trail.

The Installation of a new 8" waterline along Highway 95A to replace the undersized 4-inch is a proposed alternate to the project. This alternate would not become part of the project unless submitted bid prices are very low.

These project elements as well as the SSMWC system are shown in Figure 1 of Appendix 1. Other alternatives are discussed in the PER which will be critical as the SSMWC system moves forward but due to their lower priority rating, they are not proposed at this time.

1.3 Project Costs and Customer Impacts

The total cost of the proposed project is shown in the following table.

Table 1 – Total Cost Estimate

Project	Cost
Deodar Well Improvements	\$ 205,000
VFD at Deodar & Idaho Wells	\$ 40,000
Booster Station Generator/Trailer Generator for Wells	\$ 128,000
New Maintenance Shop Purchase and Upgrade	\$ 190,000
New 1 MG Water Tank	\$ 550,000
Water Line Loops in Residential Neighborhood	\$ 225,000
<i>Subtotal</i>	<i>\$ 1,338,000</i>
Contingency	\$ 133,800
PER and EA reports	\$ 18,000
Engineering and Construction Oversight	\$ 146,000
RPR Inspection	\$ 66,500
Land	\$ -
Legal/Bond Council, Title Search	\$ 20,000
Interim Interest	\$ 30,000
Total	\$ 1,752,300
Operation & Maintenance	\$ 22,930

It is recommended that SSMWC apply for USDA funding for this project. Based on the financial status of the water system, it is possible a significant grant could be awarded for funding in conjunction with a loan. In the event a 100% loan is awarded, customer rates would increase by an estimated \$7.22 per month. The total annual repayment, based on a 40 year repayment period and an interest rate of 4.375%, would be \$93,520. This rate increase would result in the water rates to be \$42.42/month/customer which is approximately 2.6% of the Median Household Income (MHI).

Additional details regarding the funding scenario are included in Section 7 of this report, while all the alternatives considered are discussed in Section 5.

II. PROJECT PLANNING AREA

2.1 General Information

On February 26, 1952 Esther and Merle Peek filed Application No. 14082 with the Nevada State Engineer (Ultimately superseded by Permit No. 36639) for groundwater in Silver Springs near the intersection of Highway 50 and Highway Alternate 95 and incorporated as a privately owned water system. Esther and Merle, doing business as ERGS Inc., then began and continued to develop lots, water rights, wells, and the distribution system which is operated and maintained by SSMWC (Walters, 1994). The first well drilled was the Deodar Street well, drilled in 1954.

In 1967 the water company turned non-profit and in 1994 became what is commonly known as a quasi-municipal water system. Quasi-municipal bodies are generally small, isolated geographically, and do not require a full range of services. According to the State Engineer, quasi-municipal is a term typically reserved for governmental bodies that hold similar powers and responsibilities as a municipal government, but are restricted from providing the full range of governmental services associated with individual city charters. For example, a Quasi-municipal body does not have the power to levy taxes, and revenue spending is constrained. Small water systems, like SSMWC, have adopted this term where water is provided to a community that is not governed under a municipal body. When this occurs, it must be clarified the quasi-municipal water system carries only powers to govern water service, and spending is restricted to the demands of the utility. SSMWC is governed under NRS Chapter 82, "Nonprofit Corporations," and has adopted the small water system quasi-municipal status and operates accordingly.

In 1978 SSMWC served 200 connections or approximately 500 people through 4 wells, and experienced a growth rate of about 10 service connections per month. At this time the distribution system consisted of 4 inch and 6 inch Class 160 PVC mains, 2 fire hydrants, and above ground 5,000 gallon and 10,000 gallon pressure tanks (Walters, 1994).

In September 1979, the Lake Street well was completed, but not yet equipped. The Water Company then engineered an aggressive program of replacing the undersized 4 inch pipelines, adding fire hydrants, and constructing a 1,000,000 gallon AWWA welded steel gravity tank (North Tank). By 1988 SSMWC served over 500 connections from four wells through the improved distribution system and 1,000,000 gallon gravity tank. At this time system chlorination was added (Walters, 1994).

In 1992 The Lake Street Well was equipped and in 1993 a certified operator was hired by the company to deal with the many complex State Consumer Health Protection Service (CHPS) operating and water quality regulations promulgated by the EPA. Then in 1994, a PER was done by Walters Engineering proposing improvements to be done over the next few years. Improvements included constructing an additional 1,000,000 gallon water storage tank (West tank), a booster pump station, distribution main looping and expansion, and re-equipping the Lake St. and Deodar St. Wells. The West Tank was constructed in 1995.

In 1994, the Idaho St. Well (drilled, 1973) exceeded the Maximum Contaminant Level (MCL) for Nitrates. Leaking underground septic tanks were determined to be the cause of the high

nitrate levels which led to the construction of a centralized wastewater treatment plant and the development of the Silver Springs General Improvement District (SSGID).

The SSMWC service area is regulated by the Public Utilities Commission of Nevada. This service area is outlined in the CPC issued by the PUC to SSMWC. Expansions of the regulated service area to serve additional customers require approval by the PUC. A map of the existing service area as defined by the PUC is included on Figure 1, Appendix 1. (The PUC regulated service area should not be confused with the “place of use” area as defined in the SSMWC water rights and included on Figure 3, Appendix 1.)

As stated in the previous paragraph, both the Five Star and Silver Springs Mobile Home Parks are customers of SSMWC. These projects included the installation of water lines to connect them to the existing system and allow for further expansion as additional property owners request service. Along with connecting the two MHPs (one in 2009 and the other in 2010), a new water treatment facility was installed in 2010 to bring the water system into compliance with the maximum contaminant level (MCL) for arsenic. The new plant is located at the Lake Street Well site and treats up to 1,800 gpm. Deodar (drilled, 1954) and Idaho Wells are connected to the plant through a dedicated raw water transmission main.

SSMWC also owns the Ft. Churchill Well (drilled, 1951) which is currently out of service. SSMWC plans to abandon this well as it has low production and does not meet the arsenic standard. The Atkins Well was drilled in 1971. It produced poor quality water and was inefficient. Both the Ft. Churchill and Atkins Wells are now used as monitoring wells.

2.2 Location

The SSMWC service area is located in Lyon County, Nevada, at the intersection of U.S. Highway 50 and U.S. Alternate 95. It is located between Dayton and Fallon on U.S. Highway 50 and between Fernley and Yerington on U.S. Alternate 95. The community is settled in Churchill Valley sub-basin of the Carson River Hydrographic Basin. Natural boundaries are the Desert Mountain Range to the south, the Virginia Mountain Range to the north and Lake Lahontan to the east.

2.3 Service Area and Project Area

The project study area includes the:

SSMWC service area boundaries

Areas contiguous to the SSMWC service area boundaries where expansion is possible.

The study area includes the SSMWC boundaries and possible expansions to illustrate the current service area as regulated by the PUC and possibilities for expansion in the future that exist with the infrastructure currently in place and the capital improvements that are proposed as a part of this PER.

Outlying areas, contiguous to the SSMWC service area, may also benefit from connection to SSMWC. These areas will likely experience development and may offer SSMWC alternate sources of water and have been included in the project study area.

2.4 Environmental Resources

2.4.1 Flora and Fauna

The vegetation of the Silver Springs area consists primarily of salt desert shrubs and grasses such as Indian Ricegrass, Bailey Greasewood, Shadscale, and Saltbush. The wildlife in the area is sparse and consists of desert rodents, snakes, lizards, jack rabbit and other none game species. (Walters 1994)

2.4.2 Floodplain

The flood zones for this area have been mapped by the Federal Emergency Management Agency (FEMA). The flood zones are mapped on the Flood Insurance Rate Map (FIRM) for Lyon County, Nevada, Panel Number 115, revised January 16, 2009. A portion of the FIRM has been provided in Appendix 2. Some areas of Silver Springs are subject to flooding. Specifically, there are portions of town that are specified as Zone A and Zone AE.

For reference, the following flood hazard zone designations are provided:

Zone AE and A1-A30: Zones AE and A1-A30 are the flood insurance rate zones that correspond to the 100-year floodplains that are determined in the Flood Insurance Study by detailed methods. In most instances, Base Flood Elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone. Mandatory flood insurance purchase requirements apply.

Zones B, C, and X: Zones B, C, and X are the flood insurance rate zones that correspond to areas outside the 100-year floodplains, areas of 100-year sheet flow flooding where average depths are less than 1 foot, areas of 100-year stream flooding where the contributing drainage area is less than 1 square mile, or areas protected from the 100-year flood by levees. No Base Flood Elevations or depths are shown within this zone.

Although 500 year flood zone areas are not shown on FEMA FIRM, engineering judgment and coordination with the Lyon County Floodplain manager address concerns in these areas. Such concerns include protection of well houses hospitals and other above ground structures.

2.4.3 Geologic Setting

The following italicized text is a description of the geologic setting of the service area under review and has been extracted from the Silver Springs Wastewater Collection Treatment and Disposal Facility Plan prepared by Consulting Engineering Services in 1997.

The study area is situated within a sub-basin of the Carson River Hydrographic Basin referred to as Churchill Valley. The total land area of the Churchill Valley sub-basin is 480 square miles. Of this total area approximately 54 square miles make up the valley floor. The remainder, approximately 347 square miles, comprises the consolidated rock terrain in the mountains and highlands surrounding the valley floor. These mountains include the Dead Camel Range to the east, the Virginia Range to the north and northwest, the northern end of the Pine Nut Range to the west and the Desert Mountains to the south. There are three basic lithologic units in Churchill Valley. These include younger Pleistocene to Holocene in age

(younger than 1.6 million years) and comprise unconsolidated deposits of silt, sand, gravel and boulders deposited by streams; fine grained deposits of the Carson River flood plain, playa (dry lake) deposits, dune sand, landslides, and talus. The finer-grained materials predominate at the land surface from the Weeks Cutoff east to Lahontan Reservoir and south of U.S. Highway 50. The maximum depth of the younger alluvium is estimated to be approximately 100 feet.

The older alluvium is Tertiary (Miocene and Pliocene) to Pleistocene in age (23.7 to 1.6 million years before present) and comprises unconsolidated deposits of clay, silt, sand and gravel. These lithologic materials are present at the land surface near the older alluvium includes lacustrine deposits laid down by Pleistocene aged prehistoric Lake Lahontan. Tertiary aged sedimentary rocks contain sandstone, marl, mudstone, shale diatomite, limestone, calcareous tufa, interbedded tuffaceous rocks, lava flows and breccias. These older alluvial deposits are up to several thousand feet thick.

The younger and older alluvium combines to make up the valley-fill aquifer which is the principal source of groundwater to wells in the valley. However, the hydrologic properties of these deposits are highly variable. Clay and silt are relatively impermeable and capable of transmitting up to large quantities of water.

The consolidated rocks of the surrounding highlands include igneous, metamorphic, and sedimentary rocks. The igneous rocks are primarily Cretaceous aged (114 to 66.4 million years before present) granitic intrusives and Quaternary aged (several thousand to 1.6 million years before present) volcanic rocks (andesite and basalt). The metamorphic rocks include meta-volcanic and meta-sedimentary rocks of upper Jurassic age (more than 144 million years before present). The sedimentary rocks range in age from Quaternary to Tertiary age (less than 66.4 million years before present).

Faults are common in the mountains that surround the valley. However, few fault traces extend beyond the mountain front to the valley floor.

2.4.4 Climate

Silver Spring's elevation is approximately 4,200 feet above sea level. The geographical setting of Silver Springs is typical Great Basin High Desert. The summers are warm to hot with the average temperatures climbing to 93 degrees (F) in the daytime and reaching a low of 63 degrees (F) in the evenings. The lowest average temperature in the winter months occur in January with a high daytime temperature of 44 degrees (F) and nighttime temperatures falling to 23 degrees (F). The precipitation is light with about 5.43 inches falling in the average year. The precipitation consists primarily of rain, although up to 8.5 inches of snow can be expected in the average year (Consulting Engineering Services, 1997).

2.4.5 Environmental Resources Present

A comprehensive Environmental Report for the proposed project area will be prepared separately. A preliminary search for environmental resources was conducted and no significant environmental issues were found. The State Historic Preservation Office does not list any historical landmarks within SSMWC service boundaries or proposed project area. The Nevada Department of Conservation and Natural Resources has developed a list of rare species for specific counties in Nevada and gives a brief description of endangered/threatened status. The

bald eagle is listed as a threatened species and may possibly be found in the project study boundaries; however, it is not likely the proposed project will impact any natural habitats in the area. There were no other significant endangered or threatened species listed by the National Endangered Species Act Reform Coalition (NESARC) that can be found in the proposed project area.

2.5 Growth Areas and Population Trends

2.5.1 Base Population

SSMWC currently (2012) serves 1015 connections (941 residential) within its service area boundaries. According to the 2010 census, the average household size is 2.77 people yielding a base population served by SSMWC of 2,523 people.

2.5.2 Historical Growth and Future Growth Rate

According to recent census data and the Nevada State Demographer, Lyon County was the fastest growing county in the state from 2004 to 2006; between 2007 and 2010 growth in Lyon County was negative but has been positive for the past two years. The majority of the rapid growth was concentrated in Fernley, Mound House, and Dayton. Like these areas, Silver Springs is considered a bedroom community for residential and industrial growth as it is in close proximity to larger cities like Reno and Carson City. However, SSMWC did not experience the same rapid growth as other areas within the county and is currently not experiencing negative growth, but relatively flat growth.

The average growth rate for Lyon County from 2000 through 2010 was approximately 4%. However population growth in Silver Springs between 2000 and 2010 was approximately 1% (U.S. Census data 2000 and 2010). The following table shows the number of connections predicted for the service area through 2030 utilizing the 1% growth experienced in Lyon County for the last 10 years. The population in the table is estimated based on 2.77 people per connection.

Table 2 – Estimated System Growth

Year	Estimated Population	Residential¹ Connection Growth @ 1%	Commercial^{1,2} Connection Growth	Industrial^{1,2} Connection Growth
2012	2,523	985	186	10
2013	2,548	995	186	10
2014	2,574	1,005	186	10
2015	2,599	1,015	186	10
2016	2,625	1,025	186	10
2017	2,652	1,035	186	10
2018	2,678	1,046	186	10
2019	2,705	1,056	186	10
2020	2,732	1,067	186	10
2021	2,759	1,077	186	10
2022	2,787	1,088	186	10
2023	2,815	1,099	186	10
2024	2,843	1,110	186	10
2025	2,871	1,121	186	10
2026	2,900	1,132	186	10
2027	2,929	1,144	186	10
2028	2,958	1,155	186	10
2029	2,988	1,167	186	10
2030	3,018	1,178	186	10

¹Equivalent residential units²Commercial and Industrial growth has been flat for the last ten years and additional growth is not anticipated.

According to the above table by 2030 the estimated population based on a 1.0% growth of the service area will be approximately 3,018 people serving about 1,178 ERU's. The Nevada State Demographer predicts an annual growth rate for Lyon County over the next 20 years of 1.4%. However the growth rate in Silver Springs is generally lower than that of Lyon County so the average projected growth of 1.0% annually is considered reasonable for SSMWC. System growth will be monitored and projections updated as necessary when new projects are considered.

III. EXISTING FACILITIES

3.1 Map

Figure 1 in Appendix 1 is a map of the existing water system and SSMWC service area boundaries.

3.2 Overview of Existing Facilities

SSMWC currently owns four operational wells: Ft. Churchill, Lake, Idaho, and Deodar. Currently, three of the wells are used for public consumption and potable use. The Ft. Churchill well is out of service and will be abandoned as it has a low production capacity and does not meet the arsenic standard. Water is disinfected at each of the wells with a sodium hypochlorite solution (Note: once the water treatment plant is completed disinfection will take place at the plant for the Lake and Idaho wells, not the wellhead). The wells that are in service, as well as the location of the Ft. Churchill well, are shown in Figure 2 – Well Locations.

There are two water storage tanks and two pressure zones in the system. All of the wells are located in the lower pressure zone (Zone 1), along with the North Tank, which has a capacity of one million gallons. The North Tank is located just to the east of US Hwy 95A North near the Hwy 95A and Hwy 50 intersection. Water is lifted from Zone 1 to Zone 2 via the Spruce St. Booster Pump Station. Zone 2 is supplied by the West Tank located near the Skyline Subdivision. The West Tank also has a capacity of one million gallons. Zone 2 is able to feed back to Zone 1 through a 2-inch pressure reducing valve (PRV). In the event of a fire in Zone 1, there is also an 8-inch PRV that will open to supply the needed flows to Zone 1.



SSMWC North Tank



SSMWC West Tank

The distribution system is generally made of C900 PVC pipe with the exception of a few older thin walled AC and PVC lines.

SSMWC owns a shop and office building. The shop is located on Deodar St. which also houses the Deodar St. Well. The shop stores miscellaneous spare parts, equipment and tools for maintenance, though space is limited. The new office building is located on Lahontan St.



SSMWC Office



SSMWC Deodar St. Shop

3.3 History and Background

During the past ten years, SSMWC has completed three large projects. The first project was the extension of service to the airport. The second project was the extension of service to the Silver Springs MHP (cost assumed by the MHP). The third project included the installation of a water treatment plant for arsenic removal, installation of a dedicated raw water main to connect the wells to the water treatment plant, and the extension of service to Five Star MHP.

In the same 10 year period, SSMWC became non-compliant with the arsenic MCL. The arsenic MCL changed from 50 parts per billion (ppb) to 10 ppb in January of 2006 and the water in SSMWC system exceeds this limit, ranging from 10 ppb to 24 ppb depending on which wells are operating. Aside from arsenic, SSMWC complies with the Safe Drinking Water Act and all State and federal water quality standards.

3.4 Condition of Existing Facilities

3.4.1 Water Quality

Water Quality data was gathered from the SSMWC's file and from the Safe Drinking Water Information System (SDWIS) database. The database contains information about public water systems and their violations of EPA's drinking water regulations. The database also contains a history of all water quality monitoring on file with the Bureau of Safe Drinking Water (BSDW). The following table lists contaminants monitored by SSMWC, the level at which they exist in each active well, and the drinking water standard associated with each. Table 3 provides a summary of water quality data that was compiled for the arsenic mitigation project. The arsenic concentration in the table for the Deodar well was revised to reflect the most recent data.

**Table 3
SSMWC Water Quality**

Constituent	Lake Street W02	Idaho Street W03	Deodar Street W04	Drinking Water Standards
Measured in Parts Per Million (PPM)				
<i>TDS @ 180° C</i>	340	650	540	1000
<i>Hardness</i>	86	171	299	-
<i>Calcium</i>	23	47	80	-
<i>Magnesium</i>	7.6	24	21	150
<i>Sodium</i>	50	72	59	-
<i>Potassium</i>	5	6	9	-
<i>Sulfate</i>	82	220	160	-
<i>Chloride</i>	18	85	59	400
<i>Nitrate as N*</i>	0	4.2	5.7	10
<i>Nitrite as N*</i>	0	0	0	1
<i>Alkalinity</i>	112	106	100	-
<i>Bicarbonate</i>	137	129	122	-
<i>Carbonate</i>	0	0	0	-
<i>Fluoride</i>	0.4	0.24	0.23	2
<i>Iron</i>	0.14	0	0.06	0.6
<i>Arsenic</i>	0.025	0.016	0.008	0.01
<i>Manganese</i>	0	0.002	0.003	0.1
<i>Copper</i>	0.001	0.002	0.002	1
<i>Zinc</i>	0.006	0.01	0.009	5
<i>Barium</i>	0.029	0.031	0.028	2
<i>Boron</i>	0.3	0.2	0.2	-
<i>Silica</i>	64	62	64	-
Measured in Standard Units (S.U.)				
<i>Color</i>	5	5	5	15
<i>Turbidity</i>	0.2	0.1	0.3	-
<i>pH</i>	7.67	7.46	7.42	6.5-8.5

Constituent	Lake Street W02	Idaho Street W03	Deodar Street W04	Drinking Water Standards
Trace Metals (PPM)				
<i>Cadmium</i>	0	0	0	0.005
<i>Chromium</i>	0.003	0.004	0.003	0.1
<i>Lead</i>	0	0	0	0.015
<i>Mercury</i>	0	0	0	0.002
<i>Selenium</i>	0.002	0	0.009	0.05
<i>Silver</i>	0	0	0	0.1
<i>Antimony</i>	0	0	0	0.006
<i>Beryllium</i>	0	0	0	0.004
<i>Nickel</i>	0.001	0.005	0.005	0.1
<i>Thallium</i>	0	0	0	0.002
Radiochemistry				
<i>Gross Alpha</i>	0.657	3.4	0.872	15 (pCi/l)
<i>Gross Beta</i>	5.17	2.9	10.7	15 (pCi/l)
<i>Uranium</i>	0.00149	-	0	.030 ppm

Water from the wells is generally of good quality; however, arsenic, a primary drinking water constituent, is currently exceeding the MCL of 10 ppb in two of the three active wells. Health risks associated with ingesting arsenic are skin damage or problems with circulatory systems, and arsenic may also increase risks of developing cancer. In order to achieve compliance with the arsenic MCL, SSMWC just completed a water treatment plant for arsenic removal in December 2010.

In previous years, the Deodar and Idaho Street Wells had high nitrate levels that were determined to be associated with leaking underground septic systems. Prior to 1997, the entire community was on septic systems. This led to the construction of a centralized waste water treatment plant and the development of the Silver Springs General Improvement District (SSGID) – which is now operated by Lyon County. Since the construction of the treatment facility, nitrate levels have declined rapidly.

3.4.2 Water Rights

Water rights held by SSMWC are not to exceed combined use of 1.13 billion gallons annually. The place of use map (Figure 3, Appendix 1) shows the well sources and places of water rights use, as well as the permit numbers under which the water rights are held. SSMWC requires that contractors developing within the SSMWC service area boundaries bring in water rights sufficient to serve areas under development. Additionally, by accepting Five Star MHP and Silver Springs MHP as customers, both MHPs transferred their water rights to Silver Springs Mutual Water Company. The SSMWC water rights are generally in good standing and are

adequate to serve the current customers. Review of existing water rights needs to be treated as an ongoing process to protect the existing rights and development of a plan to acquire additional water rights for future expansion of the system.

3.4.3 Wells

The three wells currently used by SSMWC are in fair condition. The Ft. Churchill and Atkins well are used only as monitoring wells. The three wells are all enclosed in well houses and sit on gravel floors. Table 5 provides information for the wells and water production data. The table shows the water system is only pumping 195 million gallons annually based on the 2009 usage data but has a right to pump an additional 935 million gallons annually.

Table 4
SSMWC Well Data

Well Name	Status	Year Drilled	Depth To Water (feet)	Well Depth (feet)	Sanitary Seal (Feet)	Casing Diameter (inches)	Max Pumping Rate (gpm)
Fort Churchill St. Well	Not used	1951	40	290	None	8	125
Lake St. Well	In-use	1979	20	350	51	14	1100
Idaho St. Well	In-use	1973	36	400	50	12	800
Deodar St. Well	In-use	1954	64	260	Unknown	14	600
Atkins Well	Not used	1971	92	294	50	14	200

Table 5
2011 Water Pumped (and sold) in Million Gallons

Month	Fort Churchill	Deodar	Idaho	Lake	Totals	Residential (sold)	Commercial (sold)	Industrial (sold)	Totals
January	0.00	0.02	0.00	7.10	7.12	4.77	0.69	0.21	5.67
February	0.00	0.15	0.00	6.18	6.33	4.29	0.81	0.20	5.30
March	0.00	0.00	0.00	7.24	7.24	4.31	1.18	0.22	5.71
April	0.00	0.00	0.00	11.42	11.42	6.13	3.03	0.25	9.41
May	0.00	0.08	0.00	17.16	17.24	9.80	4.50	0.25	14.54
June	0.00	0.01	0.05	22.57	22.63	10.97	4.62	0.25	15.83
July	0.00	6.75	0.04	21.70	28.49	20.14	8.53	0.33	28.99
August	0.00	12.17	0.00	13.00	25.17	17.17	7.07	0.33	24.57
September	0.00	10.18	0.00	11.30	21.48	16.24	6.95	0.38	23.58
October	0.00	1.19	0.00	13.10	14.29	8.28	4.21	0.35	12.84
November	0.00	0.15	0.00	8.64	8.79	4.28	2.72	0.45	7.45
December	0.00	7.22	0.00	0.64	7.86	5.71	1.86	0.64	8.21
Total Used	0.00	37.93	0.09	140.05	178.07	112.08	46.18	3.85	162.11
Total Permitted	707.7	707.7	716.07	1004.65	1132.7				
Difference Over / (Under)	-707.7	-669.8	-716.0	-864.6	-954.6				

Fort Churchill: This well was drilled in 1951 and never produced more than 125 gpm. Water from the well has shown arsenic levels at 0.025 ppm exceeding the MCL. The well does not have a surface seal. The use of this well has been discontinued.

Atkins Well: This well was drilled in 1971 and had poor quality water and was very inefficient. This well is out of service.

Lake Street: This well was drilled in 1979 and is the newest well and main producer, pumping 1,100 gpm. The well is in good condition; however it produces arsenic at 0.026ppm, exceeding the arsenic MCL.



Idaho St. Well

Idaho Street: This well was drilled in 1973 and produces 800 gpm. Arsenic is detected in the Idaho Street Well at 0.014ppm. This well is currently experiencing some electrical problems. To prevent overheating, the door to the well house is left open and a fan is used.



Deodar St. Well

Deodar Street: This well was drilled in 1954 and has the lowest production capacity at 600 gpm. Historic arsenic levels in this well have ranged from 0.080 to 0.012 ppm. This well shares the same building as the existing shop.

3.4.4 Storage

Total storage capacity for the system is 1.38 million gallons. Operating storage for Maximum Day Demand (MDD) is approximately 1.2 million gallons per day. Fire suppression storage for the community schools and commercial facilities is 2,500 gpm for four hours or 600,000 gallons. Reserve storage, is recommended by NAC to be up to 75% of the operating storage, which in this case approximately 900,000 gallons. It is not recommended to reduce this percentage because the pumping capacity is not at the 2,500 gpm fire flow required particularly if one well is down

The interior coating system on the North Tank was inspected in 2008 and some repairs were made at the time of the inspection. The inspection report recommends that inspections continue to occur every 3 to 5 years to evaluate the interior tank coating and repair it as necessary. The full report is included in Appendix 3. The West Tank is in good condition.

3.4.5 Distribution System and Fire Protection

The existing distribution system is made up of roughly the following sizes and quantities:

2-inch	350 feet
4-inch	4,570 feet
6-inch	55,230 feet
8-inch	46,700 feet
10-inch	22,270 feet
<u>12-inch</u>	<u>31,130 feet</u>
Total	160,270 feet

The condition of the distribution system is generally good and appears to be adequately sized. The majority of the pipe is C900 PVC; however, most of the 6-inch pipe in the northeast part of town is thin-wall PVC that is susceptible to leaks and is being replaced as necessary. There are several dead-end lines that could easily be looped. Additional fire hydrants and gate valves are needed in various locations. However, additional fire hydrants will only be eligible for funding if they are contiguous to the new pipelines. No USDA funds are being requested and no USDA funds will be used for non-contiguous fire hydrants.

SSMWC is in the process of converting the whole system to touch read water meters to eliminate the need to manually read the meters. This will help with record keeping and eliminate the small discrepancies between “water pumped” and “water sold”. Approximately 2.6 million gallons of water pumped in the system in 2009 was unaccounted for or not “sold”. This is a very small amount of water and is no cause for concern. To date, over half of the meters in the system have been converted to touch read meters.

Hydraulic Analysis

A water model of the SSMWC system was created in WaterCAD version 6.0. Scenarios were built for average day demand, max day demand, peak hour demand, and max day demand plus residential fire flow. All of the model results and a diagram of the water model are included in Appendix 4.

Water Use Data

Based on recent pumping records, the current average day demand for the entire system is 600,000 gpd or 415 gpm. The maximum day demand is 1,186,540 gpd or 824 gpm. The average residential water use is approximately 312 gpd.

Pressures

According to NAC 445A.6672, Item 2, the public water system shall ensure the residual pressure in the distribution system is:

- At least 20 psi during conditions of fire flow and fire demand experienced during maximum day demand;
- At least 30 psi during peak hour demand; and
- At least 40 psi during maximum day demand.

Furthermore, the zones of pressure in a distribution system must be designed in such a manner the static pressure at the lowest ground elevation of the zone does not exceed 100 psi.

Velocities

NAC 445A.6672, Item 2 states that high head losses must be avoided by maintaining normal water velocities below 8 feet per second during all conditions of flow other than fire flow.

Capacity of System

NAC 445A.6672, Item 3 states if the public water system relies exclusively on water wells as its source of water, it shall ensure the total capacity of the system is sufficient to meet:

- The maximum day demand, fire flow and fire demand when all facilities of the system are functioning; or
- The average day demand, fire flow and fire demand when the most productive well of the system is not functioning, whichever is greater. When computing total capacity for this purpose, credit must be given for any storage capacity.

In addition, the Engineer must ensure that water projects are completed in such a manner as to meet the actual maximum day demand, peak hour demand and fire demand for developments of property in the area of service of the public water system.

Fire Protection

According to Division III of the 1997 Uniform Fire Code, the minimum fire flow requirements for one and two-family dwellings having a fire area which does not exceed 3,600 square feet shall be 1,000 gallons per minute. Fire flow for commercial buildings and homes larger than 3,600 square feet range from 1,500 gpm to 8,000 gpm, with durations of up to 4 hours. For example, demand at the schools would be 2,500 gpm for 4 hours as stated in section 3.4.4.

Results

Please refer to the model output in Appendix 4 and the model diagram. Water system pressures during average day, maximum day and peak hour demands generally meet State requirements with a few exceptions. Pipe segments at the south end of Onyx and Opal experience low pressures in the range of 20 to 30 psi. The pipe on Atkins, which is the pipe segment closest to the booster station (on the low pressure side), has an average pressure of about 50 psi. The remainder of the system has good pressure ranging from 50 to 80 psi.

Regarding fire flows, the same areas mentioned above that have low pressures also have inadequate fire protection. Some of the dead-end lines on the north side of Highway 50 do not provide adequate fire flow. In addition, the 4-inch main that exits in the alley near Highway 95A does not provide adequate fire flow. In all, there are only 8 junctions in the water model that show inadequate fire flow (less than 1,000 gpm). The remainder of the junctions provide at least 1,000 gpm, with some capable of providing more than 4,000 gpm.

Unfortunately, very little data was available for calibrating the model. SSMWC did not have reliable fire hydrant flow data available to check the model results. However, the residual pressures predicted in the model generally match with those reported by SSMWC for various areas of the community. As more data becomes available and the area continues to grow, the model can be updated and improved.

In summary, the system meets required standards with only a few exceptions.

3.4.6 SCADA System

As a part of the water treatment plant, a SCADA system was installed and incorporates the wells and the tanks as well as the new treatment system itself. Additional upgrades, including new flow meters at the well heads, and upgraded remote radios will be necessary in the future to fully monitor the system on SCADA.

3.4.7 Backup Power Source

A generator was installed at the new water treatment plant, which is capable of operating both the water treatment plant and Lake Street Well in the event of an emergency. Two additional backup power sources are needed for the booster station and the Deodar and Idaho wells. A generator is needed at the booster pump station in order to transfer water from zone 1 to zone 2 in the event of an emergency (zone 2 receives its water from zone 1). A trailer mounted generator is needed for use on either the Deodar or Idaho wells in the event of a power outage.

SSMWC also has an agreement in place with Lyon County to utilize their mobile generator when available. Lyon County is located approximately 25 miles from Silver Springs, ensuring that a backup power source could be available to them in less than one hour.

3.4.8 Latest Sanitary Survey

The most recent Sanitary Survey was performed on August 27, 2008 and there were no significant or other deficiencies noted. The next survey is scheduled for 2013.

3.5 SSMWC Financial Status

3.5.1 Current Rate Schedule

SSMWC currently has 1,015 active water service connections or 1,181 EDUs. The number of active connections fluctuates over the course of the year depending on the number of trailer hookups in various areas. The cost breakdown of meter size, type of connection (residential or commercial), and pressure zone are summarized in Tables 6 and 7. Water rates have been increasing in recent years, including an increase in 2008 of \$7/month increase in the base rate, a \$0.25/1,000 gallons increase in the commodity rate and a decrease in the number of gallons included in the base rate from 30,000 gallons to 25,000 gallons. These are significant changes to the rates and bring SSMWC closer to water rates that are considered to be affordable by the Nevada Board for Financing Water Projects (AB198). The current rates are listed in the tables below.

Table 6 – Residential Rates

Connection (inch)	Zone 1 Residential Base	Zone 2 Residential Base
3/4	\$ 35.00	\$ 39.00
1	\$ 43.00	\$ 49.00
1 1/2	\$ 47.00	\$ 52.00
2	\$ 57.00	\$ 65.00
3	\$ 81.00	\$ 91.00
4	\$ 102.00	\$ 117.00
6	\$ 145.00	\$ 169.00
\$1.25 Per 1,000 gallons after 25,000 gallons		

Table 7 – Commercial Rates

Connection (inch)	Zone 1 Commercial Base	Zone 2 Commercial Base
3/4	\$ 39.00	\$ 43.00
1	\$ 47.00	\$ 49.00
1 1/2	\$ 53.00	\$ 56.00
2	\$ 61.00	\$ 69.00
3	\$ 85.00	\$ 95.00
4	\$ 106.00	\$ 121.00
6	\$ 149.00	\$ 173.00
\$1.25 Per 1,000 gallons after 25,000 gallons		
*Trailer Parks, Apartments, Hotels, Motels Add \$22.00 Per Unit for Both Zones.		

The application for service for a new customer is 3 times the base rate, plus a \$25 service charge. This is for connections that already exist, where only the customer is new. For example, if a person were to move into a home in zone 1 with a 1” meter connection the total cost to connect would be \$154 (\$43 base rate times 3, plus the \$25 service charge.)

The cost to connect a new home or commercial service to the existing system is greater than the application for service fee for an existing service. Table 8 outlines the cost for the various size meters.

Table 8 – New Connection Costs

Connection (inch)	Capacity Fee	Meter Installation	Total Cost
¾	\$3,200	\$650	\$3,850
1	\$5,300	\$750	\$6,050
1 ½	\$10,500	Actual cost	\$10,500+meter
2	\$16,800	Actual cost	\$16,800+meter
3	\$33,600	Actual cost	\$33,600+meter
4	\$57,700	Actual cost	\$57,700+meter
6	\$105,000	Actual cost	\$105,000+meter

3.5.2 Future Rates

SSMWC just completed significant rate increases, and future increases are planned to take effect in coming years. In October of 2010 there was a rate increase, the next scheduled rate increase is to take place in October of 2012. The changes will be to the commodity rate and the number of gallons included in the base rate. The following table outlines the current rates compared to the future rate changes.

Table 9 – Future Rate Changes

Rate Elements	2008	2010	2012
Gallons included in Base	25,000	20,000	15,000
Commodity Rate/1,000 gallons	\$1.25	\$1.50	\$1.75

3.5.3 Income Survey

According to an income survey completed by SSMWC in 2009, the Median Household Income (MHI) for service area is below \$19,800. (The income survey has been submitted to both CDBG and USDA and has been accepted by both.) The MHI is used to ensure the water rate for the community is considered affordable by the lending agencies. An affordable water rate is considered to be 1.5% of the MHI for 15,000 gallons of water.

According to the current MHI and the current water rates, SSMWC is currently using approximately 2.1% of the MHI for 15,000 gallons of water in Zone 2 and 2.4% of the MHI for 15,000 gallons of water in Zone 1. As can be seen, SSMWC’s water rates are well above what is considered to be “affordable” based on the low MHI of the service area. This is due in part to the fact the new rates are a significant increase (\$7/month/connection) from the previous rates.

3.5.4 SSMWC Statement of Financial Position

SSMWC has Kohn Colodny LLP perform audits annually. Audits are conducted “in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*.” Table 10 is a revenues and expenses summary for SSMWC for the past five years. The information presented in Table 10 was taken directly from the 2005 through 2009 audits performed by Kohn Colodny LLP.

Table 10 – SSMWC Statements of Activities

DECEMBER 31, 2007-2011						
	2007	2008	2009	2010	2011	
REVENUE AND OTHER GAINS						
Program service fees						
Water sales	\$ 413,383.00	\$ 435,999.00	\$ 552,432.00	\$ 515,158.00	\$ 550,302.00	
Application and hookup fees	\$ 26,285.00	\$ 9,265.00	\$ 23,030.00	\$ 2,940.00	\$ 3,720.00	
Meter installations	\$ 3,150.00	\$ 650.00	\$ -	\$ -	\$ -	
Water rights						
Late fees	\$ 10,217.00	\$ 10,355.00	\$ 12,402.00	\$ 12,528.00	\$ 11,964.00	
Service charges	\$ 6,340.00	\$ 5,719.00	\$ 5,800.00	\$ 5,821.00	\$ 6,005.00	
Contract Services	\$ 11,922.00	\$ 36,000.00	\$ 36,000.00	\$ 36,000.00	\$ 36,000.00	
Grants	\$ 4,335.00	\$ -	\$ 354,868.00	\$ 3,218,036.00	\$ 60,890.00	
Interest	\$ 17,111.00	\$ 15,699.00	\$ 12,810.00	\$ 4,009.00	\$ 1,463.00	
Gain on sale of equipment	\$ -	\$ -	\$ -	\$ -	\$ -	
Miscellaneous	\$ 12,592.00	\$ 8,537.00	\$ 4,477.00	\$ 4,700.00	\$ 7,697.00	
	\$ 505,335.00	\$ 522,224.00	\$ 1,001,819.00	\$ 3,799,192.00	\$ 678,041.00	
EXPENSES						
Program Services	\$ 461,417.00	\$ 498,036.00	\$ 491,201.00	\$ 530,426.00	\$ 620,487.00	
General and administrative	\$ 86,967.00	\$ 101,906.00	\$ 105,007.00	\$ 102,482.00	\$ 109,608.00	
	\$ 548,384.00	\$ 599,942.00	\$ 596,208.00	\$ 632,908.00	\$ 730,095.00	
Increase (decrease) in unrestricted net assets from operations	\$ (43,049.00)	\$ (77,718.00)	\$ 405,611.00	\$ 3,166,284.00	\$ (52,054.00)	
CAPITAL ADDITIONS						
Construction revenue	\$ -	\$ -	\$ -	\$ -	\$ -	
UNRESTRICTED NET ASSETS, beginning of year	\$ 1,206,410.00	\$ 1,377,811.00	\$ 1,495,877.00	\$ 1,452,828.00	\$ 1,375,310.00	
UNRESTRICTED NET ASSETS,	\$ 1,163,361.00	\$ 1,300,093.00	\$ 1,901,488.00	\$ 4,619,112.00	\$ 1,323,256.00	

In summary, revenues did not cover expenses in 2007, 2008 and 2011. In 2009 and 2010 grants may have offset shortfalls. Rates were increased in October of 2008 to eliminate budget shortfalls. Further rate increases implemented in fall of 2010 and 2012 will help avoid future budget deficits. SSMWC has two outstanding USDA loans. The first loan was for \$880,000 and was for the West Tank, Booster Station and line extensions. The monthly payments are \$4,321 and the loan expires in 2035. The second loan was for \$170,000.00 and was for the new office. The monthly payments are \$793 and the loan expires in 2042. A third loan of \$93,478, which was used to purchase a vacuum truck and a backhoe, requires monthly payments of \$1,558 and will expire in 2013. See Appendix 5 for SSMWC audits 2005 to 2011.

IV. NEED FOR PROJECT

4.1 Health and Safety

Water Availability

The system has three active wells. Anticipating growth in the future, SSMWC will need to maintain and increase the production capacity to provide adequate amounts of water to current and future customers. A new well with a capacity of 750 to 1,000 gpm will ensure that sufficient water will be available to the service area even if one of the existing wells should have problems in the future and allow for minimal growth.

Back Up Power Supply

A backup power supply is installed as a part of the new water treatment plant, which supplies power for both Lake Street Well and the water treatment plant. SSMWC needs a backup power source for the booster pump station to supply water from zone 1 to zone 2 in the event of an emergency. An agreement does exist between SSMWC and Lyon County as outlined in Section 3 of this report so a generator may be obtained in an emergency when available. Additionally, a backup source of power is still necessary for Idaho and Deodar Well sites.

4.2 System O&M

Storage and Maintenance Space

The existing shop owned by SSMWC is not sufficient in size to perform repairs on equipment and store necessary parts and supplies. The existing shop also houses Deodar Well, further limiting the available space for storage and maintenance. A new building, located at Deodar Well site, with sufficient space for maintenance of equipment and storage of supplies is necessary.

Waterline Replacement & Installation

A section of main water line along Highway 95A, from Virginia to Pyramid, needs to be upgraded to an 8" water line to eliminate a bottleneck in the system. A number of loops in the system should be completed to eliminate dead end lines. Finally, installing a pressure reducing valve (PRV) at the connection between Citrus Street and the airport waterline to allow the airport waterline to be extended to Opal Street would eliminate the dead end at the airport, provide additional service in the area and allow for a second connection between zone 1 and zone 2 to improve system pressures. No USDA funds will be requested or used for this alternative.

Tank Maintenance

The North Tank needs continued monitoring and maintenance in the coming years. A full inspection and repairs to the interior liner were completed in 2008. The next inspection should take place no later than 2013.

Miscellaneous

The Idaho Street Well is experiencing some electrical problems and the cooling system is not operating correctly, causing them to use an indoor fan and keeping the well house door open when operating the pump, otherwise the pump will automatically shut down.

Touch read meters have been installed for approximately half of the customers in the system; the remainder of the meters should be installed to eliminate the need to manually read meters.

4.3 Growth

From the growth projections mentioned in section 2, moderate growth is expected and will contribute to the project need. Silver Springs will continue to grow, thus demanding water service expansion. Project improvements will offer an incentive for residential and industrial growth and development that will promote economic stimulation in the area. By 2030, it is estimated that SSMWC will be serving almost 1,375 connections. Recommended storage will increase, and with the additional connection fees and user rates SSMWC must monitor when additional storage will be required (it is currently recommended, but not yet required as stated previously).

4.4 Consolidation with Smaller Systems and Homeowners

Consolidation with SSMHP and Five Star MHP has caused immediate growth in the service population. This also creates a more immediate possibility for further expansion as other homeowners utilizing private wells within the SSMWC service area boundaries pose potential growth for the water company. Due to high levels of arsenic in the area, and the treatment and maintenance costs associated with treating arsenic at individual wells, more homeowners may consider connecting into SSMWC's system for better quality water and convenience.

Currently, no other homeowners are scheduled to become a part of the water system; however there have been inquiries and SSMWC will likely see additional growth as a result of the new water mains that have been installed.

V. ALTERNATIVES CONSIDERED

The following sections outline the various alternatives for water system improvements which are being considered by SSMWC. For each alternative a general description is given and figures showing where the improvements will be located are included in the appendices. Cost estimates for each alternative are also presented and include land purchase if necessary, and also any construction problems which may be encountered. The design criteria to be used will be a combination of the regulations of the Nevada State Health Division, Standard Specifications for Public Works Construction and standard engineering practice.

Section VI will rate and prioritize each of the alternatives considered. Not all alternatives considered will be high priority projects and consequently, not all alternatives considered will be recommended for a proposed project. Refer to Section VII for the finally proposed list of alternatives which make up the proposed project.

Community environmental information was provided in Section II of this report and a separate environmental study was completed specifically for the proposed project elements. This study included more detailed information, mitigations where needed, and consultation with area stake holders. It was found that there are not significant environmental issues with this project primarily because all of the improvements will be installed in existing rights-of-way or property owned by SSMWC and/or areas that have been previously disturbed.

5.1 No Action

If no action is taken the water system will be reliant on wells that exceed their design life having been constructed between 33 to 58 years ago. Construction of replacement wells is required to meet minimum flow and backup well NAC requirements. Additional benefits will include greater energy efficiency for producing water and a reduction in annual costs for arsenic treatment requirements.

Zone 2 receives water from zone 1 via the booster station. In the event of a power outage water could not be moved from zone 1 to zone 2 because the booster station is not equipped with backup power. Water demands also will not be met during a power outage due to lack of backup power at either of the Deodar and Idaho Wells.

The current maintenance building is no longer sufficiently sized for SSMWC growing service area. Because of these space constraints SSMWC is unable to properly store important replacement equipment that is imperative in case of emergency; it will remain stored outside subjecting it to weather damage and vandalism. They will continue to have limited backup parts available because of limited storage space, which causes additional time and money for common repairs and replacements. The small work space limits what SSMWC is able to repair. The downtime for repair will result in lost time and money.

The system will continue to not meet the required storage volumes. Due to storage constraints SSMWC has to pump during peak hour power rate to meet demands. The system storage limitation causes higher water rates for the community.

Dead-end water lines will continue to be a maintenance burden requiring regular flushing for taste and odor control, causing both a loss of time and money.

Currently SSMWC does not have ADA compliant facilities and will not be able to accommodate handicap employees.

The 4-inch main along highway 95A will continue to under serve the commercial lots and businesses along highway 95A.

Environmental Impacts

There would be no anticipated environmental impacts associated with this alternative since no project would be implemented.

5.2 Well Improvements

The Deodar well is the oldest production well with the greatest facility deficiencies and is in need of improvement or replacement. Deodar well is the only well in the system that is currently producing at or below the maximum contaminant level for all constituents. A new well installed at this location will eventually replace the existing well that was installed in 1954 and is beyond its service life and provide greater dependability, energy efficiency, water quality and protection from contaminants.

A new groundwater production well with the capacity of 750 to 1,000 gpm will provide sufficient system capacity to meet existing demand if a well is off line for repairs or replacement, reduce the system energy demands, decrease system treatment requirements and provide for nominal future growth. In the interim, before failure of the existing well, two wells at the Deodar well site will provide system redundancy.

A new well at this location will not require that additional water rights are moved to this well site location. The location of the existing Deodar well site is illustrated on Figure 1, Appendix 1.

Environmental Impacts

Other than temporary air quality issues associated with the construction process, there would be no anticipated environmental impacts associated with this alternative.

There are three approaches to the Deodar Well Improvements:

New Source Production Well - Designing and installing a completely new and improved well to maximize efficiency, water quality and production;

Replacement Well - Providing a replacement or clone type of well on the same site as the previous well with what improvements are allowed within a more limited budget; and

Improve Existing Well - Perform an inspection and make some limited improvements to the existing well (replace failed infrastructure such as the well house and maximize the life of the existing well).

Each approach is detailed in the following subsections.

5.2.1 New Source Production Well and Associated Tasks

A detailed description of the proposed work for the new production well and associated tasks is provided in the following subsections. Prior to construction of the new well, a program to evaluate the aquifers must be pursued to insure optimal success of the well construction program. This program should start with the existing water system wells. Existing wells provide a unique opportunity to evaluate aquifers for production characteristics and water quality. This program can be divided into 5 main tasks including:

- 5.2.1.1 Data review and development of conceptual aquifer model
- 5.2.1.2 Testing of production capacity and water quality of existing wells
- 5.2.1.3 Rehabilitation of existing wells and pumping equipment
- 5.2.1.4 Exploration/Monitor well drilling and construction (no USDA funds will be requested or used for exploration/monitor well drilling and construction)
- 5.2.1.5 Production well drilling, construction, development and baseline testing

The cost estimate for the construction of a new well and connection to the dedicated water main to treat the water prior to distribution is provided in the following table.

Table 11.1 – New Source Production Well Cost Estimate with Appropriate Exploration and Study

Item	Cost
Testing of Existing Wells	\$ 78,000
Rehabilitation of Existing Wells and Pumping Equip.	\$ 40,000
Exploration & Monitor Well Construction	\$ 289,000
Production Well Installation and Testing	\$ 700,000
Electrical and SCADA	\$ 125,000
Piping and Connection Vault	\$ 125,000
Pump Equipment (Complete to Pitless and Controls)	\$ 75,000
<i>Subtotal</i>	<i>\$ 1,432,000</i>
Contingency	\$ 214,800
Engineering	\$ 214,800
Construction Management & Inspection	\$ 100,240
Land	N/A
Legal/Bond Council, Title Search	\$ 15,000
Total	\$ 1,976,840
Operation and Maintenance	\$ 20,000

5.2.1.1 Data review and development of conceptual aquifer model

This subtask is necessary to compile information and develop a conceptual aquifer model so the water system can utilize the water resources most efficiently by reducing minimizing pumping and treatment requirements. The benefits from this task will be recognized in the operation of the system, maintenance of wells and pumping equipment and in the installation of monitoring wells. Several components are included in this task including:

- Water quality map (include changes with depth)
- Groundwater production capacity map
- Cross sections of hydrogeology of basin aquifers
- Create digital file for each SSMWC well (elog, video, other)
- Development of recommendations for well field operations
- Water rights management strategy

The efforts for these tasks will be concentrated around the existing well field at this time. This effort should be expanded with time so there is sufficient lead time prior to expansion of the service area or connection of additional customers. The bulleted efforts are important so the water resources are developed in a cost efficient manner. Not completing the efforts will result in greater long term costs to the water system by not developing the water resources in the most cost effective manner.

Environmental Impacts

This alternative is a planning element and would not include any physical changes to landscape or facilities in Silver Springs. Therefore there would be no environmental consequences associated with this alternative.

5.2.1.2 Testing of the production capacity and water quality of existing wells

Existing production wells provide a unique opportunity to evaluate aquifer conditions regarding production capacity and water quality of individual aquifers. Testing of existing wells will be completed by conducting a down well flow survey with concurrent discrete interval testing. The down well survey will incorporate as necessary and as down hole conditions allow additional surveys that may include video, casing integrity, fluid resistivity, temperature and gamma. Components of this task will include:

Production Capacity Testing (step and constant discharge testing)
 Depth Specific Hydraulic Parameters (w/ spinner)
 Depth Specific Water Quality (discrete sampling)
 Geophysical Surveys (fluid resistivity [static-dynamic], temperature, gamma, other)
 Video Surveys (side scan static and pumping)
 Water rights management strategy

Environmental Impacts

There would be no anticipated environmental impacts associated with this alternative.

5.2.1.3 Rehabilitation of existing wells and pumping equipment

Well rehabilitation will be prioritized based on the results of the production well testing. Well rehabilitation will result in improved energy efficiency and possible improved water quality from existing wells. The decision to rehabilitate a well is based on the decline in production from baseline data. This will be evaluated based on historic data obtained in subtask 5.2.1.1 and data obtained during the evaluation and testing in subtask 5.2.1.2

Testing and evaluation
 Brushing , acidifying, swabbing, bailing
 Removal and reinstallation of pumping equipment

Environmental Impacts

Other than temporary air quality issues associated with the construction process, there would be no anticipated environmental impacts associated with this alternative.

5.2.1.4 Exploration and Monitoring Wells

Depending on the results of the sub tasks 5.2.1.1 thru 5.2.1.3 exploration and monitoring wells will be completed to provide active monitoring of water quality and well efficiency to optimize the production to keep operating costs including treatment and pumping to a minimum. A monitor well would provide the District with greater information from the water quality and aquifer parameters of the alluvial aquifer. No USDA funding will be requested or used for this alternative.

Drilling

Monitor well construction

Equipping of well for long term monitoring

Environmental Impacts

Other than temporary air quality issues associated with the construction process, there would be no anticipated environmental impacts associated with this alternative. Standard construction practices and permitting should be sufficient to protect the affected environment. These practices include halt and notify provisions for the discovery of historic artifacts, limits on hours of operation, and noise, air, and traffic abatement procedures.

5.2.1.5 Production well drilling, construction, development and baseline testing

This subtask will include all the components for a new production well including drilling, construction, well development and testing. These tasks will include the well design and specifications, well bidding and contracting and oversight during construction. The installation of a production well involves significant capital costs and the well that is created may be with the water system and community for greater than 100 years. The pumping and potential treatment costs during this period of time will be significant. Therefore providing design specifications that can create a superior well is critical to the water system.

Well design and specification

Well bidding contracting, oversight during construction

Testing for baseline and equipping the well

Providing a superior well design and specifications will include significant attention in regard to but not limited to the identification of individual aquifers to be screened, methods of drilling to prevent plugging of aquifers and the selection materials to provide long life and high efficiency.

Environmental Impacts

Other than temporary air quality issues associated with the construction process, there would be no anticipated environmental impacts associated with this alternative.

5.2.2 Replacement Well and Associated Tasks

The replacement well approach is much simplified as compared to the previous section. It is recommended the down hole surveys and testing described previously be performed on the existing well to determine the zones of water quality and production and the corrosion potential for example. This approach does not determine if a deeper hole or areas not currently screened will produce more or better water. Much of the engineering is done during the drilling process as the drill cuttings are analyzed. It is assumed a quality casing material will be installed but it will not have as long a life as is proposed in the previous section. A new submersible motor and pump will be installed along with a connection vault, site piping, electrical and SCADA improvements. The following table details these costs.

Table 11.2 – Replacement Well Cost Estimate

Item	Cost
New Well Construction	\$ 290,000
Electrical and SCADA	\$ 120,000
Piping and Connection Vault	\$ 120,000
Pump Equipment (Complete to Pitless and Controls)	\$ 70,000
<i>Subtotal</i>	<i>\$ 600,000</i>
Contingency	\$ 90,000
Engineering	\$ 90,000
Construction Management & Inspection	\$ 30,000
Land	N/A
Legal/Bond Council, Title Search	\$ 15,000
Total	\$ 825,000
Operation and Maintenance	\$ 20,000

Environmental Impacts

Other than temporary air quality issues associated with the construction process, there would be no anticipated environmental impacts associated with this alternative.

5.2.3 Rehabilitate Existing Well

This approach to the Deodar improvements includes performing the down hole testing to ensure the well is worth saving and which down hole improvements can be made. It also includes replacing the failed existing well house, rehabilitating the well, installing a pitless adaptor and submersible pump, installing a connection vault, replacing chemical equipment, and making electrical and SCADA improvements. Much of what is learned from this process will be documented so it can be utilized in the future design of a replacement well. The following table details these costs.

Table 11.3 – Rehabilitate Existing Well Cost Estimate

Item	Cost
Down Hole Investigation and Improvements	\$ 50,000
Well House Improvements	\$ 75,000
Electrical Improvements	\$ 75,000
Piping Improvements	\$ 55,000
<i>Subtotal</i>	<i>\$ 205,000</i>
Contingency	\$ 30,750
Engineering	\$ 30,750
Construction Management & Inspection	\$ 10,250
Land	N/A
Legal/Bond Council, Title Search	\$ 15,000
Total	\$ 291,750
Operation and Maintenance	\$ 20,000

Environmental Impacts

Other than temporary air quality issues associated with the construction process, there would be no anticipated environmental impacts associated with this alternative.

5.2.4 Deodar Street Well and Idaho Street Well Variable Frequency Drives

SSMWC would benefit from the installation of variable frequency drives (VFD) at Deodar Street Well and Idaho Street Well. A VFD allows the motor to start up slowly rather than a straight line start, which can draw up to ten times the rated current demand, this will save SSMWC a considerable amount of money. It will also ramp down when the motor is turning off preventing water hammer. These features will reduce the need for the pump-to-waste ponds at both sites, which are often full. A VFD will also allow for a constant flow to the WTP and into the system. This will ensure proper chemical dosing aiding in the treatment process and a constant loading for the filters at the WTP. No construction problems or negative environmental impacts are anticipated for this maintenance task.

A soft starter was also considered. Like VFD's, soft starters can reduce inrush currents on well pumps which can require many starts per hour. The reduced starting currents can result in longer motor life. However, VFD's can vary the output frequency, allowing for setpoint control to maintain the constant flows and pressures required for efficient operation of the treatment plant. For this reason, the VFD was chosen instead of the soft starter.

Table 12 – VFDs Cost Estimate

Item	Cost
VFDs at Deodar and Idaho	\$ 35,000
SCADA connections	\$ 5,000
<i>Subtotal</i>	<i>\$ 40,000</i>
Contingency	\$ 6,000
Engineering	\$ 4,000
Construction Management & Inspection	\$ 2,000
Land	N/A
Legal/Bond Council, Title Search	\$ 2,000
Operation and Maintenance	\$ 15,000
Total	\$ 54,000

Environmental Impacts

Other than temporary air quality issues associated with the construction process, there would be no anticipated environmental impacts associated with this alternative.

5.3 Backup Power (Booster Pump Station and Well Sites)

The booster pump station (Shown on Figure 1 in Appendix 1) should have a backup generator onsite in the event there is a power outage and water needs to be moved from zone 1 to zone 2. Zone 2 receives its water from zone 1 where all three wells and water treatment plant are located. If there is an emergency in zone 2 and there is a power outage this will allow the booster station to continue to move water from zone 1 to zone 2. A trailer mounted generator will provide SSMWC the ability to fill their system during power outages from either the Idaho or Deodar Well. The portable generator will be sized to handle the largest of the system wells. The estimated cost for this project is \$150,000 but the final cost will depend on the other alternatives selected (i.e. some modifications to the well sites may be included in other alternatives.)

Table 13 – Backup Power Generators Cost Estimate

Item	Cost
Booster Pump Generator and Electrical Modifications	\$ 43,000
Portable Generator and Electrical Modifications	\$ 75,000
SCADA connections	\$ 10,000
<i>Subtotal</i>	<i>\$ 128,000</i>
Contingency	\$ 19,200
Engineering	\$ 12,800
Construction Management & Inspection	\$ 6,400
Land	N/A
Legal/Bond Council, Title Search	\$ 2,000
Total	\$ 168,400

Environmental Impacts

Other than temporary air quality issues associated with the construction process, there would be no anticipated environmental impacts associated with this alternative.

5.4 New Water Storage Tank

The existing storage requires SSMWC to pump during peak hour power rates. The addition of a 1 million gallon storage tank next to the North Tank (Shown on Figure 1 in Appendix 1) would provide enough storage to pump only during off-peak hours and meet the commercial fire flow demand. This will save the community a considerable amount of money and provide more safety and operational flexibility in the system. Additionally, because of the rural nature of Silver Springs, the vulnerability of the treatment plant, and the age of the existing wells, high emergency storage is recommended. The project would include some site earthwork, site piping, a SCADA connection, fencing, constructing the welded steel tank, and providing interior and exterior coating. A cost estimate is below:

Table 14 – 1 MG Water Storage Tank Cost Estimate

Item	Cost
Water Tank, Site Work, and Fencing	\$ 545,000
SCADA connections	\$ 5,000
<i>Subtotal</i>	<i>\$ 550,000</i>
Contingency	\$ 82,500
Engineering	\$ 55,000
Construction Management & Inspection	\$ 27,500
Land	N/A
Legal/Bond Council, Title Search	\$ 2,000
Total	\$ 717,000

Environmental Impacts

Some biological mitigation may be required to prevent weeds. Other than temporary air quality issues associated with the construction process, there would be no anticipated environmental impacts associated with this alternative. In summary, standard construction practices and permitting should be sufficient to protect the affected environment. These practices include halt and notify provisions for the discovery of historic artifacts, limits on hours of operation, and noise, air, and traffic abatement procedures.

5.5 New Maintenance Shop

The existing maintenance area used by the water system is located in the same building as the Deodar Street Well. This maintenance area is inadequately sized for equipment maintenance and storage of replacement equipment. The building is adequate to continue housing the well; however a new facility is necessary to provide improved storage space as well as an equipment maintenance area.

Three alternatives have been considered for the maintenance shop.

Build a new shop on a lot located next to the existing shop. The lot is owned by SSMWC so no land purchase would be necessary.

Purchase a lot next to the SSMWC office and build a new shop.

Purchase an existing building next to the SSMWC office and modify it to meet maintenance needs.

Of the three alternatives, the purchase of the existing building is the most practical. The benefits of having the building close to the office include the use of the extra space for archival storage and easier management of system personnel. The cost of renovating the existing building is less than the cost of building a new building with the same size and amenities.

An out of service fire house facility located at Lahontan St and Ft Churchill St (Shown on Figure 1 in Appendix 1) appears to be the ideal facility to upgrade into a maintenance shop. The purchase of the facility and upgrades will greatly save on the capital cost of building a new facility. Upgrades will include HVAC, roofing, painting, window, removing fire department equipment, and lighting. There are no anticipated negative environmental impacts or construction problems associated with this project. A cost estimate for the building and upgrades is outlined in the following table.

Table 15 – New Maintenance Shop Cost Estimate

Item	Cost
Building Acquisition	\$ 100,000
Structural/Architectural Upgrades	\$ 40,000
Electrical Upgrades	\$ 25,000
Mechanical Upgrades	\$ 25,000
<i>Subtotal</i>	<i>\$ 190,000</i>
Contingency	\$ 28,500
Engineering	\$ 19,000
Construction Management & Inspection	\$ 9,500
Land	N/A
Legal/Bond Council, Title Search	\$ 10,000
Total	\$ 237,500
Operation and Maintenance	\$ 5,000

Environmental Impacts

Construction would take place within an existing structure and other than temporary air quality issues associated with the construction process, there would be no anticipated environmental impacts associated with this alternative. In summary, standard construction practices and permitting should be sufficient to protect the affected environment. These practices include halt and notify provisions for the discovery of historic artifacts, limits on hours of operation, and noise, air, and traffic abatement procedures.

5.6 ADA Facility Upgrades

ADA compliance upgrades to the existing SSMWC office are necessary to accommodate any current and future handicap employees. Upgrades will focus on the bathrooms, doorways, and access routes.

The alternative to this project is to do it in phases or, in the case of the wheel chair ramp, to construct building access in a different location. Upgrades costs are estimated in Table 16 below. Minor upgrades will be done in house.

Table 16 – ADA Upgrades Cost Estimate

Item	Cost
Exterior wheel chair ramp	\$ 20,000.00
ADA path through office	\$ 2,000.00
Bathrooms- move wall and door, paint	\$ 2,000
Bathrooms- ADA toilet and sink	\$ 2,500
Bathrooms- lower switches and dispensers	\$ 1,460
Bathrooms- change signage to unisex	\$ 40
<i>Subtotal</i>	\$ 28,000
Contingency	\$ 4,200
Engineering	\$ 2,800
Construction Management & Inspection	\$ 1,400
Land	N/A
Legal/Bond Council, Title Search	\$ -
Total	\$ 35,000

Environmental Impacts

Other than temporary air quality issues associated with the construction process, there would be no anticipated environmental impacts associated with this alternative.

5.7 System Improvements, Rehabilitation & Replacement

5.7.1 95A 4 inch Waterline Replacement

The 4-inch main in an alleyway will be replaced with a new 8 inch main along the Highway 95A frontage. This project will eliminate an undersized line and will be done utilizing standard construction practices, therefore no negative environmental impacts or construction problems are anticipated. There is adequate ROW present for the waterline replacement, though an NDOT encroachment permit will be necessary. The estimated cost for this project is outlined in the following table and the location of the proposed line is shown on Figure 1 included in Appendix 1. No USDA funding will be requested or used for this alternative.

Table 17 – 95A 4 inch Waterline Replacement Cost Estimate

Item	Quantity	Unit Cost	Total
8" C900 PVC	5,500	\$ 40	\$ 220,000
8" Gate Vavles	12	\$ 1,500	\$ 18,000
Traffic Control	1	\$ 15,000	\$ 15,000
Fire Hydrants	12	\$ 5,500	\$ 66,000
<i>Subtotal</i>			\$ 319,000
Contingency			\$ 47,850
Engineering			\$ 31,900
Construction Management & Inspection			\$ 15,950
Land			N/A
Legal/Bond Council, Title Search			\$ 10,000
Total			\$ 398,750

Environmental Impacts

Portions of this project would be constructed in the floodplain. However, all construction would be done according to County floodplain standards and would not affect the floodplain. Some biological mitigation may be required to prevent weeds. Some traffic mitigation may be necessary during construction. Other than temporary air quality issues associated with the construction process, there would be no anticipated environmental impacts associated with this alternative. In summary, standard construction practices and permitting should be sufficient to protect the affected environment. These practices include halt and notify provisions for the discovery of historic artifacts, limits on hours of operation, and noise, air, and traffic abatement procedures.

5.7.2 New Line Looping in Residential Neighborhood

Distribution mains on the following streets currently dead end and should be looped back into the system:

- Fort Churchill
- Pueblo
- Donner
- Tonopah
- Tuscarora
- Eureka
- Elko Street
- Virginia Ave/Truckee between Fort Churchill and Donner Trail

The locations of the above listed loops are shown on Figure 1 included in Appendix 1 and a detailed cost estimate is presented in the following table.

Table 18- New Line Looping in Residential Neighborhood Cost Estimate

Item	Quantity	Unit Cost	Total
6" C900 PVC	5,700	\$ 35	\$ 199,500
6" Gate Vavles	17	\$ 1,500	\$ 25,500
<i>Subtotal</i>			\$ 225,000
Contingency			\$ 33,750
Engineering			\$ 22,500
Constrction Management & Inspection			\$ 11,250
Land			N/A
Legal/Bond Council, Title Search			\$ 10,000
Total			\$ 281,250

Environmental Impacts

Some biological mitigation may be required to prevent weeds. Some traffic mitigation may be necessary during construction. Other than temporary air quality issues associated with the construction process, there would be no anticipated environmental impacts associated with this alternative. In summary, standard construction practices and permitting should be sufficient to protect the affected environment. These practices include halt and notify provisions for the discovery of historic artifacts, limits on hours of operation, and noise, air, and traffic abatement procedures.

5.7.3 Airport Line Loop Installation

To provide for future economic growth, provide another connection between zone 1 and zone 2 and also to eliminate the dead end at the airport, SSMWC plans to install a new PRV at the airport and Citrus and extend the airport waterline west to Opal and then south to connect at Opal and Spruce. The location of this project is shown in Figure 4 in Appendix 1.

This alternative will include a PRV at airport and Citrus, a line from the airport to Opal then to the intersection of Spruce and Opal

The installation of the airport loop will increase economic opportunities for the areas, eliminate a dead end in the system, improve pressures in the area and provide emergency water from zone 2 to zone 1. The water lines will be installed within existing rights of way, no land purchase will be necessary. Standard construction practices will be followed. The following table outlines the total cost to complete this project.

Table 19 – Airport Line Loop Cost Estimates

Item	Quantity	Unit Cost	Total
12" C900 PVC	17,100	\$ 45	\$ 769,500
12" Gate Valves	12	\$ 2,500	\$ 30,000
PRV & Vault	1	\$ 15,000	\$ 15,000
Fire Hydrants	6	\$ 5,500	\$ 33,000
<i>Subtotal</i>			\$ 847,500
Contingency			\$ 127,125
Engineering			\$ 84,750
Construction Management & Inspection			\$ 42,375
Land			N/A
Legal/Bond Council, Title Search			\$ 15,000
Total			\$ 1,059,375
Operation and Maintenance			\$ 1,000

Environmental Impacts

Some biological mitigation may be required to prevent weeds. Some traffic mitigation may be necessary during construction. Other than temporary air quality issues associated with the construction process, there would be no anticipated environmental impacts associated with this alternative. In summary, standard construction practices and permitting should be sufficient to protect the affected environment. These practices include halt and notify provisions for the discovery of historic artifacts, limits on hours of operation, and noise, air, and traffic abatement procedures.

5.7.4 Fire Hydrants

Fire hydrants are needed at the following street corners, please see Figure 8:

Truckee St. & Tahoe Ditch
Truckee St & Lahontan St.
Virginia & Donor Trail
Virginia & Pueblo St.
Winnemucca St. & Tahoe Ditch
Toiyabe St. & Esmeralda Ave.
Toiyabe St. & Lahontan St.
Ramsey St. & Tahoe Ditch
Talapoosa St. & Nevada St.

The cost of each fire hydrant installation is approximately \$4,000. The total cost for these nine locations is estimated to be \$36,000 for construction and \$50,000 when contingencies, engineering, inspection and other fees are added. Refer to Figure 5, Appendix 1 for locations. No USDA funding will be requested or used for this alternative. No USDA funds are being requested and no USDA funds will be used for non-contiguous fire hydrants.

Environmental Impacts

Other than temporary air quality issues associated with the construction process, there would be no anticipated environmental impacts associated with this alternative.

5.7.5 Gate Valves

Gate valves are needed at the following street corners:

Esmeralda Ave. & Fort Churchill Road
Esmeralda Ave. & Truckee St.
Esmeralda Ave. & Tonopah
Esmeralda Ave. & Rawhide St.
Esmeralda Ave. & Winnemucca St.
Esmeralda Ave. & Toiyabe St.
Esmeralda Ave. & Ramsey St.
Esmeralda Ave. & Talapoosa St.

The cost of each gate valve installation is approximately \$4,000. The total cost for these eight locations is estimated to be \$32,000 for construction and \$46,000 when contingencies, engineering, inspection and other fees are added. No USDA funds are being requested and no USDA funds will be used for non-contiguous gate valves.

Environmental Impacts

Other than temporary air quality issues associated with the construction process, there would be no anticipated environmental impacts associated with this alternative.

5.7.6 Water Services and Water Meters

The remaining manual read meters should be replaced with new touch-read meters. It is anticipated this project will be performed by SSMWC staff and will be paid for with SSMWC funds. No USDA funds are being requested and no USDA funds will be used for non-contiguous water meters.

Environmental Impacts

Other than temporary air quality issues associated with the construction process, there would be no anticipated environmental impacts associated with this alternative.

5.7.7 SCADA System

SCADA upgrades will be made at each site when the proposed work is performed. For example, when a generator is added or a well reconstructed, the work will include the needed SCADA upgrade. Some remote sites such as the West tank or other existing wells have radios which are not compatible with the newer models so, depending on the communication structure, when one site is upgraded, it may trigger the need to upgrade another site. These triggered upgrades are not major construction. It is simply swapping one electronic piece of equipment with another and possibly adding needed cable connections. The SCADA system improvements are not estimated separately as an independent project alternative, rather, these improvements are considered integral to and a part of each previous alternative previously described.

Environmental Impacts

This alternative includes work on or the replacement of existing equipment therefore no anticipated environmental impacts are anticipated with this alternative.

VI. SELECTION OF ALTERNATIVES

6.1 Selection of a Project

More improvements have been identified than SSMWC will attempt to address in one project. Therefore, the alternatives must be prioritized according to need and practicality. In this case, the selected alternatives include items that are the most critical to health and safety, and system efficiency. Those improvements which provide increased capacity, address deficiencies in the system, and operation and maintenance problems. The following items which were discussed in Section 5 meet these criteria:

Deodar Well Improvements – Rehabilitation and Drilling
VFDs at Deodar and Idaho Wells
Booster Station Generator and Trailer Mounted Generator
New Maintenance Shop
New 1 MG Water Storage Tank
Residential Neighborhood Line Looping
Replacement/Rehabilitation – consists of replacing an existing 4 inch main with new 8 inch pipe along Highway 95A.

The remaining items discussed in Section 5 but not included in the list above are projects that will be addressed through regular operation and maintenance of the system or through future projects.

6.2 Present Worth

The variety of projects discussed, and those that were selected alternatives, do not require significant increases in operation and maintenance costs for the water system. Therefore their “present worth” was not a significant factor in project selection; instead projects were selected based on those which were the greatest priority to the water system.

6.3 No Action

If no action is taken the water system will continue to be deficient in the areas previously discussed. If this alternative was chosen, the system would remain as is. This alternative was the least desirable and thus was not selected.

6.4 Health - Water Quality

The Deodar well is the oldest production well with the greatest facility deficiencies but is the only well in the system that is currently producing at or below the maximum contaminant level for all constituents.

The three alternatives considered for the improvement of the Deodar well are as follows:

Development of a new source production well
A replacement well at existing well site
Rehabilitation of the existing well

The development of a new source would be substantially more expensive than the other alternatives and was not selected since the other alternatives would adequately meet the needs of the system.

Occasionally, replacement wells installed at existing sites yield poorer quality water than the original well. If this occurred, the expense for the replacement would not justify the expense. For this reason the replacement well alternative was not selected.

The rehabilitation of the existing well alternative was determined to be the most practical alternative. The quality of the water produced by the well is good, the volume is adequate, and the cost is reasonable. For this reason, rehabilitation of the well is the alternative that was selected. This alternative includes the performing the down hole testing to ensure that the well is worth saving and which down hole improvements can be made. It also includes replacing the failed existing well house, rehabilitating the well, installing a pitless adaptor and submersible pump, installing a connection vault, replacing chemical equipment, and making electrical and SCADA improvements. Much of what is learned from this process will be documented so it can be utilized in the future design of a replacement well.

6.5 Operation and Maintenance -Wells

Both soft starters and VFD's were considered as solutions to improve well start-up at the Deodar and Idaho Street wells. Like VFD's, soft starters can reduce inrush currents on well pumps which can require many starts per hour. The reduced starting currents can result in longer motor life and lower current demand, providing cost savings. However, VFD's can vary the output frequency, allowing for setpoint control to maintain the constant flows and pressures required for efficient operation of the treatment plant. For this reason, the VFD was chosen instead of the soft starter.

SSMWC would benefit from the installation of variable frequency drives (VFD) at Deodar Street Well and Idaho Street Well. A VFD will reduce the need for the pump-to-waste ponds at both sites, which are often full. A VFD will also allow for a constant flow to the WTP and into the system. This will ensure proper chemical dosing aiding in the treatment process and a constant loading for the filters at the WTP.

6.6 Safety - Emergency Power

The booster pump station (Shown on Figure 1 in Appendix 1) should have a backup generator onsite in the event there is a power outage and water needs to be moved from zone 1 to zone 2. Likewise, a trailer mounted generator is needed so SSMWC can fill their system during power outages at either the Idaho or Deodar Well. The generators will guarantee water service to the entire system during power outage emergencies and is a high priority need for SSMWC.

6.7 Operation and Maintenance - Storage Capacity

The existing storage requires SSMWC to pump during peak hour power rates. The addition of a 1 million gallon storage tank next to the North Tank (Shown on Figure 1 in Appendix 1) would provide enough storage to pump only during off-peak hours and meet the commercial fire flow demand. This will save the community a considerable amount of money and provide more safety and operational flexibility in the system. Additionally, because of the rural nature of Silver

Springs, the vulnerability of the treatment plant, and the age of the existing wells, high emergency storage is recommended.

6.8 Operation and Maintenance

The existing maintenance area is in the same building as the Deodar Street well and is inadequately sized for equipment maintenance and storage of replacement equipment.

Three alternatives have been considered for a new maintenance shop.

Build a new shop on a lot located next to the Deodar Street well. The lot is owned by SSMWC so no land purchase would be necessary.

Purchase a lot next to the SSMWC office and build a new shop.

Purchase an existing building next to the SSMWC office and modify it to meet maintenance needs.

The purchase of the existing building is the most practical solution for the needed shop. The benefits of having the building close to the office include the use of the extra space for archival storage and easier management of system personnel. The cost of renovating the existing building is less than the cost of building a new building with the same size and amenities.

6.9 Health - ADA Facility Upgrades

ADA compliance upgrades to the existing SSMWC office are necessary to accommodate any current and future handicap employees. Upgrades will focus on the bathrooms, doorways, and access routes.

The alternative to this project is to do it in phases or, in the case of the wheel chair ramp, to construct building access in a different location. Minor upgrades will be done in house.

These alternatives were not chosen to be part of the current project. Some of the improvements can be made over time and the current need is not as crucial as those associated with the chosen alternatives.

6.10 Operations and Maintenance – Rehabilitation, Replacement, and Improvement

6.10.1 95A 4 inch Waterline Replacement

The 4-inch main in an alleyway will be replaced with a new 8 inch main along the Highway 95A frontage. This project will eliminate an undersized line. This alternative will not utilize USDA and will be implemented only if funding can be obtained from another source.

6.10.2 New Line Looping in Residential Neighborhood

Distribution mains on the following streets currently dead end and should be looped back into the system. Line looping helps maintain system pressures and reduces the potential occurrence of bacteria. Section 5.8.2 lists the streets where looping would be implemented.

6.10.3 Airport Line Loop Installation

To provide for future economic growth, provide another connection between zone 1 and zone 2 and also to eliminate the dead end at the airport, SSMWC plans to install a new PRV at the airport and Citrus and extend the airport waterline west to Opal and then south to connect at Opal and Spruce.

This alternative will include a PRV at airport and Citrus, a line from the airport to Opal then to the intersection of Spruce and Opal

The installation of the airport loop will increase economic opportunities for the areas, eliminate a dead end in the system, improve pressures in the area and provide emergency water from zone 2 to zone 1. The water lines will be installed within existing rights of way, no land purchase will be necessary.

The implementation of this alternative is not crucial at this time and thus was not selected to be part of the proposed project.

6.10.4 Fire Hydrants

Fire hydrants are needed at the street corners listed in Section 5.8.4. The cost of each fire hydrant installation is approximately \$4,000. The total cost for these nine locations is estimated to be \$36,000 for construction and \$50,000 when contingencies, engineering, inspection and other fees are added. No USDA funding will be requested or used for this alternative. Fire hydrants contiguous to selected alternatives will be considered part of those alternatives and funded accordingly.

6.10.5 Gate Valves

The cost of each gate valve installation is approximately \$4,000. The total cost for the eight locations listed in Section 5.8.5 is estimated to be \$32,000 for construction and \$46,000 when contingencies, engineering, inspection and other fees are added. No USDA funds are being requested and no USDA funds will be used this alternative. Gate valves contiguous to selected alternatives will be considered part of those alternatives and funded accordingly.

6.10.6 Water Services and Water Meters

The remaining manual read meters should be replaced with new touch-read meters. It is anticipated this project will be performed by SSMWC staff and will be paid for with SSMWC funds. No USDA funds are being requested and no USDA funds will be used this alternative. Meters contiguous to selected alternatives will be considered part of those alternatives and funded accordingly.

6.10.7 SCADA System

SCADA upgrades will be made at each site when the proposed work is performed. For example, when a generator is added or a well reconstructed, the work will include the needed SCADA upgrade. Some remote sites such as the West tank or other existing wells have radios which are not compatible with the newer models so, depending on the communication structure, when one site is upgraded, it may trigger the need to upgrade another site. These triggered upgrades are not major construction. It is simply swapping one electronic piece of equipment with another

and possibly adding needed cable connections. The SCADA system improvements are not estimated separately as an independent project alternative, rather, these improvements are considered integral to and a part of each previous alternative previously described.

6.11 Matrix Ratings

The following matrices summarize the selection of the alternatives and the various factors considered the selection. It should be noted that matrix ratings are subjective, but can help the water system determine which selected alternatives to move forward with if funding is not available for the full project.

Each priority category will individually be rated on a scale of 1-10 with a score/rating of 10 being a positive/high priority/level of high criticality and a score/rating of 1 being a negative/low priority/low criticality.

Table 20 - Matrix Rating of Alternatives

Deodar Well				
Factor	Deodar New Well	Deodar Replacement Well	Deodar Rehab	No Action
Cost/Benefit	5	6	9	10
System Priority	10	10	10	0
Complexity	10	8	6	0
System Benefits	10	10	10	0
Funding Eligible	0	10	10	N/A
Total	35	44	45	10
Proposed	No	No	Yes	No

New Shop				
Factor	New Shop @ Deodar Well Site	New Shop Near Office	Modify Existing Shop Near Office	No Action
Cost/Benefit	8	7	9	10
System Priority	7	7	7	0
Complexity	5	5	6	0
System Benefits	8	8	8	0
Funding Eligible	10	10	10	N/A
Total	38	37	40	10
Proposed	No	No	Yes	No

Starters for Deodar and Idaho Wells			
Factor	VFDs Deodar & Idaho	Soft Start Deodar & Idaho	No Action
Cost/Benefit	6	6	10
System Priority	9	9	0
Complexity	6	5	0
System Benefits	10	7	0
Funding Eligible	10	10	N/A
Total	41	37	10
Proposed	Yes	No	No

Misc. Elements of Proposed Project					
Factor	Emergency Generators	1 MG Water Tank	Line Looping	SCADA	No Action
Cost/Benefit	6	6	8	8	10
System Priority	10	10	9	9	0
Complexity	9	8	8	9	0
System Benefits	8	10	8	10	0
Funding Eligible	10	10	10	10	N/A
Total	43	44	43	46	10
Proposed	Yes	Yes	Yes	Yes	No

Future Projects						
Factor	ADA Improvements at office	95A Waterline Replacement	Airport Line Looping	Fire Hydrants	Gate Valves	Services and Meters
Cost/Benefit	4	7	6	7	7	7
System Priority	5	8	4	7	7	6
Complexity	5	7	7	4	4	4
System Benefits	4	10	7	6	7	7
Funding Eligible	10	10	10	0	0	0
Total	28	42	34	24	25	24
Proposed	No	No	No	No	No	No

VII. PROPOSED PROJECT

7.1 Description, Map and Schematic Layout

The proposed project for Silver Springs Mutual Water Company is to install the following;

1. Deodar well site improvements including improving the existing well facilities and drilling and equipping a new well as funding allows.
2. Installing variable frequency drives (VFD) on the Idaho and Deodar well.
3. Installing a backup generator at the booster site and purchase a trailer mounted backup generator for use at both the Idaho and Deodar well sites.
4. Purchase and upgrade a shop for equipment maintenance and storage.
5. Construct a new one million gallon tank at the existing north tank site.
6. Install 6" waterline loops in the residential neighborhood at the end of Fort Churchill St, Pueblo St, Donner St, Tonopah St, Tuscarora St, and Eureka St on Elko St. Also install a 6" waterline loop on Virginia Ave/Truckee St. from Fort Churchill and Donner Trail.

7.1.1 Environmental Impacts

The environmental report shows that there are not significant environmental issues with this project primarily because all of the improvements will be installed in existing rights-of-way or property owned by SSMWC and/or areas that have been previously disturbed.

7.1.2 Land Requirements

All construction will be in established easements. The new maintenance shop alternative includes the purchase of land and a building which appears to be eligible for federal funding.

7.2 Cost Estimate

The following table is a preliminary estimate of the probable construction costs for the proposed project.

Table 21 – Total Cost Estimate

Project	Cost
Deodar Well Improvements	\$ 205,000
VFD at Deodar & Idaho Wells	\$ 40,000
Booster Station Generator/Trailer Generator for Wells	\$ 128,000
New Maintenance Shop Purchase and Upgrade	\$ 190,000
New 1 MG Water Tank	\$ 550,000
Water Line Loops in Residential Neighborhood	\$ 225,000
<i>Subtotal</i>	<i>\$ 1,338,000</i>
Contingency	\$ 133,800
PER and EA reports	\$ 18,000
Engineering and Construction Oversight	\$ 146,000
RPR Inspection	\$ 66,500
Land	\$ -
Legal/Bond Council, Title Search	\$ 20,000
Interim Interest	\$ 30,000
Total	\$ 1,752,300
Operation & Maintenance	\$ 22,930

The Installation of a new 8” waterline along Highway 95A to replace the undersized 4-inch is a proposed alternate to the project. This alternate would not become part of the project unless submitted bid prices are very low.

7.3 Annual Operating Budget

Annual operating budget information is used to evaluate the financial capacity of the system. It includes income, O&M costs, debt repayments, and reserves including debt service and short-lived asset reserves.

7.3.1 Income

Please refer to section 3.5 for a detailed itemization of the SSMWC financial status. The following is the proposed rate schedule including projected income based on existing billings and other sources of income.

MHI = \$19,800

Current Residential Water Rate for 15,000 gal/month = \$35.00 (Zone 1), \$39.00 (Zone 2)

Total Connections = 1,181

Based on the potential loan amount, annual debt service would require a rate increase of \$6.60/month/customer, raising the average monthly customer bill to \$43.60/month. The increase would provide an additional \$93,535 of annual income.

7.3.2 Operations and Maintenance Costs

In 2011, SSMWC operation and maintenance costs were \$572,497. This amount includes salaries, benefits, water purchase, taxes, accounting, and auditing fees, legal fees, interest, utilities, oil and fuel, insurance, annual repairs and maintenance, supplies, chemicals, office

supplies, printing, and miscellaneous taken from the SSMWC financial statement by Kohn Colodny. The proposed improvements are anticipated to reduce this by approximately 10% or \$57,250. More efficient equipment operation and operating procedures are the reasons for the reduced operation and maintenance costs. A more detailed breakdown is described below.

VFDs on the wells, will allow for much more efficient well operation cutting electrical costs, they will eliminate pump to waste ponds and allow for constant flow to the WTP. Currently SSMWC have to monitor the pump to waste ponds closely because of overflow issues and variable flows to the WTP increase the frequency the chemical pumps have to adjust dosing, which requires SSMWC personnel to closely monitor dosing accuracy for proper WTP operation.

New Shop will allow SSMWC to have more replacement parts available in Silver Springs so traveling for replacement parts would be less frequent and the ability to repair parts and pieces they weren't previously able to will be a cost savings. Equipment and replacement parts will have protection from vandalism and weather.

The Deodar facilities are in poor condition and require time and attention regularly from the staff. It is anticipated this O&M demand can be greatly reduced with improved facilities. Looping the deadlines will reduce odor and taste complaints and eliminate the time consuming and wasteful flushing program currently in place.

7.3.3 Debt Repayments

SSMWC will be applying to USDA for funding. A worst case funding scenario would be SSMWC having to borrow 100% of the project cost. An evaluation of the worst case impact to the average customer is broken down below utilizing a 40 year repayment period for the project.

USDA Project Cost:	\$1,752,000
USDA Loan (100%):	\$1,752,000

Annual USDA Loan Service (4.375% interest rate) – \$93,520 (\$6.59/month/customer)
Total Monthly Customer Bill – \$43.60/month/customer
Rate Increase – \$6.60/month/customer
% MHI used for 15,000 gallons – 2.5%

Additional potential sources of funding for this project include Community Development Block Grants (CDBG) and the Nevada Drinking Water State Revolving Fund (SRF).

7.3.4 Reserves

7.3.4.1 Debt Service Reserve

SSMWC debt service reserve for existing loans as of 2011 was \$67, 649. Debt service required for the proposed loan obligation would be \$9,352 (1/10 of annual debt repayment requirement).

7.3.4.2 Short-Lived Asset Reserve

SSMWC reserves for short-lived assets are \$78,935 with an additional \$134,270 for depreciation. Appendix 6 includes lists of SSMWC existing and proposed short-lived assets.

VIII. CONCLUSIONS AND RECOMMENDATIONS

It is recommended that SSMWC pursue the project as outlined in Section 7 of this report. Communication with USDA should begin and a loan application for funding should be completed as soon as possible.

SSMWC should begin preparations for rate increases to prepare for loan payments which are necessary if the project moves forward. Raising the rates in small increments in lieu of a large increase is recommended.

SSMWC should continue to address the other items identified in this report (North Tank inspections, etc.) to ensure the system continues to be properly maintained and funds are set aside to complete necessary O&M tasks.

SSMWC should continue to pursue other sources of funding (SRF, Senate Appropriations, CDBG) for the remaining eligible projects identified in this report when they decide to move forward. The alternates described in the report but not proposed with this project should be made part of the long term CIP and pursued in the future.

APPENDIX 1

Appendix 1 includes the following Figures:

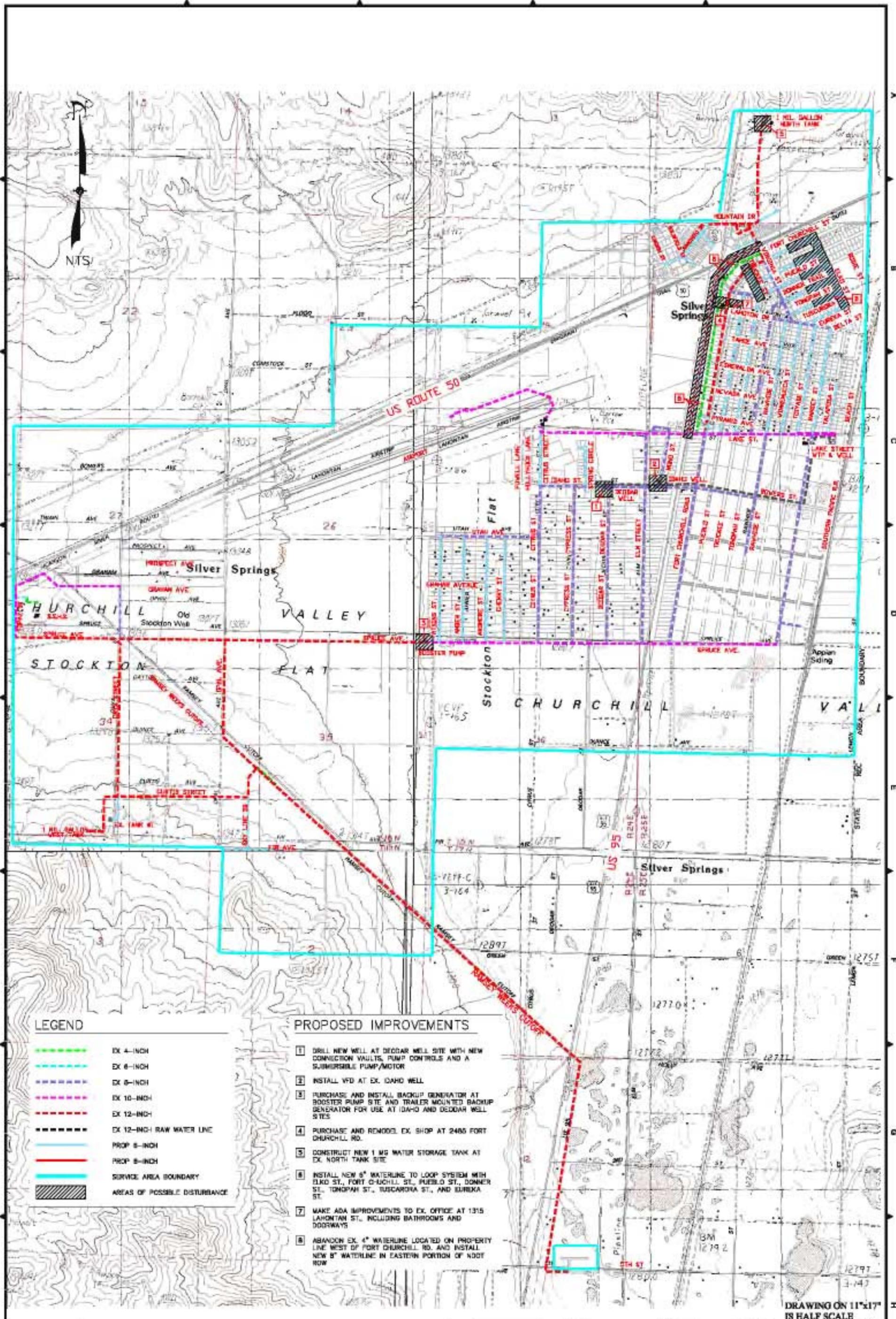
Figure 1 – SSMWC Service Area

Figure 2 – Well Locations

Figure 3 – Water Rights Place of Use

Figure 4 – Airport Loop

Figure 5 – Hydrants



LEGEND

- EX 4-INCH
- EX 6-INCH
- EX 8-INCH
- EX 10-INCH
- EX 12-INCH
- EX 12-INCH RAW WATER LINE
- PROP 8-INCH
- PROP 8-INCH
- SERVICE AREA BOUNDARY
- AREAS OF POSSIBLE DISTURBANCE

PROPOSED IMPROVEMENTS

- 1 DRILL NEW WELL AT DEDDAR WELL SITE WITH NEW CONNECTION VAULTS, PUMP CONTROLS AND A SUBMERSIBLE PUMP/MOTOR
- 2 INSTALL VFD AT EX. IDAHO WELL
- 3 PURCHASE AND INSTALL BACKUP GENERATOR AT BOOSTER PUMP SITE AND TRAILER MOUNTED BACKUP GENERATOR FOR USE AT IDAHO AND DEDDAR WELL SITES
- 4 PURCHASE AND REMODEL EX. SHOP AT 2465 FORT CHURCHILL RD.
- 5 CONSTRUCT NEW 1 MG WATER STORAGE TANK AT EX. NORTH TANK SITE
- 6 INSTALL NEW 8" WATERLINE TO LOOP SYSTEM WITH ELKO ST., FORT CHURCHILL ST., PUEBLO ST., DONNER ST., TOMPAH ST., TUSCARORA ST., AND BURKA ST.
- 7 MAKE ADA IMPROVEMENTS TO EX. OFFICE AT 1315 LAHONTAN ST., INCLUDING BATHROOMS AND DOORWAYS
- 8 ABANDON EX. 4" WATERLINE LOCATED ON PROPERTY LINE WEST OF FORT CHURCHILL RD. AND INSTALL NEW 8" WATERLINE IN EASTERN PORTION OF NOOT ROW

DRAWING ON 11"x17" IS HALF SCALE

FIGURE 1

SILVER SPRINGS MUTUAL WATER COMPANY SERVICE AREA AND PROPOSED PROJECTS

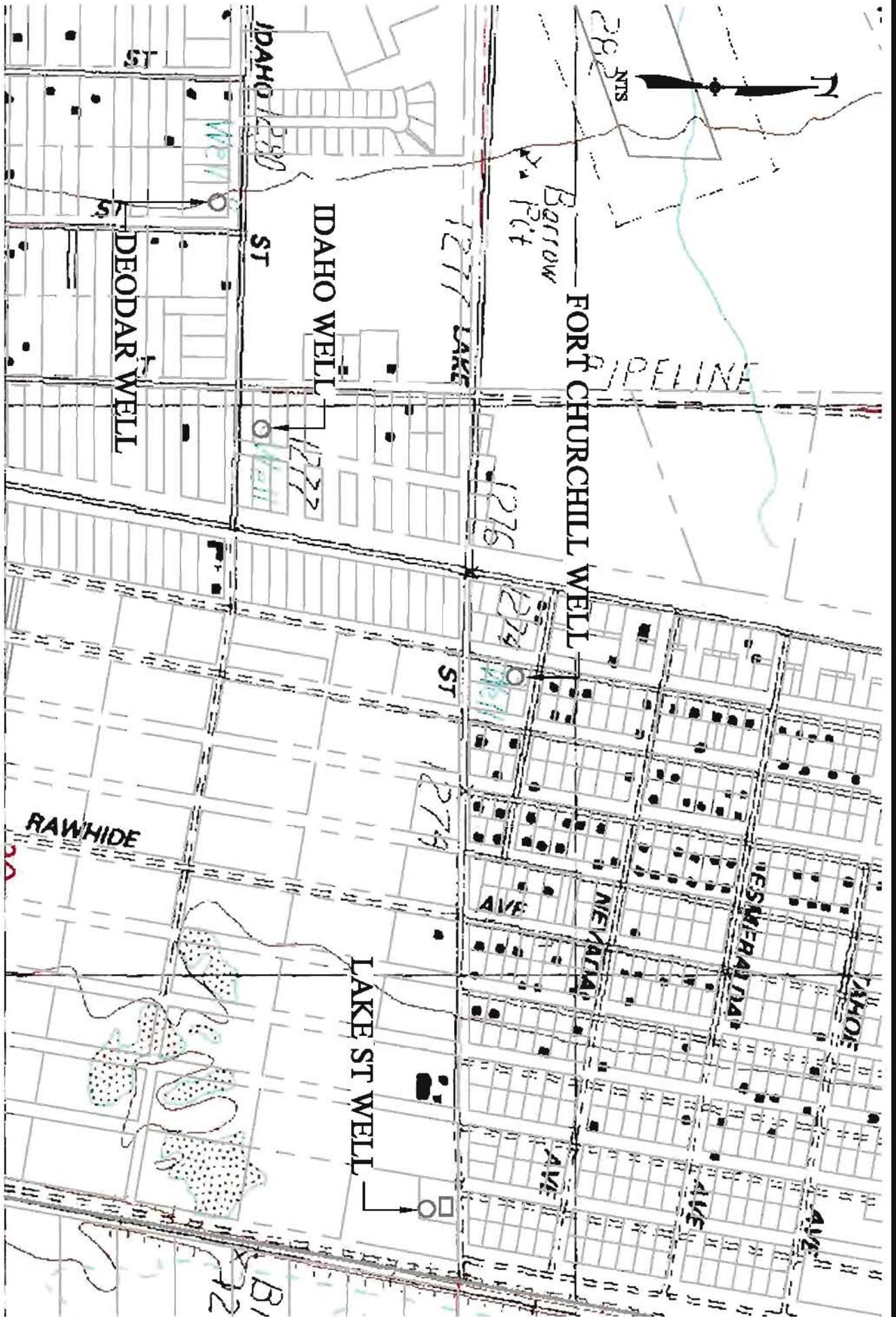
SILVER SPRINGS

NEVADA

FARR WEST ENGINEERING

8442 LONGLEY LANE, SUITE B
 8090, NEVADA 89511
 PHONE: (775) 851-4788
 FAX: (775) 851-4788

JOB NO.	DATE	REVISION	DESCRIPTION	BY	APP	DATE
2024-001	AUGUST 2024					



JOB NO.: 0261
 DESIGN: EIMH
 DRAWN: EIMH
 CHECKED: BRB
 DATE: DEC. 2010

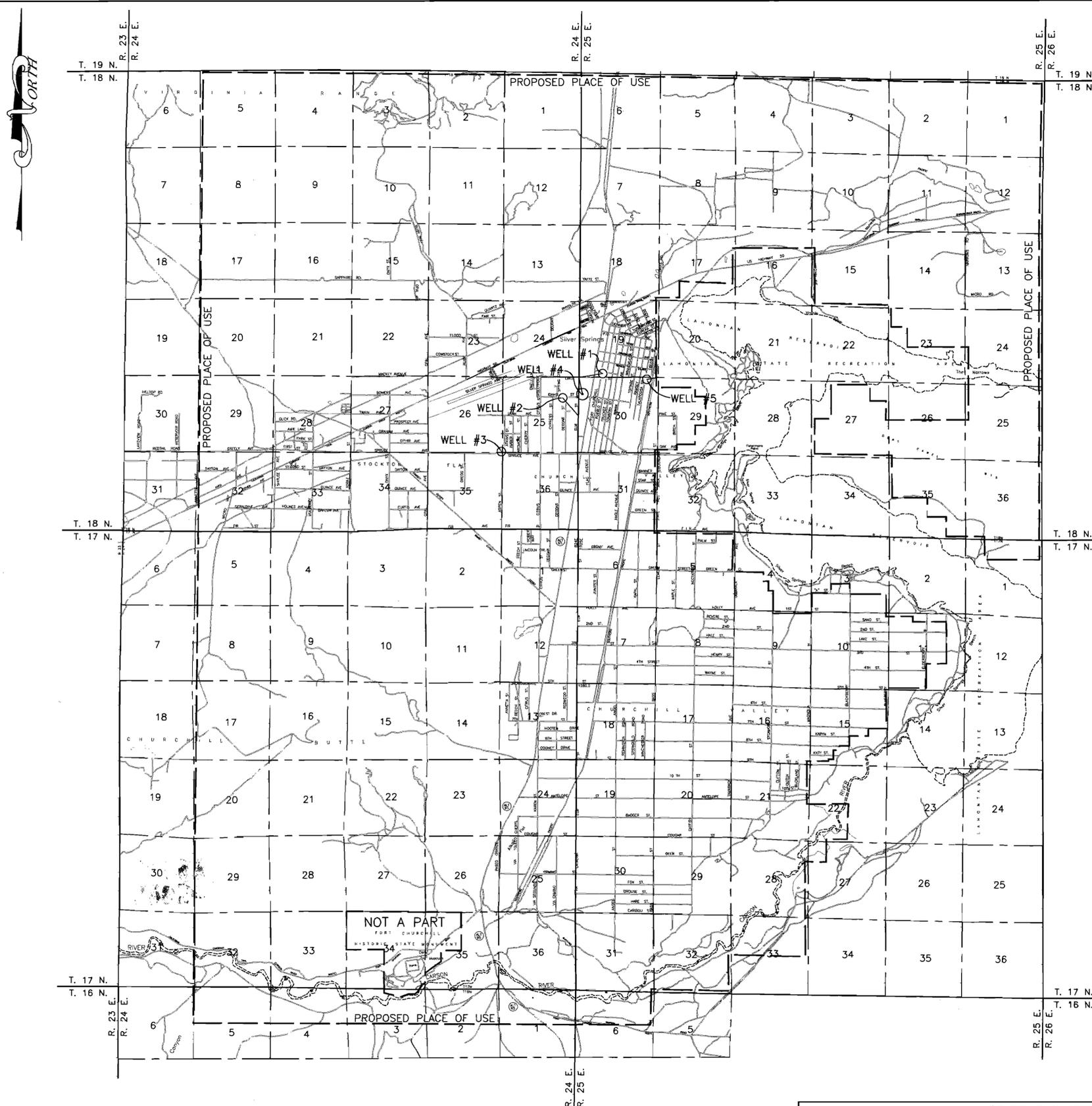
FARR WEST
 ENGINEERING

5442 LONGLEY LANE, SUITE B
 RENO, NEVADA 89511
 PHONE: (775) 851-4786
 FAX: (775) 851-0766

EXISTING WELL LOCATIONS
 SILVER SPRINGS MUTUAL WATER COMPANY
 SILVER SPRINGS
 NEVADA

FIGURE

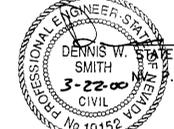
2



WELL DATA TABLE (REFERENCE)						
WELL #	PERMIT #	1/4	1/4	SEC.	T/R	TIE / BEARING & DISTANCE
1	36639, 60752	SE	SW	19	18/25	SW CORNER SEC. 19 S. 81°14'33" W. 1663.00'
2	36637, 62586	SE	NE	25	18/24	E 1/4 CORNER SEC. 25 S. 41°30'30" E. 1629.00'
3	36640, 60753	SE	SE	26	18/24	SE CORNER SEC. 26 S. 42°30'00" E. 1110.00'
4	36638, 60751, 66171	NW	NW	30	18/25	NW CORNER SEC. 30 N. 11°44'36" W. 1187.52'
4	66172, 66173					
5	36636, 60749, 62912, 62913	NE	NE	30	18/25	NE CORNER SEC. 30 N. 80°38'32" E. 802.00'

STATE OF NEVADA } S.S.
 COUNTY OF CARSON }

I, DENNIS W. SMITH, BEING FIRST SWORN, DEPOSE AND SAY THAT SITE INSPECTION HAVE BEEN MADE BY ME, OR UNDER MY SUPERVISION AND DIRECTION, BETWEEN SEPTEMBER 20, 1999 AND THE SEPTEMBER 24, 1999; THAT THE LOCATION OF EACH REFERENCE MONUMENT HAS BEEN VERIFIED BY SITE INSPECTION; THAT THE POINT OF DIVERSION AND PLACE OF USE SITES HAVE BEEN INSPECTED; THAT THIS MAP CONSISTING OF 1 SHEET HAS BEEN CORRECTLY DRAWN TO THE DESIGNATED SCALE FROM SURVEYING CALCULATION NOTES PREPARED BY ME, OR UNDER MY SUPERVISION AND DIRECTION, RELYING UPON ANALYSIS OF RECORDED SURVEY MAPS AND OTHER RECORDED SURVEYING DOCUMENTS IN THE OFFICE OF THE NEVADA STATE ENGINEER AND UNITED STATES GEOLOGICAL SURVEY; THAT THIS MAP TRULY AND CORRECTLY REPRESENTS THE PROPOSED PLACE OF USE AND LOCATION AND EXTENT OF THE WORKS USED TO DIVERT WATER FROM AN UNDERGROUND SOURCE, IN LYON COUNTY, NEVADA, BY SILVER SPRINGS MUTUAL WATER COMPANY, FOR QUASI-MUNICIPAL, QUASI-MUNICIPAL & DOMESTIC PURPOSES. THAT THE POINT OF DIVERSION, THE APPROXIMATE LOCATION AND SIZE OF THE DIVERTING CHANNEL OR OTHER CONDUIT, AND THE LOCATION AND NAMES OF ALL OTHER WORKS OR STREAMS WHICH ARE CROSSED BY, OR CONNECTED WITH THE SAID WORKS, AND THE BOUNDARY AREA IS FULLY AND CORRECTLY DESIGNATED THEREON.



SUBSCRIBED AND SWORN TO BEFORE ME ON THIS 22nd DAY OF March, 2000

Sandra L. Winchell
 NOTARY PUBLIC IN AND FOR Douglas COUNTY, NEVADA.



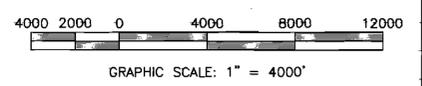
MY COMMISSION EXPIRES 11/04/02

REFERENCE DOCUMENTS

- 1) U.S.G.S. 7.5 MINUTE SERIES QUADRANGLE - STOCKTON WELL, SILVER SPRINGS NORTH, CHURCHILL BUTTE, SILVER SPRINGS SOUTH.
- 2) MAP FILED IN SUPPORT OF APPLICATION 36636, 36637, 36638, 60752, AND 60753 ON FILE IN THE OFFICE OF THE NEVADA STATE ENGINEER.

LEGEND

- PROPOSED PLACE OF USE
- EXISTING POINT OF DIVERSION
- ⊙ PROPOSED POINT OF DIVERSION (WELL #4)



STATE ENGINEERS USE



MAP
 TO ACCOMPANY APPLICATIONS TO CHANGE THE POINT OF DIVERSION AND PLACE OF USE OF A PORTION OF WATER AS APPROPRIATED UNDER PERMIT 17306, CERTIFICATE 5738 AND PERMIT 63258. TO ACCOMPANY APPLICATION TO CHANGE POINT OF DIVERSION, PLACE AND MANNER OF USE OF WATER AS APPROPRIATED UNDER PERMIT 39594, CERTIFICATE 14932.
 FOR: QUASI-MUNICIPAL, QUASI-MUNICIPAL & DOMESTIC USE
 BY: SILVER SPRINGS MUTUAL WATER COMPANY
 FROM: UNDERGROUND SOURCE
 LYON COUNTY NEVADA



78625 70624 73525 72438 72097 72096 66173 66172 66171

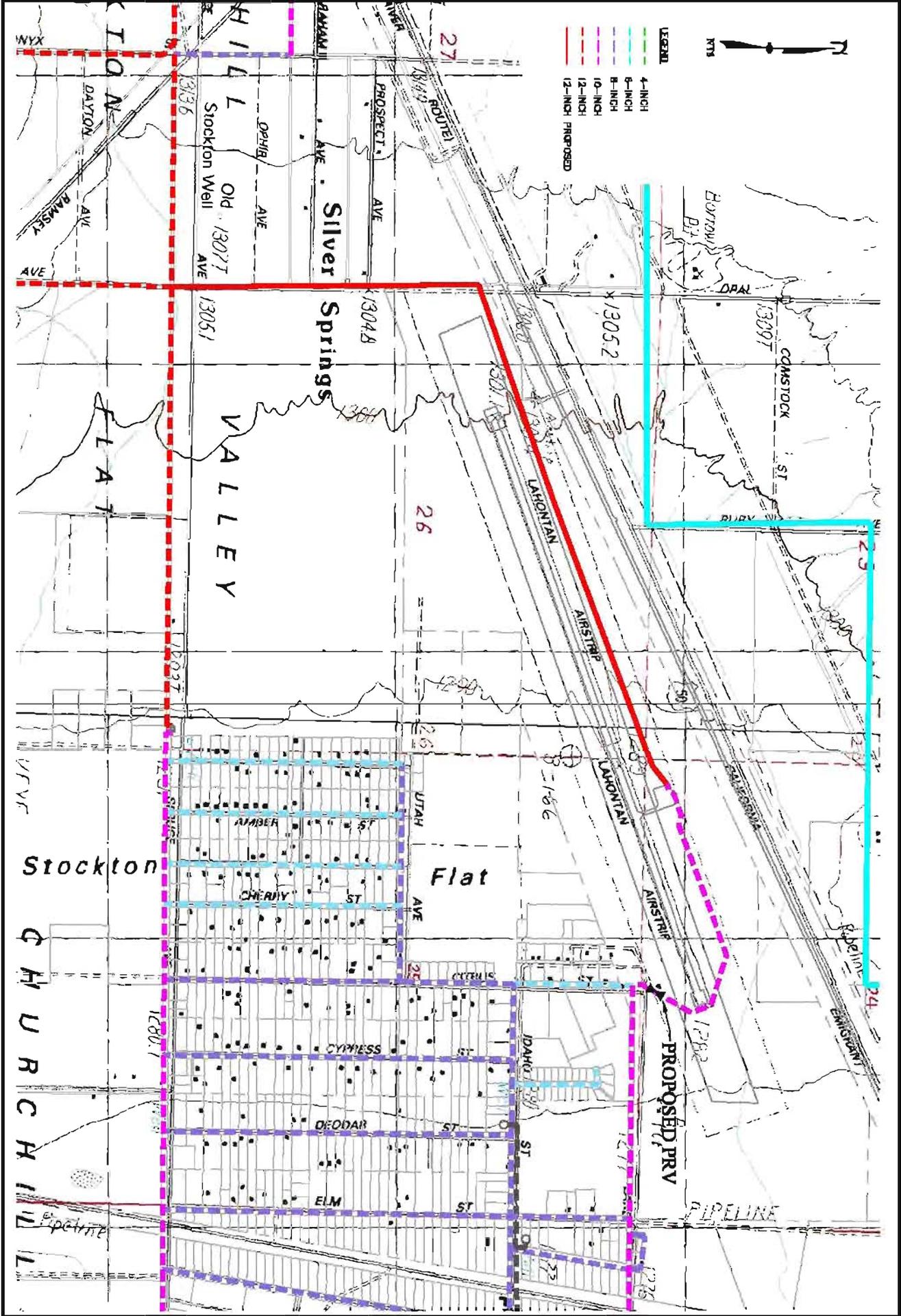
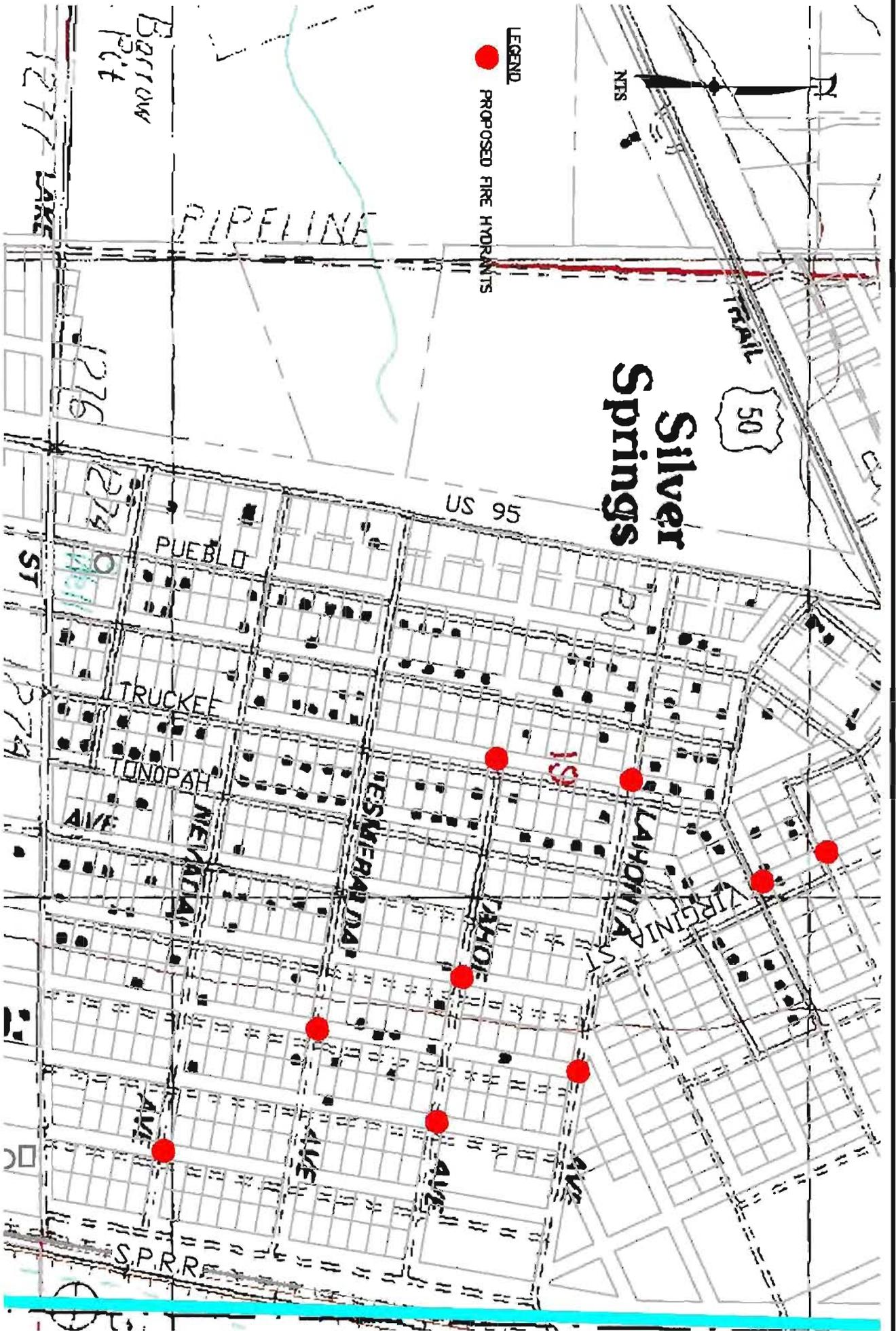


FIGURE
4

AIRPORT LOOP
SILVER SPRINGS MUTUAL WATER COMPANY
 SILVER SPRINGS NEVADA

FARR WEST
 ENGINEERING
 6442 LONGLEY LANE, SUITE B
 RENO, NEVADA 89511
 PHONE: (775) 851-4788
 FAX: (775) 851-0786

JOB NO.: 0285
 DESIGN: EIMH
 DRAWN: EIMH
 CHECKED: BBE
 DATE: MARCH 2011



JOB NO.: 0261
 DESIGNER: ELMH
 DRAWN: ELMH
 CHECKED: BRB
 DATE: DEC. 2010

FARR WEST

ENGINEERING
 5443 LONGLEY LANE, SUITE B
 RENO, NEVADA 89511
 PHONE: (775) 851-4788
 FAX: (775) 851-0765

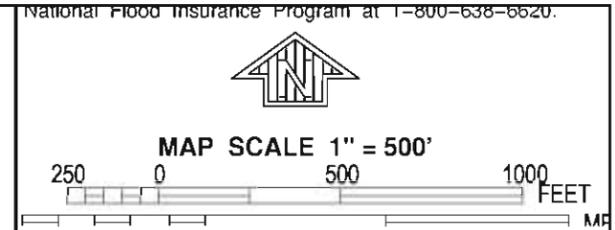
PROPOSED FIRE HYDRANT LOCATIONS
 SILVER SPRINGS MUTUAL WATER COMPANY
 SILVER SPRINGS
 NEVADA

FIGURE

5

APPENDIX 2

Appendix 2 includes the FEMA FIRM maps.



APE Element #5
on Figure 1

JOINS PANEL 0212

PANEL 0211E

FIRM
FLOOD INSURANCE RATE MAP
LYON COUNTY,
NEVADA
AND INCORPORATED AREAS

PANEL 211 OF 1375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

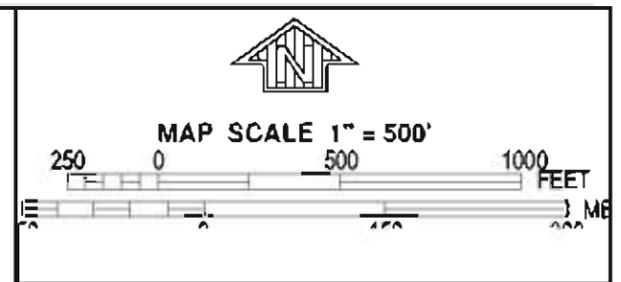
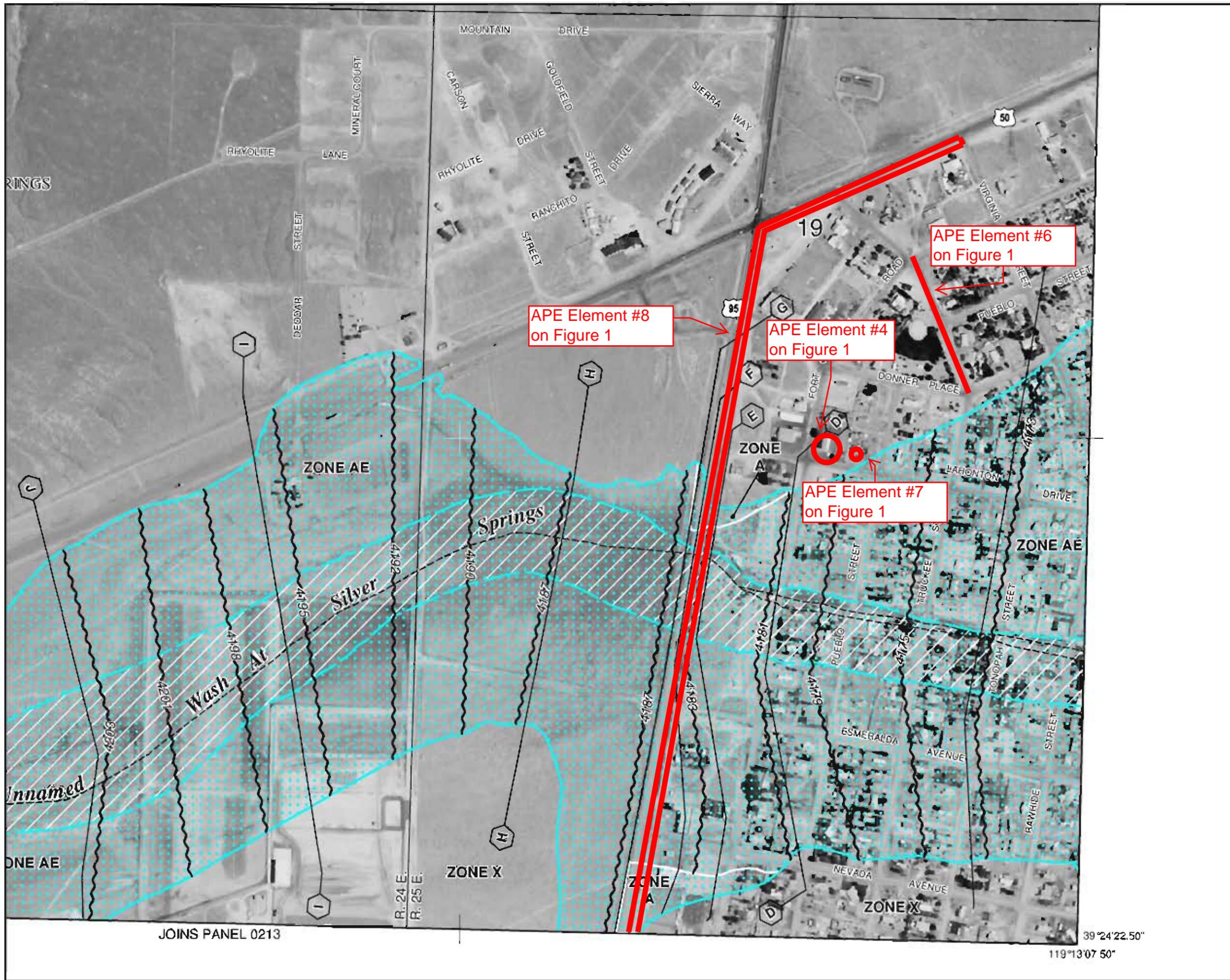
COMMUNITY	NUMBER	PANEL	SUFFIX
LYON COUNTY	320029	0211	E

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
32019C0211E
EFFECTIVE DATE
JANUARY 16, 2009

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov



PANEL 0211E

NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP
 LYON COUNTY, NEVADA
 AND INCORPORATED AREAS

PANEL 211 OF 1375
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS	COMMUNITY	NUMBER	PANEL SUFFIX
	170A COUNTY	32029	0211 E

Notes to User: The Map Number shown below should be used when placing such orders. The Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
32019C0211E

EFFECTIVE DATE
JANUARY 16, 2009

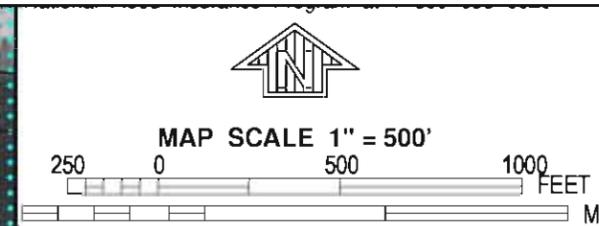
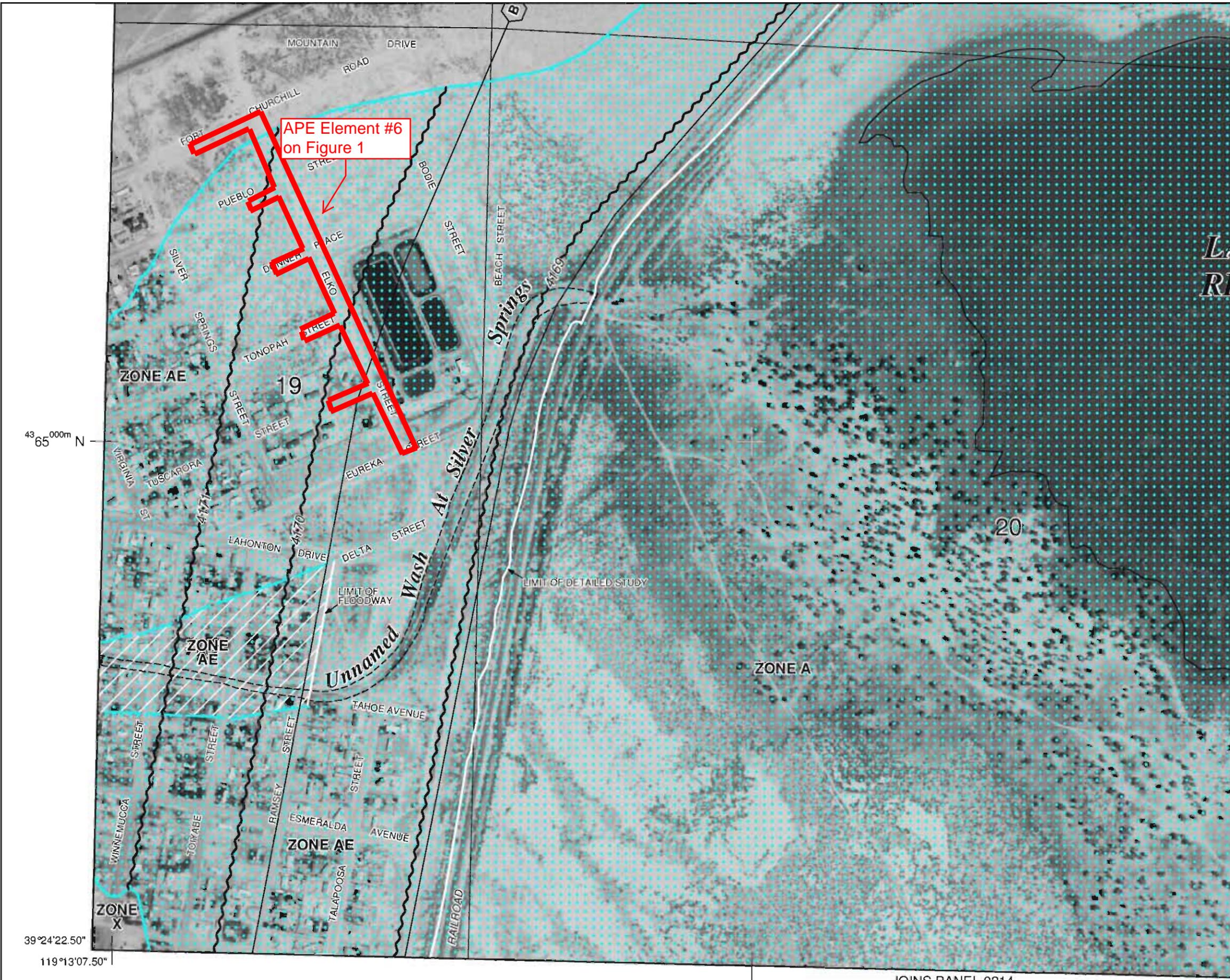
Federal Emergency Management Agency

JOINS PANEL 0213

39°24'22.50"

119°13'07.50"

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PANEL 0212E

FIRM
FLOOD INSURANCE RATE MAP
LYON COUNTY,
NEVADA
AND INCORPORATED AREAS

PANEL 212 OF 1375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LYON COUNTY	320029	0212	E

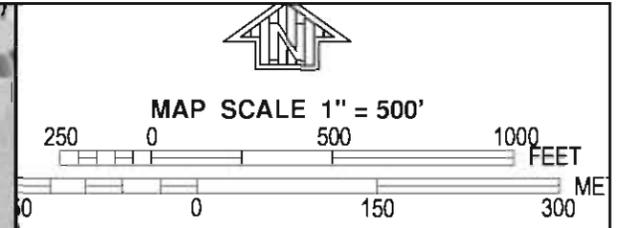
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
32019C0212E
EFFECTIVE DATE
JANUARY 16, 2009

Federal Emergency Management Agency

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43° 63' 00.00m N



JOINS PANEL 0200

APE for Element #3 on Figure 1

**LYON COUNTY
UNINCORPORATED AREAS
320029**

43° 62' 00.00m N

35

36

QUINCE AVENUE

NFP

PANEL 0213E

FIRM
FLOOD INSURANCE RATE MAP
LYON COUNTY,
NEVADA
AND INCORPORATED AREAS

PANEL 213 OF 1375
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LYON COUNTY	320029	0213	E

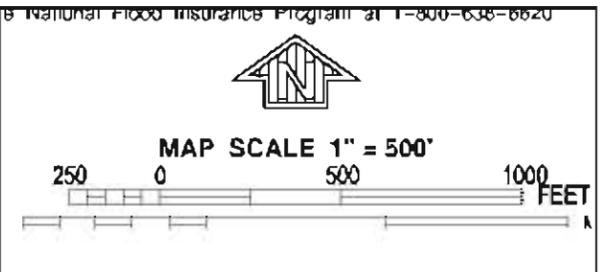
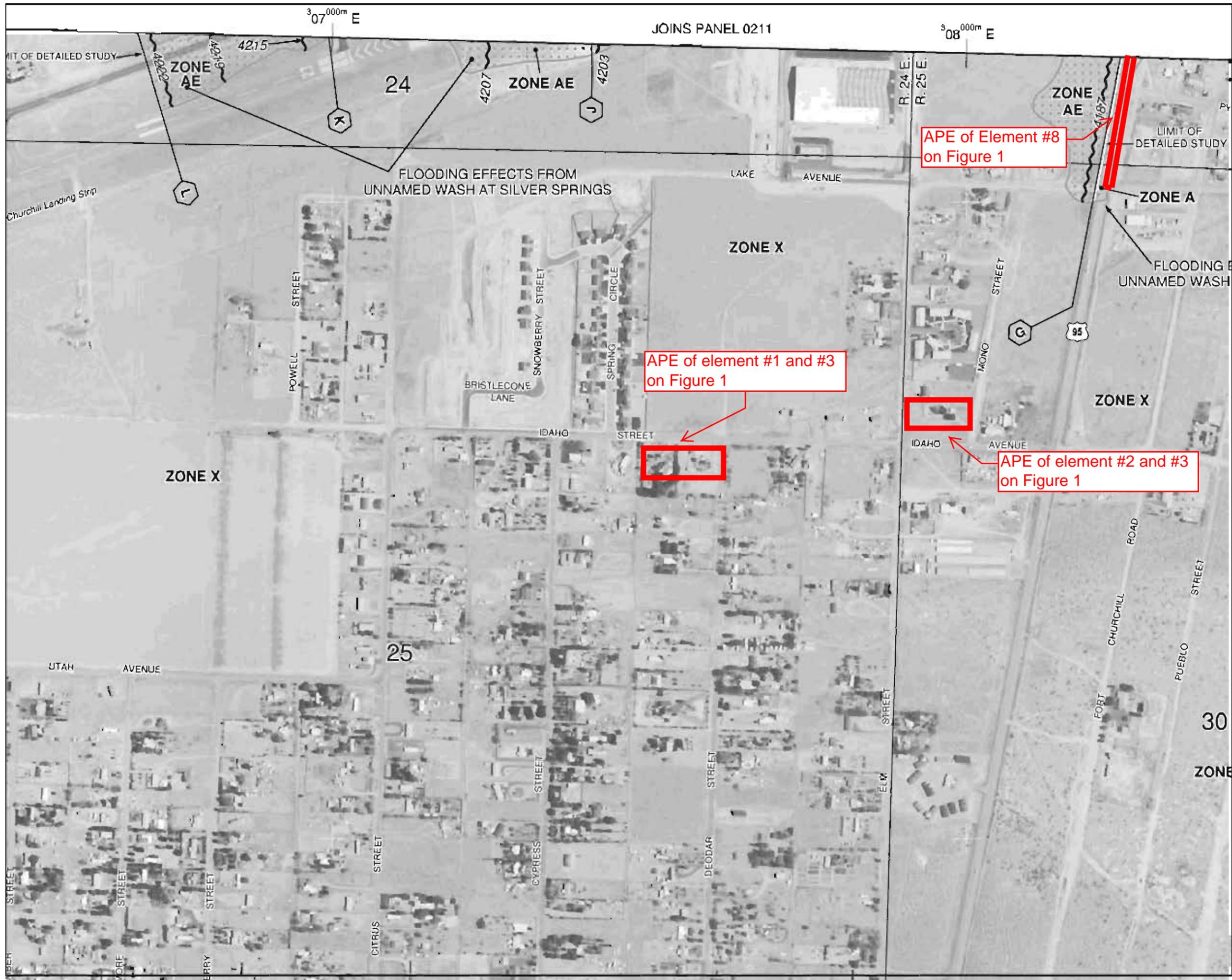
Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

 **MAP NUMBER**
32019C0213E

EFFECTIVE DATE
JANUARY 16, 2009

Federal Emergency Management Agency

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U.S. National Flood Insurance Program at 1-800-638-6620

PANEL 0213E

FIRM
FLOOD INSURANCE RATE MAP
 LYON COUNTY,
 NEVADA
 AND INCORPORATED AREAS

PANEL 213 OF 1375
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

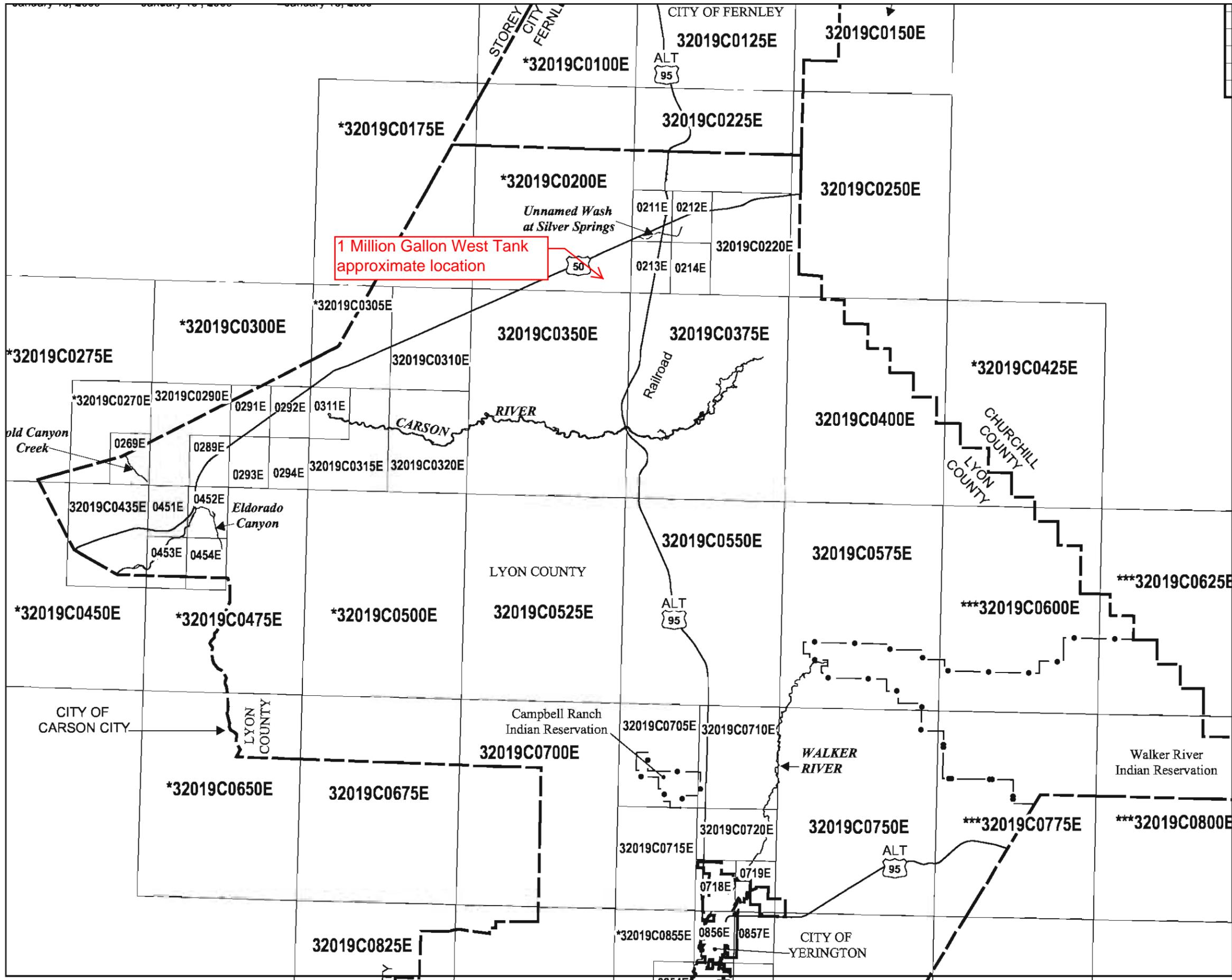
CONTAINS	COMMUNITY	NUMBER	PANEL	SUFFIX
	LYON COUNTY	320178	0213	E

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
 32019C0213E
EFFECTIVE DATE
 JANUARY 16, 2009

Federal Emergency Management Agency

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NATIONAL FLOOD INSURANCE PROGRAM

MAP INDEX

FIRM
 FLOOD INSURANCE RATE MAP
 LYON COUNTY,
 NEVADA
 AND INCORPORATED AREAS
 (SEE LISTING OF COMMUNITIES TABLE)

MAP INDEX

PANELS PRINTED: 50, 75, 82, 84, 105, 110, 125, 150, 211, 212, 213, 214, 220, 225, 250, 269, 289, 290, 291, 292, 293, 294, 310, 311, 315, 320, 350, 375, 400, 435, 451, 452, 453, 454, 525, 550, 575, 675, 700, 705, 710, 715, 718, 719, 720, 750, 825, 850, 854, 856, 857, 858, 859, 865, 870, 950, 975, 1000, 1025, 1075, 1100, 1150, 1175, 1250, 1275, 1350, 1375



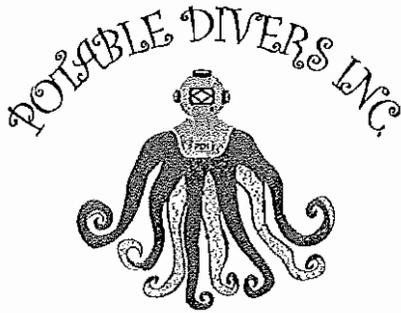
MAP NUMBER
 32019CIND0A
 EFFECTIVE DATE
 JANUARY 16, 2009

Federal Emergency Management Agency

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APPENDIX 3

Appendix 3 includes the North Tank condition assessment.



SILVER SPRINGS MUTUAL WATER CO. FIELD REPORT

June 27, 2008

**Underwater Repair
1,000,000 Gallon
Potable Water Storage Tank**

RECEIVED JUL - 7 2008

Submitted To:

Don Allen

Silver Springs Mutual Water Co.
PO Box 285
Silver Springs, NV 89429

Office Phone: (775) 577-2223

Office Fax: (775) 577-9166

Submitted By:

POTABLE DIVERS, INC.

PO Box 474

Vernal, Utah 84078

Office Phone: (866) 789-3483

Office Fax: (866) 913-4905

E-mail: david@potabledivers.com

David Harvey, Dive Supervisor

FIELD REPORT

Table of Contents

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2.0 Overview	3
3.0 Findings	3
3.1 Interior Shell	3-4
3.2 Interior Floor	4
3.3 Interior Support Column	4
4.0 Conclusion	5
5.0 Recommendations	5

DVD DOCUMENTATION

UNDER SEPARATE COVER

FIELD REPORT

1.0 INTRODUCTION

In June 2008 Silver Springs Mutual Water Co., commissioned Potable Divers Inc. (PDI) to conduct underwater repairs of their 1,000,000 gallon Potable Water Storage located in Silver Springs Nevada.

Information contained in this report was obtained from dive crew observations, and conversations with Silver Springs Mutual Water Co. personnel. References to locations within the tank will be made through out this report referring to positions on the clock. The upper man way and interior ladder being the 12:00 position as the diver looks toward the interior wall.

2.0 OVERVIEW

This 1,000,000 gallon welded steel, ground level tank is constructed of ¼" thick bottom floor plates, ¼" thick wall plates with over lapping roof plates. The interior diameter is approximately 80 feet, with an approximate height of 32 feet.

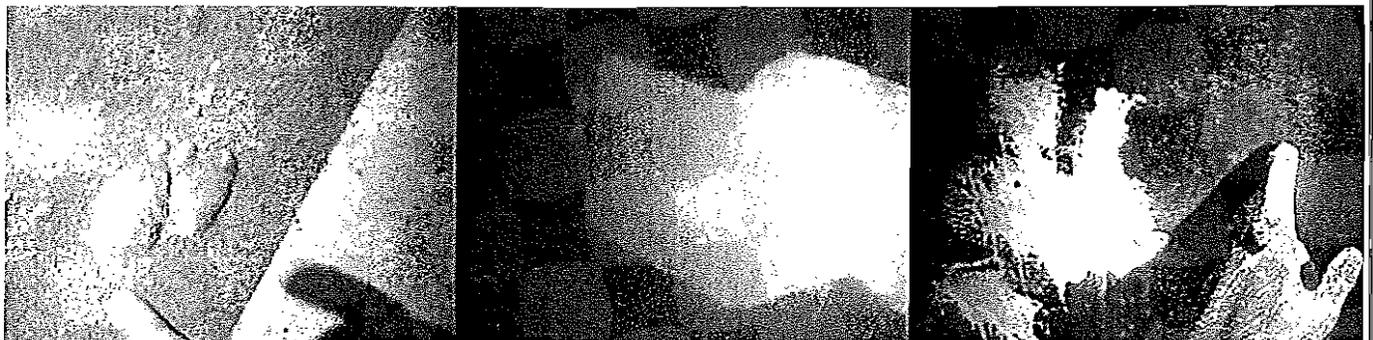
Diver access was gained via exterior ladder with safety railing present, roof top man way access hatch and interior ladder, which reached to the tank bottom.

The exterior appeared to be protected by a tan, plural component epoxy type coating, which exhibited good adhesion to the metal sub straight. Interior coating appeared to be a cold tar application black in color and in fair condition, with flaws noted. Potable Divers at the direction of Silver Springs Personnel took corrective action, and refurbished the cold tar application, removing the rust and corrosion and recoating the problematic areas using a "NSF 61 approved Underwater Epoxy".

An estimated 98% of the corrosion, rust and pitting was corrected during the four days of repairs. After the repairs were conducted photos and a video inspection were taken to show the condition of the tank and to have documentary to compare in the next few years to determine how fast the rest of the old cold tar application may be deteriorating. At this time the tank is in full operational condition with minimal problems noted. However there are areas of the old cold tar application that will most certainly fail in approximately five years or so, and will need to be addressed at that time.

3.0 FINDINGS

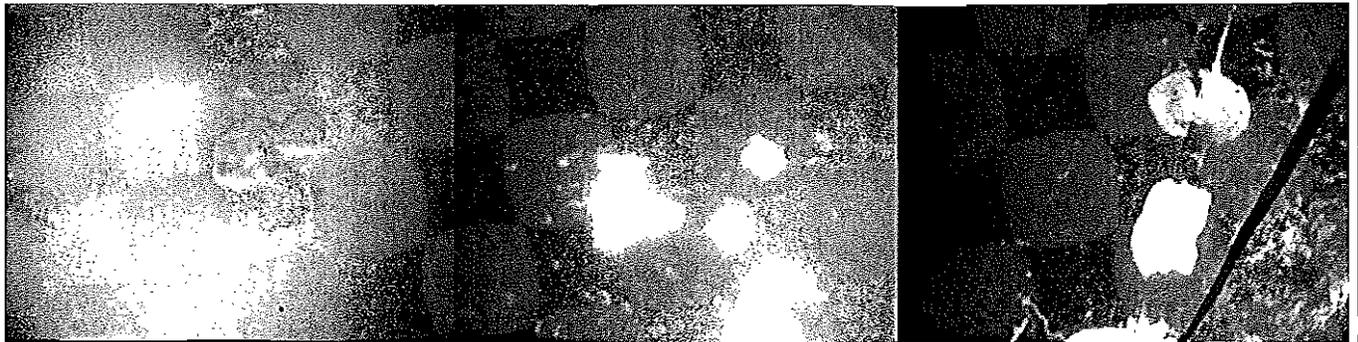
3.1 INTERIOR SHELL



The interior coating exhibited fair adhesion in most areas, however around the entire tank from the floor and wall seam up the wall two to three feet there is blistering occurring. These areas of coating failure were corrected by pneumatically removing the coating and all if any corrosion. Once the problematic area had been conditioned to near white metal, an underwater epoxy called "aquatapoxy" was applied over the metal and the surrounding coating that was still intact. The aquatapoxy is 100% solids which allows it to cure underwater. The 100% solids formula is a two part epoxy that chemically reacts when the two parts are mixed together. The epoxy being heavier than water displaces any water that may be under the application. The epoxy has excellent adhering attributes and will bond to any type of metal or concrete. Once the epoxy has fully cured it has steel like appearance and strength.

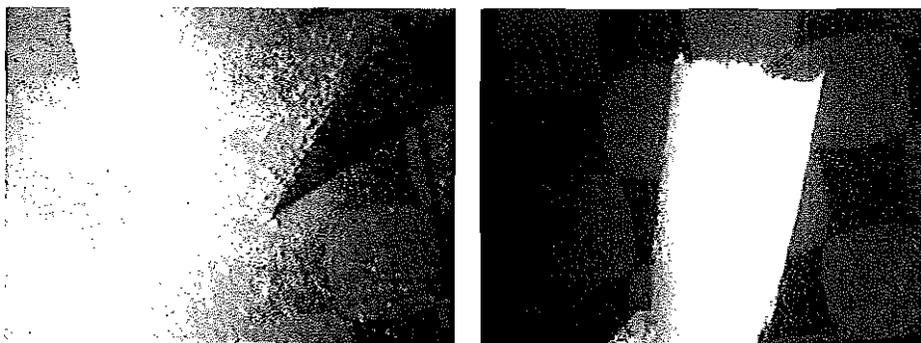
3.2 INTERIOR FLOOR

As seen in the photo the floor was covered in a corrosion caused from coating failure. Under most of these "rust nodules" the floor had began to pit. Once again the Divers at the direction of the Silver Springs Mutual Water Co. took corrective action and corrected the problematic areas.



3.3 INTERIOR SUPPORT COLUMN

Support column supporting the roof was visually inspected and appeared to be in satisfactory condition. The base of the support column although it had no extensive damage from the corrosion it had been exposed to was recoated using the underwater epoxy. As the roof support column lower support structure is designed to move, there is always a concern about rust and corrosion within this area. No negative indicators were noted during this inspection.



4.0 CONCLUSION

Based on the results of this underwater inspection and the repairs that took place, it appears this tank is in full operational condition and should continue to provide reliable water storage capacity for potable water use with proper maintenance, and cleaning.

5.0 RECOMMENDATIONS

PDI concurs with the recommendations of AWWA that all potable water reservoirs or storage tanks be cleaned and inspected *at least* every five years and in some cases, depending upon source waters, type and quantities of sediment, and presence (or lack thereof) of cathodic protection systems, more frequently.

The following recommendations are made to provide continued, uninterrupted service of your water storage tank:

1. After the repair work was finished a final inspection was conducted to determine the condition of the tank. At this the tank is in good condition with very minimal corrosion and blistering problems. However it is apparent that the cold tar application will continue to fail over time, until the entire coating is replaced. It is undetermined at this time how fast the cold tar application will fail, but it is recommended to have the tank inspected for these problems every three to five years.
2. We would like to have our dive team come back in one year to do an inspection on the repair work we have completed as we warranty all our work, at this time we can perform an inspection that will give us an indication of how well the old cold tar application is holding up and help us plan for upcoming problems should there be any in the near future. There is no cost for this service as it is part of our warranty.

APPENDIX 4

Appendix 4 includes the system water model.

SSMWC Water Model
Active Scenario: MDD

Current Time: 0.000 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-3	4,200.00	4.02	4,347.15	63.7
J-5	4,200.00	4.02	4,347.15	63.7
J-6	4,200.00	4.02	4,346.88	63.5
J-7	4,200.00	4.02	4,346.85	63.5
J-8	4,200.00	4.02	4,346.85	63.5
J-9	4,200.00	4.02	4,346.84	63.5
J-10	4,200.00	10.04	4,346.84	63.5
J-11	4,200.00	4.02	4,346.83	63.5
J-12	4,200.00	4.02	4,346.83	63.5
J-13	4,200.00	4.02	4,346.84	63.5
J-14	4,200.00	4.02	4,346.63	63.4
J-15	4,200.00	4.02	4,346.84	63.5
J-16	4,200.00	4.02	4,346.84	63.5
J-17	4,200.00	4.02	4,346.82	63.5
J-18	4,183.00	4.02	4,346.12	70.6
J-19	4,180.00	4.02	4,345.94	71.8
J-20	4,180.00	4.02	4,345.65	71.7
J-21	4,176.00	4.02	4,345.27	73.2
J-22	4,173.00	4.02	4,344.98	74.4
J-23	4,173.00	4.02	4,344.87	74.4
J-24	4,180.00	4.02	4,345.94	71.8
J-25	4,180.00	4.02	4,345.64	71.7
J-26	4,176.00	4.02	4,345.27	73.2
J-27	4,173.00	4.02	4,344.98	74.4
J-28	4,173.00	4.02	4,344.90	74.4
J-29	4,173.00	4.02	4,344.90	74.4
J-30	4,180.00	5.02	4,345.99	71.8
J-32	4,180.00	4.02	4,344.86	71.3
J-33	4,180.00	4.02	4,344.81	71.3
J-34	4,180.00	4.02	4,344.80	71.3
J-35	4,180.00	4.02	4,344.77	71.3
J-36	4,180.00	4.02	4,345.75	71.7
J-37	4,180.00	4.02	4,345.70	71.7
J-38	4,180.00	10.04	4,345.50	71.6
J-39	4,180.00	10.04	4,345.28	71.5
J-40	4,180.00	10.04	4,345.25	71.5
J-41	4,173.00	4.02	4,344.93	74.4
J-42	4,173.00	10.04	4,344.88	74.4
J-43	4,170.00	4.02	4,344.81	75.6
J-44	4,170.00	4.02	4,344.81	75.6
J-45	4,167.00	10.04	4,344.79	76.9
J-46	4,167.00	10.04	4,344.79	76.9
J-47	4,163.00	4.02	4,344.73	78.6
J-48	4,163.00	5.02	4,344.72	78.6
J-49	4,170.00	5.02	4,344.72	75.6
J-50	4,186.00	2.01	4,344.39	68.5
J-51	4,186.00	2.01	4,344.55	68.6

SSMWC Water Model
Active Scenario: MDD

Current Time: 0.000 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-52	4,180.00	10.04	4,344.77	71.3
J-53	4,180.00	10.04	4,344.77	71.3
J-54	4,180.00	10.04	4,344.77	71.3
J-55	4,180.00	10.04	4,344.76	71.3
J-56	4,176.00	10.04	4,344.75	73.0
J-57	4,176.00	10.04	4,344.74	73.0
J-58	4,170.00	10.04	4,344.73	75.6
J-59	4,170.00	10.04	4,344.72	75.6
J-60	4,170.00	4.02	4,344.72	75.6
J-61	4,173.00	10.04	4,344.87	74.4
J-62	4,170.00	10.04	4,344.83	75.6
J-63	4,180.00	4.02	4,344.33	71.1
J-64	4,176.00	4.02	4,344.30	72.8
J-65	4,180.00	10.04	4,344.27	71.1
J-66	4,180.00	10.04	4,344.51	71.2
J-67	4,189.00	4.02	4,344.36	67.2
J-68	4,186.00	4.02	4,344.42	68.5
J-69	4,189.00	20.09	4,344.24	67.2
J-70	4,196.00	20.09	4,344.21	64.1
J-71	4,206.00	4.02	4,344.19	59.8
J-72	4,212.00	20.09	4,344.18	57.2
J-73	4,212.00	12.05	4,344.18	57.2
J-74	4,212.00	16.07	4,344.06	57.1
J-75	4,212.00	16.07	4,344.06	57.1
J-76	4,206.00	20.09	4,344.12	59.8
J-77	4,193.00	20.09	4,344.17	65.4
J-78	4,206.00	4.02	4,344.18	59.8
J-79	4,219.00	16.07	4,344.02	54.1
J-80	4,222.00	16.07	4,344.00	52.8
J-81	4,230.00	16.07	4,344.00	49.3
J-82	4,235.00	16.07	4,343.99	47.2
J-83	4,235.00	16.07	4,344.01	47.2
J-84	4,230.00	16.07	4,344.01	49.3
J-85	4,222.00	16.07	4,344.01	52.8
J-86	4,219.00	16.07	4,344.02	54.1
J-87	4,285.00	4.02	4,499.74	92.9
J-88	4,315.00	4.02	4,499.73	79.9
J-89	4,320.00	4.02	4,499.72	77.8
J-90	4,340.00	4.02	4,499.72	69.1
J-91	4,340.00	4.02	4,499.72	69.1
J-92	4,350.00	4.02	4,499.72	64.8
J-93	4,350.00	73.71	4,499.72	64.8
J-94	4,315.00	4.02	4,499.77	79.9
J-95	4,315.00	4.02	4,499.77	79.9
J-96	4,435.00	4.02	4,499.87	28.1
J-97	4,360.00	6.03	4,499.78	60.5
J-98	4,325.00	4.82	4,499.77	75.6

SSMWC Water Model
Active Scenario: MDD

Current Time: 0.000 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-99	4,320.00	4.02	4,499.76	77.8
J-100	4,420.00	6.03	4,499.78	34.5
J-101	4,460.00	1.21	4,499.87	17.3
J-102	4,435.00	4.02	4,499.91	28.1
J-103	4,176.00	4.02	4,344.75	73.0
J-104	4,180.00	5.02	4,345.89	71.8
J-105	4,240.00	4.02	4,499.73	112.4
J-106	4,215.00	0.00	4,346.85	57.0
J-107	4,215.00	0.00	4,346.85	57.0
J-108	4,215.00	0.00	4,346.85	57.0
J-109	4,215.00	0.00	4,346.85	57.0
J-110	4,215.00	0.00	4,346.85	57.0
J-111	4,230.00	0.00	4,346.85	50.6
J-112	4,200.00	0.00	4,346.84	63.5
J-113	4,230.00	0.00	4,346.85	50.6
J-115	4,212.00	0.00	4,344.19	57.2
J-116	4,212.00	0.00	4,344.23	57.2
J-117	4,212.00	0.00	4,344.24	57.2
J-118	4,212.00	0.00	4,344.24	57.2
J-120	4,212.00	0.00	4,344.24	57.2
J-122	4,240.00	0.00	4,499.73	112.4
J-123	4,350.00	0.00	4,499.72	64.8
J-124	4,212.00	0.00	4,344.24	57.2
J-125	4,200.00	0.00	4,499.75	129.7
J-126	4,212.00	0.00	4,499.74	124.5
J-128	4,212.00	21.51	4,350.73	60.0

SSMWC Water Model

Active Scenario: MDD + Fire Analysis

Current Time: 0.000 hours

Label	Demand (gpm)	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Pressure (Calculated Residual) (psi)
J-3	4.02	1,000.00	4,000.00	42.6
J-5	4.02	1,000.00	1,520.69	20.0
J-6	4.02	1,000.00	4,000.00	41.3
J-7	4.02	1,000.00	4,000.00	39.6
J-8	4.02	1,000.00	4,000.00	30.7
J-9	4.02	1,000.00	2,581.95	20.0
J-10	10.04	1,000.00	2,803.42	20.0
J-11	4.02	1,000.00	1,758.78	20.0
J-12	4.02	1,000.00	1,517.32	20.0
J-13	4.02	1,000.00	3,280.27	20.0
J-14	4.02	1,000.00	110.43	20.3
J-15	4.02	1,000.00	1,492.78	20.0
J-16	4.02	1,000.00	4,000.00	39.5
J-17	4.02	1,000.00	4,000.00	41.1
J-18	4.02	1,000.00	4,000.00	45.1
J-19	4.02	1,000.00	4,000.00	45.7
J-20	4.02	1,000.00	4,000.00	35.3
J-21	4.02	1,000.00	4,000.00	31.8
J-22	4.02	1,000.00	4,000.00	26.5
J-23	4.02	1,000.00	4,000.00	22.8
J-24	4.02	1,000.00	1,506.26	20.0
J-25	4.02	1,000.00	1,469.65	20.0
J-26	4.02	1,000.00	1,502.20	20.0
J-27	4.02	1,000.00	1,506.32	20.0
J-28	4.02	1,000.00	4,000.00	20.1
J-29	4.02	1,000.00	1,076.04	20.0
J-30	5.02	1,000.00	386.59	20.0
J-32	4.02	1,000.00	4,000.00	39.1
J-33	4.02	1,000.00	2,393.14	20.0
J-34	4.02	1,000.00	2,482.75	20.0
J-35	4.02	1,000.00	3,812.44	20.0
J-36	4.02	1,000.00	4,000.00	43.6
J-37	4.02	1,000.00	3,222.36	20.0
J-38	10.04	1,000.00	4,000.00	41.2
J-39	10.04	1,000.00	3,361.36	20.0
J-40	10.04	1,000.00	3,232.24	20.0
J-41	4.02	1,000.00	3,959.94	20.0
J-42	10.04	1,000.00	4,000.00	20.7
J-43	4.02	1,000.00	3,661.85	20.0
J-44	4.02	1,000.00	993.76	20.0
J-45	10.04	1,000.00	3,480.39	20.0
J-46	10.04	1,000.00	3,074.25	20.0
J-47	4.02	1,000.00	2,569.79	20.0
J-48	5.02	1,000.00	2,267.47	20.0
J-49	5.02	1,000.00	3,605.86	20.0

SSMWC Water Model

Active Scenario: MDD + Fire Analysis

Current Time: 0.000 hours

Label	Demand (gpm)	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Pressure (Calculated Residual) (psi)
J-50	2.01	1,000.00	3,954.65	25.8
J-51	2.01	1,000.00	4,000.00	32.0
J-52	10.04	1,000.00	4,000.00	40.7
J-53	10.04	1,000.00	4,000.00	36.8
J-54	10.04	1,000.00	4,000.00	33.7
J-55	10.04	1,000.00	4,000.00	30.8
J-56	10.04	1,000.00	4,000.00	28.7
J-57	10.04	1,000.00	4,000.00	25.1
J-58	10.04	1,000.00	4,000.00	23.7
J-59	10.04	1,000.00	3,968.94	20.0
J-60	4.02	1,000.00	3,279.54	20.0
J-61	10.04	1,000.00	4,000.00	21.0
J-62	10.04	1,000.00	3,900.32	20.0
J-63	4.02	1,000.00	2,929.02	20.0
J-64	4.02	1,000.00	3,301.08	20.0
J-65	10.04	1,000.00	3,887.98	23.8
J-66	10.04	1,000.00	3,592.56	20.0
J-67	4.02	1,000.00	3,937.32	27.5
J-68	4.02	1,000.00	4,000.00	22.6
J-69	20.09	1,000.00	3,824.83	26.8
J-70	20.09	1,000.00	3,731.91	20.0
J-71	4.02	1,000.00	3,409.03	20.0
J-72	20.09	1,000.00	3,429.79	20.0
J-73	12.05	1,000.00	3,606.51	20.0
J-74	16.07	1,000.00	3,313.78	23.9
J-75	16.07	1,000.00	3,340.08	34.9
J-76	20.09	1,000.00	3,539.51	31.5
J-77	20.09	1,000.00	3,702.99	31.4
J-78	4.02	1,000.00	1,075.19	20.0
J-79	16.07	1,000.00	3,118.95	21.1
J-80	16.07	1,000.00	3,003.65	20.0
J-81	16.07	1,000.00	2,553.68	20.0
J-82	16.07	1,000.00	2,021.43	20.0
J-83	16.07	1,000.00	2,496.61	44.5
J-84	16.07	1,000.00	2,801.71	40.5
J-85	16.07	1,000.00	2,991.74	39.0
J-86	16.07	1,000.00	3,126.69	36.9
J-87	4.02	1,000.00	2,285.37	65.2
J-88	4.02	1,000.00	2,285.25	45.2
J-89	4.02	1,000.00	2,285.34	41.6
J-90	4.02	1,000.00	2,285.44	35.3
J-91	4.02	1,000.00	2,285.40	36.3
J-92	4.02	1,000.00	2,285.42	34.1
J-93	73.71	1,000.00	2,285.48	38.6
J-94	4.02	1,000.00	2,285.59	59.2

SSMWC Water Model
Active Scenario: MDD + Fire Analysis

Current Time: 0.000 hours

Label	Demand (gpm)	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Pressure (Calculated Residual) (psi)
J-95	4.02	1,000.00	2,285.63	59.7
J-96	4.02	1,000.00	2,285.58	20.8
J-97	6.03	1,000.00	2,285.52	41.9
J-98	4.82	1,000.00	2,285.48	54.9
J-99	4.02	1,000.00	2,285.45	54.5
J-100	6.03	1,000.00	535.28	20.0
J-101	1.21	1,000.00	0.00	17.3
J-102	4.02	1,000.00	2,769.01	20.8
J-103	4.02	1,000.00	1,413.91	20.0
J-104	5.02	1,000.00	189.18	20.0
J-105	4.02	1,000.00	2,285.62	57.8
J-106	0.00	1,000.00	4,000.00	20.0
J-107	0.00	1,000.00	3,718.52	20.0
J-108	0.00	1,000.00	3,548.09	20.0
J-109	0.00	1,000.00	3,403.31	20.0
J-110	0.00	1,000.00	3,344.46	20.0
J-111	0.00	1,000.00	2,625.40	20.0
J-112	0.00	1,000.00	2,529.21	20.0
J-113	0.00	1,000.00	2,197.57	20.0
J-115	0.00	1,000.00	3,037.60	20.0
J-116	0.00	1,000.00	2,981.13	20.0
J-117	0.00	1,000.00	3,345.49	20.0
J-118	0.00	1,000.00	2,566.18	20.0
J-120	0.00	1,000.00	1,864.33	20.0
J-122	0.00	1,000.00	2,285.63	58.5
J-123	0.00	1,000.00	1,385.01	20.0
J-124	0.00	1,000.00	1,977.65	20.0
J-125	0.00	1,000.00	3,068.18	20.0
J-126	0.00	1,000.00	2,543.81	20.0
J-128	21.51	1,000.00	2,525.56	20.0

SSMWC Water Model

Active Scenario: Peak Hour Demand

Current Time: 0.000 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-3	4,200.00	5.91	4,346.51	63.4
J-5	4,200.00	5.91	4,346.51	63.4
J-6	4,200.00	5.91	4,346.19	63.2
J-7	4,200.00	5.91	4,346.15	63.2
J-8	4,200.00	5.91	4,346.15	63.2
J-9	4,200.00	5.91	4,346.13	63.2
J-10	4,200.00	14.78	4,346.12	63.2
J-11	4,200.00	5.91	4,346.11	63.2
J-12	4,200.00	5.91	4,346.11	63.2
J-13	4,200.00	5.91	4,346.13	63.2
J-14	4,200.00	5.91	4,345.70	63.0
J-15	4,200.00	5.91	4,346.13	63.2
J-16	4,200.00	5.91	4,346.14	63.2
J-17	4,200.00	5.91	4,346.12	63.2
J-18	4,183.00	5.91	4,345.31	70.2
J-19	4,180.00	5.91	4,345.12	71.4
J-20	4,180.00	5.91	4,344.78	71.3
J-21	4,176.00	5.91	4,344.35	72.8
J-22	4,173.00	5.91	4,344.03	74.0
J-23	4,173.00	5.91	4,343.91	73.9
J-24	4,180.00	5.91	4,345.11	71.4
J-25	4,180.00	5.91	4,344.77	71.3
J-26	4,176.00	5.91	4,344.35	72.8
J-27	4,173.00	5.91	4,344.03	74.0
J-28	4,173.00	5.91	4,343.94	74.0
J-29	4,173.00	5.91	4,343.94	74.0
J-30	4,180.00	7.39	4,345.05	71.4
J-32	4,180.00	5.91	4,344.00	71.0
J-33	4,180.00	5.91	4,343.93	70.9
J-34	4,180.00	5.91	4,343.91	70.9
J-35	4,180.00	5.91	4,343.87	70.9
J-36	4,180.00	5.91	4,344.90	71.3
J-37	4,180.00	5.91	4,344.84	71.3
J-38	4,180.00	14.78	4,344.64	71.2
J-39	4,180.00	14.78	4,344.38	71.1
J-40	4,180.00	14.78	4,344.33	71.1
J-41	4,173.00	5.91	4,343.98	74.0
J-42	4,173.00	14.78	4,343.93	74.0
J-43	4,170.00	5.91	4,343.85	75.2
J-44	4,170.00	5.91	4,343.84	75.2
J-45	4,167.00	14.78	4,343.83	76.5
J-46	4,167.00	14.78	4,343.83	76.5
J-47	4,163.00	5.91	4,343.80	78.2
J-48	4,163.00	7.39	4,343.79	78.2
J-49	4,170.00	7.39	4,343.80	75.2
J-50	4,186.00	2.96	4,343.70	68.2
J-51	4,186.00	2.96	4,343.79	68.3

SSMWC Water Model

Active Scenario: Peak Hour Demand

Current Time: 0.000 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-52	4,180.00	14.78	4,343.90	70.9
J-53	4,180.00	14.78	4,343.90	70.9
J-54	4,180.00	14.78	4,343.88	70.9
J-55	4,180.00	14.78	4,343.86	70.9
J-56	4,176.00	14.78	4,343.84	72.6
J-57	4,176.00	14.78	4,343.83	72.6
J-58	4,170.00	14.78	4,343.81	75.2
J-59	4,170.00	14.78	4,343.80	75.2
J-60	4,170.00	5.91	4,343.79	75.2
J-61	4,173.00	14.78	4,343.91	73.9
J-62	4,170.00	14.78	4,343.87	75.2
J-63	4,180.00	5.91	4,343.64	70.8
J-64	4,176.00	5.91	4,343.63	72.5
J-65	4,180.00	14.78	4,343.63	70.8
J-66	4,180.00	14.78	4,343.75	70.8
J-67	4,189.00	5.91	4,343.68	66.9
J-68	4,186.00	5.91	4,343.71	68.2
J-69	4,189.00	29.55	4,343.62	66.9
J-70	4,196.00	29.55	4,343.61	63.9
J-71	4,206.00	5.91	4,343.61	59.5
J-72	4,212.00	29.55	4,343.60	56.9
J-73	4,212.00	17.73	4,343.61	56.9
J-74	4,212.00	23.64	4,343.60	56.9
J-75	4,212.00	23.64	4,343.62	56.9
J-76	4,206.00	29.55	4,343.61	59.5
J-77	4,193.00	29.55	4,343.61	65.2
J-78	4,206.00	5.91	4,343.60	59.5
J-79	4,219.00	23.64	4,343.60	53.9
J-80	4,222.00	23.64	4,343.60	52.6
J-81	4,230.00	23.64	4,343.60	49.2
J-82	4,235.00	23.64	4,343.61	47.0
J-83	4,235.00	23.64	4,343.99	47.2
J-84	4,230.00	23.64	4,343.81	49.2
J-85	4,222.00	23.64	4,343.71	52.7
J-86	4,219.00	23.64	4,343.66	53.9
J-87	4,285.00	5.91	4,497.69	92.0
J-88	4,315.00	5.91	4,497.78	79.1
J-89	4,320.00	5.91	4,497.95	77.0
J-90	4,340.00	5.91	4,498.04	68.4
J-91	4,340.00	5.91	4,498.06	68.4
J-92	4,350.00	5.91	4,498.11	64.1
J-93	4,350.00	108.46	4,498.21	64.1
J-94	4,315.00	5.91	4,498.53	79.4
J-95	4,315.00	5.91	4,498.56	79.4
J-96	4,435.00	5.91	4,499.11	27.7
J-97	4,360.00	8.87	4,498.35	59.9
J-98	4,325.00	7.09	4,498.17	74.9

SSMWC Water Model
Active Scenario: Peak Hour Demand

Current Time: 0.000 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-99	4,320.00	5.91	4,498.01	77.0
J-100	4,420.00	8.87	4,498.33	33.9
J-101	4,460.00	1.77	4,499.11	16.9
J-102	4,435.00	5.91	4,499.36	27.8
J-103	4,176.00	5.91	4,343.84	72.6
J-104	4,180.00	7.39	4,344.85	71.3
J-105	4,240.00	5.91	4,496.59	111.0
J-106	4,215.00	0.00	4,346.14	56.7
J-107	4,215.00	0.00	4,346.14	56.7
J-108	4,215.00	0.00	4,346.14	56.7
J-109	4,215.00	0.00	4,346.14	56.7
J-110	4,215.00	0.00	4,346.14	56.7
J-111	4,230.00	0.00	4,346.14	50.2
J-112	4,200.00	0.00	4,346.13	63.2
J-113	4,230.00	0.00	4,346.14	50.2
J-115	4,212.00	0.00	4,343.62	56.9
J-116	4,212.00	0.00	4,343.63	57.0
J-117	4,212.00	0.00	4,343.64	57.0
J-118	4,212.00	0.00	4,343.64	57.0
J-120	4,212.00	0.00	4,343.64	57.0
J-122	4,240.00	0.00	4,496.62	111.0
J-123	4,350.00	0.00	4,498.21	64.1
J-124	4,212.00	0.00	4,343.64	57.0
J-125	4,200.00	0.00	4,498.11	129.0
J-126	4,212.00	0.00	4,498.08	123.8
J-128	4,212.00	42.18	4,350.73	60.0

APPENDIX 5

Appendix 5 includes the SSMWC financial audits.

SILVER SPRINGS MUTUAL WATER CO.
STATEMENTS OF FINANCIAL POSITION
DECEMBER 31, 2011 AND 2010

	2011	2010
ASSETS		
CURRENT ASSETS		
Cash and time certificates of deposit	\$ 449,569	\$ 464,761
Accounts receivable, net of allowance for doubtful accounts of \$5,000 at December 31, 2011 and 2010	44,612	38,327
Grants receivable	-	163,948
Prepaid expenses	13,505	9,006
Total current assets	507,686	676,042
PROPERTY, PLANT AND EQUIPMENT, net	5,127,725	5,218,674
OTHER ASSETS		
Restricted cash		
Customer deposits	23,242	22,934
Debt service	70,805	70,661
Operation and maintenance	20,085	13,299
Depreciation	68,267	68,204
	182,399	175,098
Total assets	\$ 5,817,810	\$ 6,069,814
LIABILITIES AND NET ASSETS		
CURRENT LIABILITIES		
Current maturities of notes payable	\$ 36,934	\$ 36,032
Accounts payable	3,932	156,138
Accrued payroll taxes	413	-
Accrued leave	155	11,532
Accrued wages	5,989	5,736
Customer deposits	23,156	24,155
Total current liabilities	70,579	233,593
LONG-TERM DEBT, net of current portion	852,080	889,016
Total liabilities	922,659	1,122,609
NET ASSETS		
Unrestricted		
Designated by the governing board for emergencies and water system improvements	195,601	259,913
Investment in property, plant and equipment, net of related debt	4,238,711	4,293,626
Reserves required by loan and grant funding source		
Debt service	67,649	67,505
Operation and maintenance	78,935	72,149
Depreciation	134,270	74,027
Contributions-in-aid of construction	179,985	179,985
Total unrestricted net assets	4,895,151	4,947,205
Total liabilities and net assets	\$ 5,817,810	\$ 6,069,814

See accompanying notes

SILVER SPRINGS MUTUAL WATER CO.
STATEMENTS OF ACTIVITIES
FOR THE YEARS ENDED DECEMBER 31, 2011 AND 2010

	2011	2010
UNRESTRICTED REVENUE AND OTHER GAINS		
Program service fees		
Water sales	\$ 550,302	\$ 515,158
Application and hookup fees	3,720	2,940
Late fees	11,964	12,528
Service charges	6,005	5,821
Contract services	36,000	36,000
Grants	60,890	3,218,036
Interest	1,463	4,009
Miscellaneous	7,697	4,700
	678,041	3,799,192
EXPENSES		
Program services	620,487	530,426
General and administrative	109,608	102,482
	730,095	632,908
Change in unrestricted net assets	(52,054)	3,166,284
UNRESTRICTED NET ASSETS, beginning of year	4,947,205	1,780,921
UNRESTRICTED NET ASSETS, end of year	\$ 4,895,151	\$ 4,947,205

See accompanying notes

SILVER SPRINGS MUTUAL WATER CO.
STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2011 AND 2010

	2011	2010
CASH FLOWS FROM OPERATING ACTIVITIES		
Change in net assets	\$ (52,054)	\$ 3,166,284
Adjustments to reconcile change in net assets to net cash provided by operating activities		
Depreciation	157,598	96,141
Changes in certain components of working capital		
(Increase) decrease in:		
Accounts receivable	(6,285)	(2,242)
Grants receivable	163,948	(50,268)
Prepaid expenses	(4,499)	4,546
Increase (decrease) in:		
Accounts payable	(152,206)	37,469
Accrued payroll taxes	413	(1,704)
Accrued leave	(11,377)	(653)
Accrued wages	253	1,782
Customer deposits	(999)	705
Net cash provided by operating activities	94,792	3,252,060
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of property, plant and equipment	(66,649)	(3,221,911)
CASH FLOWS FROM FINANCING ACTIVITIES		
Payments on notes payable	(36,034)	(35,640)
(Increase) decrease in restricted cash, customer deposits	(308)	353
Increase in restricted cash, required debt service	(144)	(728)
(Increase) decrease in restricted cash, required operation and maintenance	(6,786)	10,983
(Increase) decrease in restricted cash, required depreciation	(63)	2,285
Net cash used by financing activities	(43,335)	(22,747)
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(15,192)	7,402
CASH AND CASH EQUIVALENTS, beginning of year	464,761	457,359
CASH AND CASH EQUIVALENTS, end of year	\$ 449,569	\$ 464,761
SUPPLEMENTAL CASH FLOW DATA		
Cash paid during the year for interest	\$ 44,990	\$ 46,298

See accompanying notes

SILVER SPRINGS MUTUAL WATER CO.
STATEMENTS OF FINANCIAL POSITION
DECEMBER 31, 2010 AND 2009

	2010	2009
ASSETS		
CURRENT ASSETS		
Cash and time certificates of deposit	\$ 464,761	\$ 457,359
Accounts receivable, net of allowance for doubtful accounts of \$5,000 at December 31, 2010 and 2009	38,327	36,085
Grants receivable	163,948	113,680
Prepaid expenses	9,006	13,552
Total current assets	676,042	620,676
PROPERTY, PLANT AND EQUIPMENT, net	5,218,674	2,092,904
OTHER ASSETS		
Restricted cash		
Customer deposits	22,934	23,287
Debt service	70,661	69,933
Operation and maintenance	13,299	24,282
Depreciation	68,204	70,489
	175,098	187,991
Total assets	\$ 6,069,814	\$ 2,901,571
LIABILITIES AND NET ASSETS		
CURRENT LIABILITIES		
Current maturities of notes payable	\$ 36,032	\$ 35,175
Accounts payable	156,138	118,669
Accrued payroll taxes	-	1,704
Accrued leave	11,532	12,185
Accrued wages	5,736	3,954
Customer deposits	24,155	23,450
Total current liabilities	233,593	195,137
LONG-TERM DEBT, net of current portion	889,016	925,513
Total liabilities	1,122,609	1,120,650
NET ASSETS		
Unrestricted		
Designated by the governing board for emergencies and water system improvements	259,913	304,016
Investment in property, plant and equipment, net of related debt	4,293,628	1,132,216
Reserves required by loan and grant funding source		
Debt service	67,505	69,933
Operation and maintenance	72,149	24,282
Depreciation	74,027	70,489
Contributions-in-aid of construction	179,985	179,985
Total unrestricted net assets	4,947,205	1,780,921
Total liabilities and net assets	\$ 6,069,814	\$ 2,901,571

See accompanying notes

SILVER SPRINGS MUTUAL WATER CO.
STATEMENTS OF ACTIVITIES
FOR THE YEARS ENDED DECEMBER 31, 2010 AND 2009

	2010	2009
UNRESTRICTED REVENUE AND OTHER GAINS		
Program service fees		
Water sales	\$ 515,158	\$ 552,432
Application and hookup fees	2,940	23,030
Late fees	12,528	12,402
Service charges	5,821	5,800
Contract services	36,000	36,000
Grants	3,218,036	354,868
Interest	4,009	12,810
Miscellaneous	4,700	4,477
	3,799,192	1,001,819
EXPENSES		
Program services	530,426	491,201
General and administrative	102,482	105,007
	632,908	596,208
Increase in unrestricted net assets	3,166,284	405,611
UNRESTRICTED NET ASSETS, beginning of year	1,780,921	1,375,310
UNRESTRICTED NET ASSETS, end of year	\$ 4,947,205	\$ 1,780,921

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See accompanying notes

SILVER SPRINGS MUTUAL WATER CO.
STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2010 AND 2009

	2010	2009
CASH FLOWS FROM OPERATING ACTIVITIES		
Change in net assets	\$ 3,166,284	\$ 405,611
Adjustments to reconcile change in net assets to net cash provided by operating activities		
Depreciation	96,141	81,398
Loss on exchange of asset	-	916
Changes in certain components of working capital		
(Increase) decrease in:		
Accounts receivable	(2,242)	(2,898)
Grants receivable	(50,268)	(113,680)
Prepaid expenses	4,546	(1,246)
Increase (decrease) in:		
Accounts payable	37,469	110,334
Accrued payroll taxes	(1,704)	1,535
Accrued leave	(653)	-
Accrued wages	1,782	-
Customer deposits	705	276
Net cash provided by operating activities	3,252,060	482,446
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of property, plant and equipment	(3,221,911)	(432,975)
CASH FLOWS FROM FINANCING ACTIVITIES		
Payments on notes payable	(35,640)	(33,901)
(Increase) decrease in restricted cash, customer deposits	353	(1,511)
Increase in restricted cash, required debt service	(728)	(1,798)
Decrease in restricted cash, required operation and maintenance	10,983	47,867
(Increase) decrease in restricted cash, required depreciation	2,285	(29,308)
Net cash used by financing activities	(22,747)	(18,651)
NET INCREASE IN CASH AND CASH EQUIVALENTS	7,402	30,820
CASH AND CASH EQUIVALENTS, beginning of year	457,359	426,539
CASH AND CASH EQUIVALENTS, end of year	\$ 464,761	\$ 457,359
SUPPLEMENTAL CASH FLOW DATA		
Cash paid during the year for interest	\$ 46,298	\$ 48,655
SUPPLEMENTAL NONCASH INVESTING AND FINANCING ACTIVITIES		
Remove abandoned equipment, net book value	\$ -	\$ 916

See accompanying notes

SILVER SPRINGS MUTUAL WATER CO.
STATEMENTS OF FINANCIAL POSITION
DECEMBER 31, 2009 AND 2008

	2009	2008
ASSETS		
CURRENT ASSETS		
Cash and time certificates of deposit	\$ 457,359	\$ 426,539
Accounts receivable, net of allowance for doubtful accounts of \$5,000 at December 31, 2009 and 2008	36,085	33,387
Grants receivable	113,680	-
Prepaid expenses	13,552	12,306
Total current assets	620,676	472,232
PROPERTY, PLANT AND EQUIPMENT	2,092,904	1,742,243
OTHER ASSETS		
Restricted cash		
Customer deposits	23,287	21,776
Debt service	69,933	68,135
Operation and maintenance	24,282	72,149
Depreciation	70,489	41,181
	187,991	203,241
Total assets	\$ 2,901,571	\$ 2,417,716
LIABILITIES AND NET ASSETS		
CURRENT LIABILITIES		
Current maturities of notes payable	\$ 35,175	\$ 34,361
Accounts payable	118,669	8,335
Accrued payroll taxes	1,704	169
Accrued leave	12,185	12,185
Accrued wages	3,954	3,954
Customer deposits	23,450	23,174
Total current liabilities	195,137	82,178
LONG-TERM DEBT, net of current portion	925,513	960,228
Total liabilities	1,120,650	1,042,406
NET ASSETS		
Unrestricted		
Designated by the governing board for emergencies and water system improvements	304,016	266,206
Investment in property, plant and equipment, net of related debt	1,132,216	747,654
Reserves required by loan and grant funding source		
Debt	69,933	68,135
Operation and maintenance	24,282	72,149
Depreciation	70,489	41,181
Contributions-in-aid of construction	179,985	179,985
Total unrestricted net assets	1,780,921	1,375,310
Total liabilities and net assets	\$ 2,901,571	\$ 2,417,716

See accompanying notes

SILVER SPRINGS MUTUAL WATER CO.
STATEMENTS OF ACTIVITIES
FOR THE YEARS ENDED DECEMBER 31, 2009 AND 2008

	<u>2009</u>	<u>2008</u>
UNRESTRICTED REVENUE AND OTHER GAINS		
Program service fees		
Water sales	\$ 552,432	\$ 435,999
Application and hookup fees	23,030	9,265
Meter installations	-	650
Late fees	12,402	10,355
Service charges	5,800	5,719
Contract services	36,000	36,000
Grants	354,868	-
Interest	12,810	15,899
Miscellaneous	4,477	8,537
	<u>1,001,819</u>	<u>522,424</u>
EXPENSES		
Program services	491,201	498,036
General and administrative	105,007	101,906
	<u>596,208</u>	<u>599,942</u>
	405,611	(77,518)
	<u>1,375,310</u>	<u>1,452,828</u>
UNRESTRICTED NET ASSETS, beginning of year		
	<u>1,375,310</u>	<u>1,452,828</u>
UNRESTRICTED NET ASSETS, end of year		
	<u>\$ 1,780,921</u>	<u>\$ 1,375,310</u>

See accompanying notes

SILVER SPRINGS MUTUAL WATER CO.
STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2009 AND 2008

	2009	2008
CASH FLOWS FROM OPERATING ACTIVITIES		
Change in net assets	\$ 405,611	\$ (77,518)
Adjustments to reconcile change in unrestricted net assets to net cash provided by operating activities		
Depreciation	81,398	78,673
Loss on exchange of asset	916	438
Changes in certain components of working capital		
(Increase) decrease in:		
Accounts receivable	(2,698)	(5,940)
Grants receivable	(113,680)	-
Prepaid expenses	(1,246)	(2,300)
Increase (decrease) in:		
Accounts payable	110,334	3,915
Accrued payroll taxes	1,535	(4,147)
Accrued leave	-	1,677
Accrued wages	-	1,710
Customer deposits	276	(1,913)
Net cash provided (used) by operating activities	<u>482,446</u>	<u>(5,405)</u>
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of property, plant and equipment	(432,975)	(92,399)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds received from note payable	-	93,478
Payments on notes payable	(33,901)	(24,242)
(Increase) decrease in restricted cash, customer deposits	(1,511)	2,995
Increase in restricted cash, required debt service	(1,798)	(630)
Decrease in restricted cash, required operation and maintenance	47,867	-
(Increase) decrease in restricted cash, required depreciation	(29,308)	8,012
Net cash provided (used) by financing activities	<u>(18,651)</u>	<u>79,613</u>
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	30,820	(18,191)
CASH AND CASH EQUIVALENTS, beginning of year	<u>426,539</u>	<u>444,730</u>
CASH AND CASH EQUIVALENTS, end of year	<u>\$ 457,359</u>	<u>\$ 426,539</u>
SUPPLEMENTAL CASH FLOW DATA		
Cash paid during the year for interest	\$ 48,655	\$ 48,471
SUPPLEMENTAL NONCASH INVESTING AND FINANCING ACTIVITIES		
Remove abandoned equipment, net book value	\$ 916	\$ 438

See accompanying notes

SILVER SPRINGS MUTUAL WATER CO.
STATEMENTS OF ACTIVITIES
FOR THE YEARS ENDED DECEMBER 31, 2008 AND 2007

	<u>2008</u>	<u>2007</u>
UNRESTRICTED REVENUE AND OTHER GAINS		
Program service fees		
Water sales	\$ 435,999	\$ 413,383
Application and hookup fees	9,265	26,285
Meter installations	650	3,150
Late fees	10,355	10,217
Service charges	5,719	6,340
Contract services	36,000	11,922
Grants	-	4,335
Interest	15,899	17,111
Miscellaneous	8,537	12,592
	<u>522,424</u>	<u>505,335</u>
EXPENSES		
Program services	498,036	461,417
General and administrative	101,906	86,967
	<u>599,942</u>	<u>548,384</u>
Decrease in unrestricted net assets	(77,518)	(43,049)
UNRESTRICTED NET ASSETS, beginning of year	<u>1,452,828</u>	<u>1,495,877</u>
UNRESTRICTED NET ASSETS, end of year	<u>\$ 1,375,310</u>	<u>\$ 1,452,828</u>

See accompanying notes

SILVER SPRINGS MUTUAL WATER CO.
STATEMENTS OF FINANCIAL POSITION
DECEMBER 31, 2007 AND 2006

	2007	2006
ASSETS		
CURRENT ASSETS		
Cash and time certificates of deposit	\$ 444,730	\$ 431,163
Accounts receivable, net of allowance for doubtful accounts of \$5,000 at December 31, 2007 and 2006	27,446	28,209
Accrued interest receivable	-	5,072
Grants receivable	-	6,248
Prepaid expenses	10,006	9,539
Total current assets	482,182	480,231
PROPERTY, PLANT AND EQUIPMENT	1,728,955	1,799,966
OTHER ASSETS		
Restricted cash		
Customer deposits	24,771	25,286
Debt service	67,505	67,505
Operation and maintenance	72,149	72,149
Depreciation	49,193	36,566
	213,618	201,506
Total assets	\$ 2,424,755	\$ 2,481,703
LIABILITIES AND NET ASSETS		
CURRENT LIABILITIES		
Current maturities of notes payable	\$ 14,891	\$ 14,156
Accounts payable	4,420	5,780
Accrued payroll taxes	4,316	5,661
Accrued leave	10,508	7,823
Accrued wages	2,244	1,276
Customer deposits	25,087	25,775
Total current liabilities	61,466	60,471
LONG-TERM DEBT, net of current portion	910,461	925,355
Total liabilities	971,927	985,826
NET ASSETS		
Unrestricted		
Designated by the governing board for emergencies and water system improvements	423,512	405,324
Investment in property, plant and equipment, net of related debt	803,603	860,455
Reserves required by loan and grant funding source		
Debt	67,505	67,505
Operation and maintenance	72,149	72,149
Depreciation	49,193	36,566
Contributions-in-aid of construction	179,985	179,985
Undesignated accumulated deficit	(143,119)	(126,107)
Total unrestricted net assets	1,452,828	1,495,877
Total liabilities and net assets	\$ 2,424,755	\$ 2,481,703

See accompanying notes

SILVER SPRINGS MUTUAL WATER CO.
STATEMENTS OF ACTIVITIES
FOR THE YEARS ENDED DECEMBER 31, 2007 AND 2006

	2007	2006
REVENUE AND OTHER GAINS		
Program service fees		
Water sales	\$ 413,383	\$ 418,215
Application and hookup fees	26,285	67,505
Meter installations	3,150	8,650
Late fees	10,217	8,582
Service charges	6,340	6,725
Contract services	11,922	-
Grants	4,335	135,587
Interest	17,111	13,142
Miscellaneous	12,592	4,369
	505,335	662,775
EXPENSES		
Program services	461,417	464,033
General and administrative	86,967	80,676
	548,384	544,709
Increase (decrease) in unrestricted net assets from operations	(43,049)	118,066
UNRESTRICTED NET ASSETS, beginning of year	1,495,877	1,377,811
UNRESTRICTED NET ASSETS, end of year	\$ 1,452,828	\$ 1,495,877

See accompanying notes

SILVER SPRINGS MUTUAL WATER CO.
STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2007 AND 2006

	2007	2006
CASH FLOWS FROM OPERATING ACTIVITIES		
Change in unrestricted net assets before capital additions	\$ (43,049)	\$ 118,066
Adjustments to reconcile change in unrestricted net assets to net cash provided by operating activities		
Depreciation	78,793	84,320
Changes in certain components of working capital		
(Increase) decrease in:		
Accounts receivable	763	4,538
Accrued interest receivable	5,072	(5,072)
Grants receivable	6,248	(6,248)
Prepaid expenses	(467)	(304)
Increase (decrease) in:		
Accounts payable	(1,360)	(2,756)
Accrued payroll taxes	(1,345)	533
Accrued leave	2,685	159
Accrued wages	968	112
Customer deposits	(688)	3,158
Net cash provided by operating activities	47,620	196,506
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of property, plant and equipment	(7,782)	(102,607)
CASH FLOWS FROM FINANCING ACTIVITIES		
Payments on notes payable	(14,159)	(13,458)
(Increase) decrease in restricted cash, customer deposits	515	(3,581)
Increase in restricted cash, required debt service	-	(4,167)
Increase in restricted cash, required operation and maintenance	-	(72,149)
Increase in restricted cash, required depreciation	(12,627)	(36,566)
Net cash used by financing activities	(26,271)	(129,921)
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	13,567	(36,022)
CASH AND CASH EQUIVALENTS, beginning of year	431,163	467,185
CASH AND CASH EQUIVALENTS, end of year	\$ 444,730	\$ 431,163
SUPPLEMENTAL CASH FLOW DATA		
Cash paid during the year for interest	\$ 47,210	\$ 47,909

See accompanying notes

SILVER SPRINGS MUTUAL WATER CO.
STATEMENTS OF FINANCIAL POSITION
DECEMBER 31, 2006 AND 2005

	2006	2005
ASSETS		
CURRENT ASSETS		
Cash and time certificates of deposit	\$ 431,163	\$ 467,185
Accounts receivable, net of allowance for doubtful accounts of \$5,000 at December 31, 2006 and 2005	28,209	32,747
Accrued interest receivable	5,072	-
Grants receivable	6,248	-
Prepaid expenses	9,539	9,235
Total current assets	480,231	509,167
PROPERTY, PLANT AND EQUIPMENT	1,799,966	1,781,679
OTHER ASSETS		
Restricted cash		
Customer deposits	25,286	21,705
Debt service	67,505	63,338
Operation and maintenance	72,149	-
Depreciation	36,566	-
	201,506	85,043
Total assets	\$ 2,481,703	\$ 2,375,889
LIABILITIES AND NET ASSETS		
CURRENT LIABILITIES		
Current maturities of notes payable	\$ 14,156	\$ 13,456
Accounts payable	5,780	8,536
Accrued payroll taxes	5,661	5,128
Accrued leave	7,823	7,664
Accrued wages	1,276	1,164
Customer deposits	25,775	22,617
Total current liabilities	60,471	58,565
LONG-TERM DEBT, net of current portion	925,355	939,513
Total liabilities	985,826	998,078
NET ASSETS		
Unrestricted		
Designated by the governing board for emergencies and water system improvements	405,324	384,428
Investment in property, plant and equipment, net of related debt	860,455	828,710
Reserves required by loan and grant funding source		
Debt	67,505	63,338
Operation and maintenance	72,149	-
Depreciation	36,566	-
Contributions-in-aid of construction	179,985	179,985
Undesignated accumulated deficit	(126,107)	(78,650)
Total unrestricted net assets	1,495,877	1,377,811
Total liabilities and net assets	\$ 2,481,703	\$ 2,375,889

See accompanying notes

SILVER SPRINGS MUTUAL WATER CO.
STATEMENTS OF ACTIVITIES
FOR THE YEARS ENDED DECEMBER 31, 2006 AND 2005

	2006	2005
REVENUE AND OTHER GAINS		
Program service fees		
Water sales	\$ 418,215	\$ 412,141
Application and hookup fees	67,505	69,135
Meter installations	8,650	14,950
Late fees	8,582	12,010
Service charges	6,725	5,980
Contract services	-	9,542
Grants	135,587	12,848
Interest	13,142	3,661
Miscellaneous	4,369	4,002
	662,775	544,269
EXPENSES		
Program services	464,033	417,568
General and administrative	80,676	88,796
	544,709	506,364
Increase in unrestricted net assets from operations before capital additions	118,066	37,905
CAPITAL ADDITIONS		
Contributions-in-aid of construction	-	133,496
Increase in unrestricted net assets from operations after capital additions	118,066	171,401
UNRESTRICTED NET ASSETS, beginning of year	1,377,811	1,206,410
UNRESTRICTED NET ASSETS, end of year	\$ 1,495,877	\$ 1,377,811

See accompanying notes

SILVER SPRINGS MUTUAL WATER CO.
STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2006 AND 2005

	2006	2005
CASH FLOWS FROM OPERATING ACTIVITIES		
Change in unrestricted net assets before capital additions	\$ 118,066	\$ 37,905
Adjustments to reconcile change in unrestricted net assets to net cash provided by operating activities before capital additions		
Depreciation	84,320	81,440
Loss on disposal of assets	-	4,000
Changes in certain components of working capital		
(Increase) decrease in:		
Accounts receivable	4,538	(7)
Contract services receivable	-	6,361
Grants receivable	(6,248)	31,782
Accrued interest receivable	(5,072)	-
Prepaid expenses	(304)	(1,447)
Increase (decrease) in:		
Accounts payable	(2,756)	1,889
Accrued payroll taxes	533	(386)
Accrued leave	159	(959)
Accrued wages	112	(67)
Customer deposits	3,158	2,651
Net cash provided by operating activities	<u>196,506</u>	<u>163,162</u>
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of property, plant and equipment	(102,607)	(6,687)
CASH FLOWS FROM FINANCING ACTIVITIES		
Payments on notes payable	(13,458)	(12,794)
Increase in restricted cash, customer deposits	(3,581)	(1,913)
Increase in restricted cash, required debt service	(4,167)	(976)
Increase in restricted cash, required operation and maintenance	(72,149)	-
Increase in restricted cash, required depreciation	(36,566)	-
Net cash used by financing activities	<u>(129,921)</u>	<u>(15,683)</u>
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(36,022)	140,792
CASH AND CASH EQUIVALENTS, beginning of year	467,185	326,393
CASH AND CASH EQUIVALENTS, end of year	\$ <u>431,163</u>	\$ <u>467,185</u>
SUPPLEMENTAL CASH FLOW DATA		
Cash paid during the year for interest	\$ 47,909	\$ 48,576
NONCASH INVESTING AND FINANCING ACTIVITIES		
Contributions-in-aid of construction	\$ -	\$ 133,496

See accompanying notes

APPENDIX 6

Appendix 6 includes the SSMWC existing and proposed short lived assets.

Existing	WATER SYSTEM SHORT LIVED ASSETS								
									4%
									R&R Fund Annual Cash
COMPONENT	Unit Cost	# of Units	Total Cost	Est. Equip Life years	Annual Depreciation (S.L.)		Interest Rate	Cost Recovery Factor (A/P)	Annualized Cost
Water System Tools & Equipment									
Backhoe	\$20,000	1	\$20,000	10	\$2,000		4.00%	0.12329	\$2,466
Vacuum Truck	\$70,000	1	\$70,000	10	\$7,000		4.00%	0.12329	\$8,630
Booster Pump Station / Pressure Red	\$60,000	1	\$60,000	10	\$6,000		4.00%	0.12329	\$7,397
SCADA System Upgrades	\$160,000	1	\$160,000	15	\$10,667		4.00%	0.08994	\$14,391
Pump/Motors Replacement at Wells	\$30,000	3	\$90,000	10	\$9,000		4.00%	0.12329	\$11,096
Flow Meters & Gages	\$3,000	9	\$27,000	15	\$1,800		4.00%	0.08994	\$2,428
Pick-up 1	\$10,000	1	\$10,000	10	\$1,000		4.00%	0.12329	\$1,233
Pick-up 2	\$15,000	1	\$15,000	10	\$1,500		4.00%	0.12329	\$1,849
VFD	\$15,000	1	\$15,000	10	\$1,500		4.00%	0.12329	\$1,849
Pressure Reducing Valve/Station	\$12,000	1	\$12,000	10	\$1,200		4.00%	0.12329	\$1,479
Filter Media Replacement	\$14,000	6	\$84,000	15	\$5,600		4.00%	0.08994	\$7,555
Reclaim Pumps	\$10,000	2	\$20,000	10	\$2,000		4.00%	0.12329	\$2,466
1-5 Year Annual Cost					\$0.00				\$0.00
6-10 Year Annual Cost					\$31,200.00				\$38,466.76
11-15 Year Annual Cost					\$18,066.67				\$24,374.04
SHORT LIVED ASSET TOTAL	\$419,000				\$49,267				\$62,841

Proposed	WATER SYSTEM SHORT LIVED ASSETS							
								4% R&R Fund Annual Cash
COMPONENT	Unit Cost	# of Units	Total Cost	Est. Equip Life years	Annual Depreciation (S.L.)	Interest Rate	Cost Recovery Factor (A/P)	Annualized Cost
Water System Tools & Equipment								
Backhoe	\$20,000	1	\$20,000	10	\$2,000	4.00%	0.12329	\$2,466
Vacuum Truck	\$70,000	1	\$70,000	10	\$7,000	4.00%	0.12329	\$8,630
Booster Pump Station / Pressure Red	\$60,000	1	\$60,000	10	\$6,000	4.00%	0.12329	\$7,397
SCADA System Upgrades	\$160,000	1	\$160,000	15	\$10,667	4.00%	0.08994	\$14,391
Pump/Motors Replacement at Wells	\$30,000	4	\$120,000	10	\$12,000	4.00%	0.12329	\$14,795
Flow Meters & Gages	\$3,000	10	\$30,000	15	\$2,000	4.00%	0.08994	\$2,698
Pick-up 1	\$10,000	1	\$10,000	10	\$1,000	4.00%	0.12329	\$1,233
Pick-up 2	\$15,000	1	\$15,000	10	\$1,500	4.00%	0.12329	\$1,849
VFD	\$15,000	3	\$45,000	10	\$4,500	4.00%	0.12329	\$5,548
Pressure Reducing Valve/Station	\$12,000	1	\$12,000	10	\$1,200	4.00%	0.12329	\$1,479
Filter Media Replacement	\$14,000	6	\$84,000	15	\$5,600	4.00%	0.08994	\$7,555
Reclaim Pumps	\$10,000	2	\$20,000	10	\$2,000	4.00%	0.12329	\$2,466
1-5 Year Annual Cost					\$0.00			\$0.00
6-10 Year Annual Cost					\$27,000.00			\$33,288.55
11-15 Year Annual Cost					\$12,666.67			\$17,088.81
SHORT LIVED ASSET TOTAL	\$253,000				\$39,667			\$50,377

APPENDIX 7

Appendix 7 includes the SSMWC vulnerability assessment.



State of Nevada

**Nevada Division of Environmental Protection
Bureau of Safe Drinking Water**

**Vulnerability Assessment Program (VAP)
Public Water System Report**

**NAME: SILVER SPRINGS MUTUAL WATER COMPANY
PWS ID #: NV0000223**

State of Nevada

Public Water Systems

Vulnerability Assessment Program (VAP)

Water System Assessment Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY
Water System Number: NV0000223
Report Preparation Date: 12/21/2011
Date Report Modified: 01/29/2013

The federal Safe Drinking Water Act (SDWA) was amended in 1996 to require states to develop and implement source water assessment programs (SWAP) to analyze existing and potential threats to the quality of public drinking water throughout the state. The 1996 Amendments specifically required states to delineate areas that are sources of public drinking water, identify potential contamination sources within the delineated area, and assess the water system's susceptibility to contamination. It is also required an assessment report outlining the findings of the assessment to be provided to the water system and the public. The State of Nevada's SWAP allowed for the issuance of water quality monitoring waivers for specific contaminants for water system with groundwater sources (well/springs) that were determined to have a low risk of potential contamination. In 2010, the Nevada Division of Environmental Protection (NDEP), Bureau of Safe Drinking Water (BSDW), implemented its Environmental Protection Agency (EPA) approved Vulnerability Assessment Program (VAP). The intent of the VAP was to update contaminant source inventories in delineated areas around ground water sources previously assessed by SWAP and re-evaluate the issuance of previously granted water quality monitoring waivers. Newly permitted groundwater sources not previously assessed during SWAP were also evaluated. This VAP report of your public water system delineates potential contaminant sources and associated contaminant types within the modeled captured zone (3,000 ft. radius) of the water system sources (wells/springs) and it provides an assessment of the potential contamination risk to the system.

The assessment report is broken down into sections related to water system contact information, general facility information and methods used in the assessment, descriptions of water sources (wells/springs), including the well drillers log, a summary of water tanks, descriptions of potential contaminant sources to the water sources, and a map showing the water sources and potential contaminant sources within a 3,000 ft. radius. The process of assessing ground water contamination vulnerability is described on Page 4. An idealized diagram illustrating surface and ground water sources [blue text], potential contaminant sources [red text], and barriers protecting drinking water [green text] is shown on Page 5. While not all public water systems have all of the water sources and potential contaminant sources shown, the diagram shows the relation and sensitivity between water sources and potential contaminant sources and the importance in protecting our drinking water quality.

The information contained in this report was believed to be accurate as of August, 2010. However, any user of this information is hereby notified that the data provided are subject to change and that the accuracy cannot be guaranteed. Data are provided "As Is," with all faults and without warranty of any kind. Blank fields within this report denote unknown information at the time this report was produced. BSDW, its employees and contractors do not guarantee the data defects will be corrected. The entire risk as to the quality, accuracy, performance, and usefulness of the data provided resides solely with the user. Users agree to hold harmless BSDW, its employees and contractors from any and all liability claims for damages arising from or connected with the use of the data.

Nevada Division of Environmental Protection
Bureau of Safe Drinking Water
Vulnerability Assessment Program
901 South Stewart St, Ste. 4001
Carson City, Nevada 89701-5405
(775) 687-9521, FAX (775) 687-5699

Nevada Vulnerability Assessment Program (VAP) Water System Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY
Water System Number: NV0000223

Report Preparation Date: 12/21/2011
Date Report Modified: 01/29/2013

System Type: C

Water System Contact Information

Facility Location Physical Address

Facility Address: 1315 LAHONTAN STREET

City: SILVER SPRINGS State: NV Zip Code: 89429 County: LYON

Telephone: 775-577-2223 Fax: N/A Email: UNK

Operator Contact Information

Name: ROY D MCDONALD Highest Operator Certification Level: D1/T2

Address: 317 S WEST ST , YERINGTON, NV 89447

Telephone: 775-463-2729 Fax: N/A Email: PWDIRECTOR@YERINGTON.NET

Owner Representative Contact Information

Name: SILVER SPRINGS MUTUAL

Address: 1315 LAHONTAN STREET, SILVER SPRINGS, NV 89429

Telephone: 775-577-2223 Fax: N/A Email: UNK

Water System Facility Information

Number of Service Connections:

1,088

Population Served:

3,070

Water System Observations

Vulnerability Assessment Program Information

Water System Status (A – Active, I – Inactive): A Source Location Method (GPS Survey): GPS

Source Delineation Method (Fixed Radius, EPA WHPA Model, EPA WhAEM Model, Watershed, or Consecutive Connection [Water purchase from another public water system]): FIXED RADIUS

Is Vulnerability Assessment Completed?: YES Is an EPA approved state VAP used?: YES

Is Integrated Source Water Protection Program in place?: YES

Further information related to the Vulnerability Assessment is available at: <http://ndep.nv.gov/bsdw/vap.htm>

Distribution System Information

Is asbestos concrete (A/C) pipe used in the distribution system (Yes/No/Unknown)?: YES

Is lead pipe used in the distribution system (Yes/No/Unknown)?: NO

Is a chlorinator used in the system (Yes/No/Unknown)?: YES

NDEP Integrated Source Water Protection Program (ISWPP) Information

ISWPP Status (A – Active, I – Inactive): A Is a State endorsed ISWPP in Place?: YES

Further information related to the NDEP Integrated Source Water Protection Program is available at: <http://ndep.nv.gov/bwpc/sourcewater.htm>

Nevada Vulnerability Assessment Program (VAP) Water System Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY
 Water System Number: NV0000223 System Type: C

Report Preparation Date: 12/21/2011
 Date Report Modified: 01/29/2013

Mapping and Hydrologic Information Sources

U.S. Geological Survey (USGS) Hydrologic Information

USGS Hydrologic Unit Code: 16050202 Is a USGS Water Survey Publication Available (Yes/No)?: UNK

USGS Water Publication Name: N/A

Further information related to USGS water resources publications is available at: <http://water.usgs.gov/pubs>

Other Hydrologic Information Sources

Is Nevada Division of Environmental Protection (NDEP) Information Available (Yes/No)? : Yes

Were Other Hydrologic References Used?: NO

Was BSDW Water Quality Used?: YES Was BSDW Sanitary Survey Information Used?: NO

Map Source	Map Name	Map Number	Year
SCS	LYON COUNTY AREA, NEVADA	NV625	9/28/2009
USGS	SILVER SPRINGS NORTH	39119-D2	3/30/1998
FEMA	LYON CO UNINC & INC AREAS	32019C0213E	1/16/2009
USGS Recon.	N/A	N/A	N/A
NBMG	GEOLOGY AND MINERAL	B75	1969

Water Source Information Summary

Number of Active Wells: Number of Active Springs: Number of Active Intakes: Total Sources:

Tag Number	Water System Source Name	Source Type	Well/Spring/Intake
W02	WELL 5 LAKE STREET	GW	Well
W03	WELL 4 IDAHO ST	GW	Well
W04	DEODAR WELL	GW	Well

Water Tank Information Summary

Number of Water Tanks: Total Tank Capacity (gal):

Tank Name	Tank Capacity (gal)	Interior Coating Material
OLD NORTH STORAGE TANK	1,000,000	EPOXY
NEW WEST STORAGE TANK	1,000,000	EPOXY

Nevada Vulnerability Assessment Program (VAP) Water System Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY

Report Preparation Date: 12/21/2011

Water System Number: NV0000223

System Type: C

Date Report Modified: 01/29/2013

Ground Water (GW) Assessment Process

The source water assessment for ground water sources consisted of the following steps:

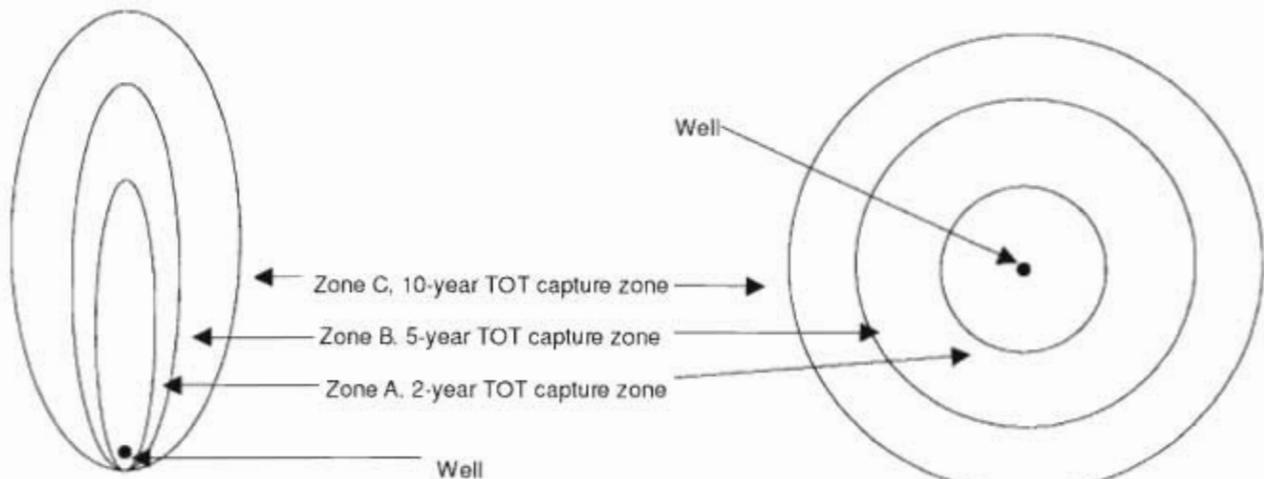
- 1) Use of the SDWIS (State Drinking Water Information System) database to determine which water systems to evaluate.
- 2) A search for any existing information related to each ground water source.
- 3) A capture zone of 3,000 feet fixed radius was used, which corresponds to 10-year Time-of-Travel (TOT) as established by Source Water Assessment Program (SWAP).
- 4) A field investigation of each ground water source to obtain new information and verify existing information.
- 5) An evaluation of the source water quality.
- 6) An evaluation of the collected information, including potential contaminant sources.
- 7) Risk ranking of each potential contaminant source.
- 8) Vulnerability determination of each source.

Information related to ground water sources was available from Nevada Division of Environmental Protection (NDEP) Bureau of Safe Drinking Water (BSDW) files, Nevada Division of Water Resources (DWR), U. S. Geological Survey (USGS), Nevada Bureau of Mines and Geology (NBMG), Natural Resources Conservation Service (NRCS), Federal Emergency Management Agency (FEMA) flood zone maps, and from the public water systems.

In the SWAP report, the 2, 5, and 10-year capture zones were determined by using either ground water modeling (EPA WHPA model) or when sufficient hydrologic information was not available, determined using the volumetric flow equation resulting in a fixed radius capture zone. Transient, Non-Community (TNC) public water systems were typically modeled using a single 1,100 foot minimum fixed radius capture zone. The two figures below illustrate the general capture zones resulting from ground water modeling or using the volumetric flow equation.

Ground Water Modeled Capture Zones

Fixed Radius Capture Zones



The field investigation included a visual inspection of each wellhead and/or springbox, GPS location survey of the wellhead and/or springbox, tagging of the wellhead and/or springbox with new NDEP BSDW identification tags, observation of the geology of the area, identification and photographing of each contaminant source within the 3,000 ft. radius.

An evaluation of the source water quality was performed for each source using existing monitoring data based on contaminants regulated under the federal Safe Drinking Water Act (SDWA) and State of Nevada drinking water standards.

Nevada Vulnerability Assessment Program (VAP) Water System Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY
Water System Number: NV0000223 System Type: C

Report Preparation Date: 12/21/2011
Date Report Modified: 01/29/2013

Ground Water (GW) Well Source Information

General Source Information

NDEP Tag Number: W02 Source Name: WELL 5 LAKE STREET

Division of Water Resources (DWR) Notice of Intent #: UNK DWR Permit #: 35142 Well Log #: 20347

Location Information

Assessor's Parcel Number (APN): 018-432-04 Latitude: Longitude: -

TRS Legal Location: Township: 18N, Range: 25E, Section: 30, ¼ Section: NE, ¼-¼ Section: NE

Well Information

Total Well Depth (ft): 350 Is the casing terminated at least 18 inches above ground surface?: NO
Is sanitary seal present?: YES Seal Depth (ft): 51
Casing Depth (ft): 350 Casing Size (in): 14 Is a well log available in file at BSDW?: YES
Is a well log available at Water Resources?: YES
Is the ground water source located in a mapped FEMA 100-year flood zone?: YES
Has the ground water source been tagged by NDEP?: YES

Well Screen Depths and Interval Length:

Top Depth (ft)	Bottom Depth (ft)	Interval Length (ft)
165	195	30
210	260	50
280	320	40
325	345	20

Pump Information

Pump Size (HP): 100 Average Pumping Rate (GPM): 150 Maximum Pumping Rate (GPM): 1080
Pump Type: VERTICAL TURBINE Pump Age (yrs): 2001 Are PCB's present in pump?: NO

Capture Zone Modeling Hydrologic Parameters

Estimated porosity of primary water bearing stratum: 0.33 Estimated aquifer transmissivity (ft²/day): 72000
Estimated local hydraulic gradient magnitude: 0.002 Direction (degrees): 102
Explain if pump interference between wells exist: NO
Groundwater Capture Zone Method: Modeled Fixed Radius
Approximate Radius of Capture Zone (ft): 3000
Was a single well modeled for this study?: No Is well located in a well field?: NO
Static Water Level(s) from the Ground Surface (ft): 20 Date Recorded: 9/4/1979
If Static Water Level Equals -1, Source is Artesian

Nevada Vulnerability Assessment Program (VAP) Water System Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY
 Water System Number: NV0000223 System Type: C

Report Preparation Date: 12/21/2011
 Date Report Modified: 01/29/2013

Ground Water (GW) Well Source Information Page 2 - W02

Land Use Near Well

Predominant land development around well is: RURAL
 Predominant land usage around well is: COMMERCIAL
 Additional land use comments:

Water Contaminant Information

Water Quality Results in Database?: YES Contaminants Detected?: YES Change in System Configuration?: NO
 IOC's detected above 50% MCL or detection of VOC's or SOC's?: YES
 Significant variation in reported concentrations?: NO Changes in system operating procedures?: NO
 GW system hydraulically connected to surface water with dioxin detect within 1000 feet of GW source?: NO
 Explanation:

Capture Zone Contaminant Information

Explain contaminant sources within a 10-year capture zone:	NONE IDENTIFIED
Is access restricted in the capture zone?:	THE CAPTURE ZONE IS ACCESSABLE
Is agriculture restricted in the capture zone?:	YES, AREA IS ZONED FOR RESIDENTIAL AND COMMERCIAL
Is new industry restricted in the capture zone?:	NO, AREA HAS SOME ZONING FOR INDUSTRY
If surface water is present in capture zone, list distance, source, and type:	NONE IDENTIFIED
Explain historical/environmental land usage in the capture zone which could impact water quality:	UNKNOWN
Note if there are potential sources within a 2-year Time-of-Travel (TOT):	NONE IDENTIFIED
Are there other wells (agricultural, commercial or residential) within a 2-year TOT?:	NONE IDENTIFIED
Explain if visual well construction defects exist:	NONE IDENTIFIED
Explain if well is not adequately protected:	YES, WELL HEAD IS HOUSED
Are there unplugged abandoned wells in the capture zone?:	UNKNOWN

Nevada Vulnerability Assessment Program (VAP) Water System Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY
 Water System Number: NV0000223

System Type: C

Report Preparation Date: 12/21/2011
 Date Report Modified: 01/29/2013

Ground Water (GW) Well Source Information

General Source Information

NDEP Tag Number: W03 Source Name: WELL 4 IDAHO ST

Division of Water Resources (DWR) Notice of Intent #: 36638 DWR Permit #: 27249 Well Log #: 13173

Location Information

Assessor's Parcel Number (APN): 018-414-12 Latitude: Longitude:

TRS Legal Location: Township: 18N, Range: 25E, Section: 30, ¼ Section: NW, ¼-¼ Section: NW

Well Information

Total Well Depth (ft): 400 Is the casing terminated at least 18 inches above ground surface?: NO

Is sanitary seal present?: YES Seal Depth (ft): 50

Casing Depth (ft): 400 Casing Size (in): 12 Is a well log available in file at BSDW?: YES

Is a well log available at Water Resources?: YES

Is the ground water source located in a mapped FEMA 100-year flood zone?: NO

Has the ground water source been tagged by NDEP?: YES

Well Screen Depths and Interval Length:

Top Depth (ft)	Bottom Depth (ft)	Interval Length (ft)
200	400	200

Pump Information

Pump Size (HP): 60 Average Pumping Rate (GPM): 150 Maximum Pumping Rate (GPM): 780

Pump Type: VERTICAL TURBINE Pump Age (yrs): 2001 Are PCB's present in pump?: NO

Capture Zone Modeling Hydrologic Parameters

Estimated porosity of primary water bearing stratum: 0.33 Estimated aquifer transmissivity (ft²/day): 50000

Estimated local hydraulic gradient magnitude: 0.002 Direction (degrees): 102

Explain if pump interference between wells exist: NO

Groundwater Capture Zone Method: Modeled Fixed Radius

Approximate Radius of Capture Zone (ft): 3000

Was a single well modeled for this study?: No Is well located in a well field?: NO

Static Water Level(s) from the Ground Surface (ft): 36 Date Recorded: 3/31/1973

If Static Water Level Equals -1, Source is Artesian

Nevada Vulnerability Assessment Program (VAP) Water System Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY
 Water System Number: NV0000223 System Type: C

Report Preparation Date: 12/21/2011
 Date Report Modified: 01/29/2013

Ground Water (GW) Well Source Information Page 2 - W03

Land Use Near Well

Predominant land development around well is: RURAL
 Predominant land usage around well is: COMMERCIAL
 Additional land use comments:

Water Contaminant Information

Water Quality Results in Database?: YES Contaminants Detected?: YES Change in System Configuration?: NO
 IOC's detected above 50% MCL or detection of VOC's or SOC's?: YES
 Significant variation in reported concentrations?: NO Changes in system operating procedures?: NO
 GW system hydraulically connected to surface water with dioxin detect within 1000 feet of GW source?: NO
 Explanation:

Capture Zone Contaminant Information

Explain contaminant sources within a 10-year a capture zone:	LAUNDROMAT, CAR WASH, GAS STATION
Is access restricted in the capture zone?:	THE CAPTURE ZONE IS ASSESSABLE
Is agriculture restricted in the capture zone?:	YES, AREA IS ZONED FOR RESIDENTIAL AND COMMERCIAL
Is new industry restricted in the capture zone?:	NO, AREA HAS SOME ZONING FOR INDUSTRY
If surface water is present in capture zone, list distance, source, and type:	NONE IDENTIFIED
Explain historical/environmental land usage in the capture zone which could impact water quality:	UNKNOWN
Note if there are potential sources within a 2-year Time-of-Travel (TOT):	NONE IDENTIFIED
Are there other wells (agricultural, commercial or residential) within a 2-year TOT?:	NONE IDENTIFIED
Explain if visual well construction defects exist:	NONE IDENTIFIED
Explain if well is not adequately protected:	YES, WELL HEAD IS HOUSED
Are there unplugged abandoned wells in the capture zone?:	UNKNOWN

Nevada Vulnerability Assessment Program (VAP) Water System Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY
 Water System Number: NV0000223 System Type: C

Report Preparation Date: 12/21/2011
 Date Report Modified: 01/29/2013

Ground Water (GW) Well Source Information

General Source Information

NDEP Tag Number: W04 Source Name: DEODAR WELL

Division of Water Resources (DWR) Notice of Intent #: 36637 DWR Permit #: 14082 Well Log #: 2543

Location Information

Assessor's Parcel Number (APN): 018-404-33 Latitude: Longitude:

TRS Legal Location: Township: 18N, Range: 24E, Section: 25, ¼ Section: NE, ¼-¼ Section: SE

Well Information

Total Well Depth (ft): 260 Is the casing terminated at least 18 inches above ground surface?: NO

Is sanitary seal present?: UNK Seal Depth (ft): N/A

Casing Depth (ft): 260 Casing Size (in): 14 Is a well log available in file at BSDW?: YES

Is a well log available at Water Resources?: YES

Is the ground water source located in a mapped FEMA 100-year flood zone?: NO

Has the ground water source been tagged by NDEP?: YES

Well Screen Depths and Interval Length:

Top Depth (ft)	Bottom Depth (ft)	Interval Length (ft)
92	124	32
142	240	98
250	255	5

Pump Information

Pump Size (HP): 75 Average Pumping Rate (GPM): 50 Maximum Pumping Rate (GPM): 600

Pump Type: VERTICAL TURBINE Pump Age (yrs): 1954 Are PCB's present in pump?: NO

Capture Zone Modeling Hydrologic Parameters

Estimated porosity of primary water bearing stratum: 0.33 Estimated aquifer transmissivity (ft²/day): 50,000

Estimated local hydraulic gradient magnitude: 0.002 Direction (degrees): 102

Explain if pump interference between wells exist: NO

Groundwater Capture Zone Method: Modeled Fixed Radius

Approximate Radius of Capture Zone (ft): 3000

Was a single well modeled for this study?: No Is well located in a well field?: NO

Static Water Level(s) from the Ground Surface (ft): 64 Date Recorded: 4/19/1954

If Static Water Level Equals -1, Source is Artesian

Nevada Vulnerability Assessment Program (VAP) Water System Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY
 Water System Number: NV0000223 System Type: C

Report Preparation Date: 12/21/2011
 Date Report Modified: 01/29/2013

Ground Water (GW) Well Source Information Page 2 - W04

Land Use Near Well

Predominant land development around well is: RURAL
 Predominant land usage around well is: RESIDENTIAL
 Additional land use comments:

Water Contaminant Information

Water Quality Results in Database?: YES Contaminants Detected?: YES Change in System Configuration?: NO
 IOC's detected above 50% MCL or detection of VOC's or SOC's?: YES
 Significant variation in reported concentrations?: NO Changes in system operating procedures?: NO
 GW system hydraulically connected to surface water with dioxin detect within 1000 feet of GW source?: NO
 Explanation:

Capture Zone Contaminant Information

Explain contaminant sources within a 10-year a capture zone:	CAR WASH
Is access restricted in the capture zone?:	THE CAPTURE ZONE IS ASSESSABLE
Is agriculture restricted in the capture zone?:	YES, AREA IS ZONED FOR RESIDENTIAL AND COMMERCIAL
Is new industry restricted in the capture zone?:	NO, AREA HAS SOME ZONING FOR INDUSTRY
If surface water is present in capture zone, list distance, source, and type:	NONE IDENTIFIED
Explain historical/environmental land usage in the capture zone which could impact water quality:	UNKNOWN
Note if there are potential sources within a 2-year Time-of-Travel (TOT):	NONE IDENTIFIED
Are there other wells (agricultural, commercial or residential) within a 2-year TOT?:	NONE IDENTIFIED
Explain if visual well construction defects exist:	NONE IDENTIFIED
Explain if well is not adequately protected:	YES, WELL HEAD IS HOUSED
Are there unplugged abandoned wells in the capture zone?:	UNKNOWN

Nevada Vulnerability Assessment Program (VAP) Water System Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY
 Water System Number: NV0000223 System Type: C

Report Preparation Date: 12/21/2011
 Date Report Modified: 01/29/2013

Risk Ranking and Vulnerability Process

Risk ranking of each potential contaminant source was determined using a pre-defined chart of contaminant source types that were assigned a risk of either low, moderate, or high depending upon the type of contaminant. The risk potential designation was based upon the toxicity or degree of hazard associated with the contaminant source or activity. A contaminant source initially designed as high risk may be downgraded to moderate or low risk if sufficient factors, such as, water quality, distance from the source or time-of-travel, or vulnerability of the well, are identified.

Potential Contaminant Source Initial Risk Ranking

#	Potential Source	Category	Risk Rank	#	Potential Source	Category	Risk Rank
<i>Agricultural</i>				<i>Medical/Educational</i>			
1	Animal burial areas	C, D	H	28	Educational institutions	B, C	M
2	Animal feedlots	B, C, D	H to M	29	Medical institutions	D, E	L
3	Chemical application	C, B	H	30	Research laboratories	A to E	H
4	Chemical mixing & storage	A, B, C	H	<i>Storage</i>			
5	Irrigated fields	A, B	M	31	Aboveground storage tanks	A, B	H
	Irrigation ditches	B, C	H	32	Underground storage tanks	A	H
6	Manure spreading & pits	A, C, D	M	33	Public storage	A, B, C	L
7	Unsealed irrigation wells	A, B, C, D	H	34	Radioactive material storage	E	L
<i>Industrial</i>				<i>Municipal Waste</i>			
8	Chemical manufacturing	A, B, C	H	35	Dumps and landfills	A to E	H
9	Electroplaters & fabrication	C	H	36	Municipal incinerators	B, C, D	M
10	Electrical manufacturing	C	H	37	Recycling/reduction facilities	A to E	H
11	Machine & metalworking	A	H	38	Scrap & junkyards	A, C	H
12	Manufacturing sites	A, B, C	H	39	Wastewater treatment plants	A, B, C, D	H
13	Petroleum distribution	A	H	40	Sewer transfer stations	A, B, C, D	H
<i>Commercial</i>				<i>Miscellaneous</i>			
14	Dry Cleaners	A	H	41	Airports	A	H
15	Furniture & wood stripping	A, C	H	42	Asphalt plants	A	H
16	Jewelry & metal plating	C	H	43	Boat yards	A	H
17	Laundromats	-	L	44	Cemeteries	D	M
18	Paint shops	A	H	45	Construction areas	A	M
19	Photography & printing	C	H	46	Dry wells	A	H
<i>Automotive</i>				47	Fuel storage systems	A	H
20	Auto repair shops	A, C	H	48	Golf courses & parks	B, C	H
21	Car washes	A, C, D	M	49	Mining	A, C, E	H
22	Gas stations	A, C	H	50	Pipelines	A	H
23	Road deicing & storage	C	M	51	Railroad tracks & yards	A, B, C, D	H
24	Road maintenance depots	A, C	H	52	Surface water	D	H
<i>Residential</i>				53	Stormwater drains & basins	A to E	H
25	Household hazardous waste	A, B, C	M	54	Unplugged abandoned wells	A, B, C, D	H
26	Private wells	A, B, C, D	M to H	55	Operating well	A, B, C, D	H to L
27	Septic systems & cesspools	B, C, D	H to M	56	Other	A, B, C, D	H to L

Contaminant Category Codes (A - VOC, B - SOC, C - IOC, D - Microbial, and E - Radionuclides).
 Risk Ranking Codes (L - Low, M - Moderate, and H - High) Potential Contamination Vulnerability.

For a source to receive a low vulnerability designation, the following conditions must be met: No detections of volatile organic compound (VOC) or synthetic organic compound (SOC) contaminants, no maximum contaminant level (MCL) exceedances for inorganic (IOC) contaminants, a low risk potential designation, low or remote likelihood of contamination to the ground water source, and no evidence of risk to public health. To receive a low vulnerability to microbiological agents designation, there must be no Total Coliform Rule MCL violations, or if there were any violations, it must be demonstrated that the cause was permanently corrected. An overall low vulnerability designation means that the source has been determined to have a low vulnerability from contamination from any of the contaminants in the inventory.

Nevada Vulnerability Assessment Program (VAP) Water System Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY

Report Preparation Date: 12/21/2011

Water System Number: NV0000223

System Type: C

Date Report Modified: 01/29/2013

Potential Contaminant Sources (PCS) Listing

The list below denotes potential contaminant sources (PCS) to the water system sources by their respective potential contaminant type and threat to the source. A complete risk ranking of each PCS is only shown for active wells in the next section. A PCS with high threat to the respective source is shown in red (bold) text, a moderate threat is shown in orange (italic) text, and a low threat is shown in black (normal) text. If no PCS sources are listed in the table below, no PCS sources were identified at the time of the field survey. Due to the dynamic nature of potential sources of contaminants to the water sources, not all of the actual PCS sources may be identified as of the date of this report.

Tag Number	PCS #	Contaminant Description	Initial Risk Ranking	Final Risk Ranking
W03	LY-00088	CAR WASHES	<i>MOD.</i>	LOW
W03	LY-00089	GAS STATIONS	HIGH	LOW
W03	LY-00091	LAUNDROMATS	LOW	LOW
W04	LY-00088	CAR WASHES	<i>MOD.</i>	LOW

Nevada Vulnerability Assessment Program (VAP) Water System Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY
 Water System Number: NV0000223 System Type: C

Report Preparation Date: 12/21/2011
 Date Report Modified: 01/29/2013

Potential Contaminant Source to a Ground Water Source

Contaminant Source Description

BSDW Tag Number: W02 Source Name: WELL 5 LAKE STREET
 PCS #: N/A Contaminant Source Type: N/A Distance to Source: N/A
 Description/Address: N/A Latitude: N/A Longitude: N/A

Initial Risk Ranking of Contaminant Source

Volatile Organic Compounds (VOC): **N/A** Inorganic Compounds (IOC): **N/A** Synthetic Organic Compounds (SOC): **N/A**
 Microbiological: **N/A** Radionuclides: **N/A**

Risk Ranking Modifying Parameters

<u>Well Water Quality</u>		<u>Hydrogeological Factors</u>		<u>Well/Spring Construction</u>	
1. VOC Detect:	NO	12. Contaminant Source Dir.:	DGRAD	25. Adequate Construction?:	YES
2. SOC Detect:	NO	13. Modeled TOT	N/A	26. 50-foot Seal Depth?:	YES
3. Dioxin Detect:	NO	Contaminant Source:		27. Casing > 18" Above Ground?:	NO
4. IOC 50% of the MCL Exceedance:	YES	14. Calculated Radius TOT:	N/A	28. Screen Below Confining Layer(s)?:	YES
5. Asbestos Detect:	NO	15. Fixed Radius TOT:	3000	29. Visual Construction Defects?:	NO
6. Total Coliform MCL within 2 yrs:	NO	16. TOT (Spring):	N/A	30. Overburden > 50 ft:	YES
7. Total Coliform MCL at Source:	NO	17. Aquifer Type:	CONF	31. Is Spring Properly Const?:	N/A
8. E Coli MCL:	NO	18. Static Water Depth (ft):	20		
9. E Coli MCL at Source:	NO	19. Static Water Depth Date:	9/4/79		
10. Radionuclide MCL Exceedance:	NO	20. Confining Layer(s)?	YES		
11. Nitrate > ½ MCL:	NO	21. Is Contaminant Mobile?:	YES		
		22. Is The Contaminant Persistent?:	YES		
		23. Have Contaminations occurred?:	UNK		
		24. Approved Method to Control Contamination?:	UNK		
32. Other Relevant Information: (4) IOC AND (10) RAD DETECTIONS ABOVE 50% OF THE MCL HAVE OCCURRED, BUT IT IS LIKELY TO BE FROM NATURAL SOURCES AND NOT ASSOCIATED WITH THIS POTENTIAL CONTAMINANT SOURCE.					

Final Risk Ranking of Contaminant Source

If risk ranking box is blank, contaminant is typically not associated with this particular type of potential contaminant source.

PCS source potential threat ranking:

VOC: **N/A** IOC: **N/A** SOC: **N/A** Microbiological: **N/A** Radionuclides: **N/A**

Explanation of Final Risk Ranking (Including item # for each risk Parameters)

NO PCS HAS BEEN IDENTIFIED FOR THE SOURCE.

Nevada Vulnerability Assessment Program (VAP) Water System Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY
 Water System Number: NV0000223 System Type: C

Report Preparation Date: 12/21/2011
 Date Report Modified: 01/29/2013

Potential Contaminant Source to a Ground Water Source

Contaminant Source Description

BSDW Tag Number: W03 Source Name: WELL 4 IDAHO ST
 PCS #: LY-00088 Contaminant Source Type: 21 CAR WASHES Distance to Source: 1479.9
 Description/Address: 1401 lake avenue Latitude: Longitude:

Initial Risk Ranking of Contaminant Source

Volatile Organic Compounds (VOC): **MOD** Inorganic Compounds (IOC): **MOD** Synthetic Organic Compounds (SOC): **N/A**
 Microbiological: **MOD** Radionuclides: **N/A**

Risk Ranking Modifying Parameters

<i>Well Water Quality</i>		<i>Hydrogeological Factors</i>		<i>Well/Spring Construction</i>	
1. VOC Detect:	NO	12. Contaminant Source Dir.:	DGRAD	25. Adequate Construction?:	YES
2. SOC Detect:	NO	13. Modeled TOT	N/A	26. 50-foot Seal Depth?:	YES
3. Dioxin Detect:	NO	14. Contaminant Source:		27. Casing > 18" Above Ground?:	NO
4. IOC 50% of the MCL Exceedance:	YES	15. Calculated Radius TOT:	N/A	28. Screen Below Confining Layer(s)?:	YES
5. Asbestos Detect:	NO	16. Fixed Radius TOT:	3000	29. Visual Construction Defects?:	NO
6. Total Coliform MCL within 2 yrs:	NO	17. TOT (Spring):	N/A	30. Overburden > 50 ft:	YES
7. Total Coliform MCL at Source:	NO	18. Aquifer Type:	CONF	31. Is Spring Properly Const?:	N/A
8. E Coli MCL:	NO	19. Static Water Depth (ft):	36		
9. E Coli MCL at Source:	NO	20. Static Water Depth Date:	3/31/73		
10. Radionuclide MCL Exceedance:	NO	21. Confining Layer(s)?	YES		
11. Nitrate > 1/2 MCL:	NO	22. Is Contaminant Mobile?:	NO		
		23. Is The Contaminant Persistent?:	NO		
		24. Have Contaminations occurred?:	UNK		
		25. Approved Method to Control Contamination?:	UNK		
32. Other Relevant Information: (4) IOC AND (10) RAD DETECTIONS ABOVE 50% OF THE MCL HAVE OCCURRED, BUT IT IS LIKELY TO BE FROM NATURAL SOURCES AND NOT ASSOCIATED WITH THIS POTENTIAL CONTAMINANT SOURCE.					

Final Risk Ranking of Contaminant Source

If risk ranking box is blank, contaminant is typically not associated with this particular type of potential contaminant source.
 PCS source potential threat ranking:
 VOC: **LOW** IOC: **LOW** SOC: **N/A** Microbiological: **LOW** Radionuclides: **N/A**

Explanation of Final Risk Ranking (Including item # for each risk Parameters)

THIS PCS IS WITHIN THE FIVE YEAR CAPTURE ZONE AT APPROXIMATELY 1500 FEET FROM THE WELL HEAD. THERE IS A CONFINING LAYER (20) TO HELP RETARD CONTAMINATION AND THE PCS IS DOWNGRADIENT FROM THE WELL. THERE IS A LOW POTENTIAL OF CONTAMINATION FROM THIS POTENTIAL CONTAMINANT SOURCE.

Nevada Vulnerability Assessment Program (VAP) Water System Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY
 Water System Number: NV0000223 System Type: C

Report Preparation Date: 12/21/2011
 Date Report Modified: 01/29/2013

Potential Contaminant Source to a Ground Water Source

Contaminant Source Description

BSDW Tag Number: W03 Source Name: WELL 4 IDAHO ST
 PCS #: LY-00089 Contaminant Source Type: 22 GAS STATIONS Distance to Source: 2457.0
 Description/Address: 2900 Nevada Ave. SILVER SPRING Latitude: Longitude:

Initial Risk Ranking of Contaminant Source

Volatile Organic Compounds (VOC): **HIGH** Inorganic Compounds (IOC): **HIGH** Synthetic Organic Compounds (SOC): **N/A**
 Microbiological: **N/A** Radionuclides: **N/A**

Risk Ranking Modifying Parameters

<i>Well Water Quality</i>		<i>Hydrogeological Factors</i>		<i>Well/Spring Construction</i>	
1. VOC Detect:	NO	12. Contaminant Source Dir.:	DGRAD	25. Adequate Construction?:	YES
2. SOC Detect:	NO	13. Modeled TOT	N/A	26. 50-foot Seal Depth?:	YES
3. Dioxin Detect:	NO	Contaminant Source:		27. Casing > 18" Above Ground?:	NO
4. IOC 50% of the MCL Exceedance:	YES	14. Calculated Radius TOT:	N/A	28. Screen Below Confining Layer(s)?:	YES
5. Asbestos Detect:	NO	15. Fixed Radius TOT:	3000	29. Visual Construction Defects?:	NO
6. Total Coliform MCL within 2 yrs:	NO	16. TOT (Spring):	N/A	30. Overburden > 50 ft:	YES
7. Total Coliform MCL at Source:	NO	17. Aquifer Type:	CONF	31. Is Spring Properly Const?:	N/A
8. E Coli MCL:	NO	18. Static Water Depth (ft):	36		
9. E Coli MCL at Source:	NO	19. Static Water Depth Date:	3/31/73		
10. Radionuclide MCL Exceedance:	NO	20. Confining Layer(s)?	YES		
11. Nitrate > ½ MCL:	NO	21. Is Contaminant Mobile?:	YES		
		22. Is The Contaminant Persistent?:	YES		
		23. Have Contaminations occurred?:	UNK		
		24. Approved Method to Control Contamination?:	UNK		
32. Other Relevant Information: (4) IOC AND (10) RAD DETECTIONS ABOVE 50% OF THE MCL HAVE OCCURRED, BUT IT IS LIKELY TO BE FROM NATURAL SOURCES AND NOT ASSOCIATED WITH THIS POTENTIAL CONTAMINANT SOURCE.					

Final Risk Ranking of Contaminant Source

If risk ranking box is blank, contaminant is typically not associated with this particular type of potential contaminant source.

PCS source potential threat ranking:

VOC: **LOW** IOC: **LOW** SOC: **N/A** Microbiological: **N/A** Radionuclides: **N/A**

Explanation of Final Risk Ranking (Including item # for each risk Parameters)

THIS PCS IS BEYOND THE FIVE YEAR CAPTURE ZONE AT APPROXIMATELY 2500 FEET FROM THE WELL HEAD. THERE IS A CONFINING LAYER (20) TO HELP RETARD CONTAMINATION AND THE PSC IS LOCATED DOWNGRADE OF THE WELL. THERE IS A LOW POTENTIAL OF CONTAMINATION FROM THIS POTENTIAL CONTAMINANT SOURCE.

Nevada Vulnerability Assessment Program (VAP) Water System Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY
 Water System Number: NV0000223 System Type: C

Report Preparation Date: 12/21/2011
 Date Report Modified: 01/29/2013

Potential Contaminant Source to a Ground Water Source

Contaminant Source Description

BSDW Tag Number: W03 Source Name: WELL 4 IDAHO ST
 PCS #: LY-00091 Contaminant Source Type: 17 LAUNDROMATS Distance to Source: 2613.8
 Description/Address: 2840 Nevada Ave. Latitude: Longitude:

Initial Risk Ranking of Contaminant Source

Volatile Organic Compounds (VOC): N/A Inorganic Compounds (IOC): HIGH Synthetic Organic Compounds (SOC): N/A
 Microbiological: N/A Radionuclides: N/A

Risk Ranking Modifying Parameters

<u>Well Water Quality</u>		<u>Hydrogeological Factors</u>		<u>Well/Spring Construction</u>	
1. VOC Detect:	NO	12. Contaminant Source Dir.:	DGRAD	25. Adequate Construction?:	YES
2. SOC Detect:	NO	13. Modeled TOT	N/A	26. 50-foot Seal Depth?:	YES
3. Dioxin Detect:	NO	Contaminant Source:		27. Casing > 18" Above Ground?:	NO
4. IOC 50% of the MCL Exceedance:	YES	14. Calculated Radius TOT:	N/A	28. Screen Below Confining Layer(s)?:	YES
5. Asbestos Detect:	NO	15. Fixed Radius TOT:	3000	29. Visual Construction Defects?:	NO
6. Total Coliform MCL within 2 yrs:	NO	16. TOT (Spring):	N/A	30. Overburden > 50 ft:	YES
7. Total Coliform MCL at Source:	NO	17. Aquifer Type:	CONF	31. Is Spring Properly Const?:	N/A
8. E Coli MCL:	NO	18. Static Water Depth (ft):	36		
9. E Coli MCL at Source:	NO	19. Static Water Depth Date:	3/31/73		
10. Radionuclide MCL Exceedance:	NO	20. Confining Layer(s)?	YES		
11. Nitrate > ½ MCL:	NO	21. Is Contaminant Mobile?:	YES		
		22. Is The Contaminant Persistent?:	YES		
		23. Have Contaminations occurred?:	UNK		
		24. Approved Method to Control Contamination?:	UNK		
32. Other Relevant Information: (4) IOC AND (10) RAD DETECTIONS ABOVE 50% OF THE MCL HAVE OCCURRED, BUT IT IS LIKELY TO BE FROM NATURAL SOURCES AND NOT ASSOCIATED WITH THIS POTENTIAL CONTAMINANT SOURCE.					

Final Risk Ranking of Contaminant Source

If risk ranking box is blank, contaminant is typically not associated with this particular type of potential contaminant source.
 PCS source potential threat ranking:
 VOC: N/A IOC: LOW SOC: N/A Microbiological: N/A Radionuclides: N/A

Explanation of Final Risk Ranking (Including item # for each risk Parameters)

THIS PCS IS OUTSIDE THE FIVE YEAR CAPTURE ZONE AT APPROXIMATELY 2600 FEET FROM THE WELL HEAD. THERE IS A CONFINING LAYER (20) TO HELP RETARD CONTAMINATION AND THE PCS IS LOCATED DOWNGRAIENT OF THE WELL. THERE IS A MODERATE POTENTIAL OF CONTAMINATION FROM THIS POTENTIAL CONTAMINANT SOURCE.

Nevada Vulnerability Assessment Program (VAP) Water System Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY
 Water System Number: NV0000223 System Type: C

Report Preparation Date: 12/21/2011
 Date Report Modified: 01/29/2013

Potential Contaminant Source to a Ground Water Source

Contaminant Source Description

BSDW Tag Number: W04 Source Name: DEODAR WELL
 PCS #: LY-00088 Contaminant Source Type: 21 CAR WASHES Distance to Source: 2682.8
 Description/Address: 1401 lake avenue Latitude: Longitude:

Initial Risk Ranking of Contaminant Source

Volatile Organic Compounds (VOC): **MOD** Inorganic Compounds (IOC): **MOD** Synthetic Organic Compounds (SOC): **N/A**
 Microbiological: **MOD** Radionuclides: **N/A**

Risk Ranking Modifying Parameters

<i>Well Water Quality</i>		<i>Hydrogeological Factors</i>		<i>Well/Spring Construction</i>	
1. VOC Detect:	NO	12. Contaminant Source Dir.:	DGRAD	25. Adequate Construction?:	NO
2. SOC Detect:	YES	13. Modeled TOT	N/A	26. 50-foot Seal Depth?:	NO
3. Dioxin Detect:	NO	Contaminant Source:		27. Casing > 18" Above Ground?:	NO
4. IOC 50% of the MCL Exceedance:	YES	14. Calculated Radius TOT:	N/A	28. Screen Below Confining Layer(s)?:	YES
5. Asbestos Detect:	NO	15. Fixed Radius TOT:	3000	29. Visual Construction Defects?:	NO
6. Total Coliform MCL within 2 yrs:	NO	16. TOT (Spring):	N/A	30. Overburden > 50 ft:	YES
7. Total Coliform MCL at Source:	NO	17. Aquifer Type:	CONF	31. Is Spring Properly Const?:	N/A
8. E Coli MCL:	NO	18. Static Water Depth (ft):	64		
9. E Coli MCL at Source:	NO	19. Static Water Depth Date:	4/19/54		
10. Radionuclide MCL Exceedance:	NO	20. Confining Layer(s)?	YES		
11. Nitrate > ½ MCL:	YES	21. Is Contaminant Mobile?:	NO		
		22. Is The Contaminant Persistent?:	NO		
		23. Have Contaminations occurred?:	UNK		
		24. Approved Method to Control Contamination?:	UNK		
32. Other Relevant Information: (4) IOC AND (10) RAD DETECTIONS ABOVE 50% OF THE MCL HAVE OCCURRED, BUT IT IS LIKELY TO BE FROM NATURAL SOURCES AND NOT ASSOCIATED WITH THIS POTENTIAL CONTAMINANT SOURCE.					

Final Risk Ranking of Contaminant Source

If risk ranking box is blank, contaminant is typically not associated with this particular type of potential contaminant source.
 PCS source potential threat ranking:
 VOC: **LOW** IOC: **LOW** SOC: **N/A** Microbiological: **LOW** Radionuclides: **N/A**

Explanation of Final Risk Ranking (Including item # for each risk Parameters)

THIS PCS IS OUTSIDE THE FIVE YEAR CAPTURE ZONE AT APPROXIMATELY 2700 FEET FROM THE WELL HEAD. THERE IS A CONFINING LAYER (20) TO HELP RETARD CONTAMINATION AND THE PCS IS DOWNGRADIENT FOT HE WELL. NITRATE HAS BEEN DETECTED ABOVE 50% OR THE MCL AND DIQUAT WAS DETECTED IN 2012, HOWEVER THESE CONTAMINANTS ARE NOT TYPICALLY ASSOCIATED THIS PCS. THERE IS A LOW POTENTIAL OF CONTAMINATION FROM THIS POTENTIAL CONTAMINANT SOURCE.

Nevada Vulnerability Assessment Program (VAP) Water System Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY
 Water System Number: NV0000223 System Type: C

Report Preparation Date: 12/21/2011
 Date Report Modified: 01/29/2013

Water Quality Contaminant Detections

The table below denotes any detections of VOC, SOC, and Microbial contaminants and detects of IOC and Radionuclides equal to or greater than 50% of the contaminant MCL value. Detections above the MCL are shown in red (bold) type, detections between 50% of the MCL and 100% of the MCL value are shown in orange (italic) type, and detections below 50% of the MCL are shown in black (normal) type. If the table below is blank, no contaminant detections as described above were present of the report print date.

Tag Number	Contaminant Name	Contaminant Type	Sample Date	Concentration	Unit	MCL	Unit
W02	ARSENIC	IOC	11/6/2002	0.026	MG/L	0.01	MG/L
W02	ARSENIC	IOC	10/17/2005	0.026	MG/L	0.01	MG/L
W02	ARSENIC	IOC	3/28/2008	0.024	MG/L	0.01	MG/L
W02	ARSENIC	IOC	11/19/2008	0.024	MG/L	0.01	MG/L
W02	ARSENIC	IOC	3/19/2009	0.026	MG/L	0.01	MG/L
W02	ARSENIC	IOC	5/7/2009	0.032	MG/L	0.01	MG/L
W02	ARSENIC	IOC	7/9/2009	0.023	MG/L	0.01	MG/L
W02	ARSENIC	IOC	8/13/2009	0.025	MG/L	0.01	MG/L
W02	ARSENIC	IOC	11/10/2009	0.025	MG/L	0.01	MG/L
W02	ARSENIC	IOC	2/16/2010	0.024	MG/L	0.01	MG/L
W02	ARSENIC	IOC	9/8/2010	0.01	MG/L	0.01	MG/L
W02	ARSENIC	IOC	12/15/2010	0.023	MG/L	0.01	MG/L
W02	ARSENIC	IOC	1/13/2011	0.023	MG/L	0.01	MG/L
W02	ARSENIC	IOC	3/14/2011	0.024	MG/L	0.01	MG/L
W02	ARSENIC	IOC	8/4/2011	0.022	MG/L	0.01	MG/L
W03	ARSENIC	IOC	11/6/2002	0.014	MG/L	0.01	MG/L
W03	ARSENIC	IOC	10/24/2005	0.014	MG/L	0.01	MG/L
W03	ARSENIC	IOC	3/28/2008	0.014	MG/L	0.01	MG/L
W03	ARSENIC	IOC	11/19/2008	0.012	MG/L	0.01	MG/L
W03	ARSENIC	IOC	3/19/2009	0.014	MG/L	0.01	MG/L
W03	ARSENIC	IOC	5/7/2009	0.015	MG/L	0.01	MG/L
W03	ARSENIC	IOC	7/9/2009	0.015	MG/L	0.01	MG/L
W03	ARSENIC	IOC	8/13/2009	0.015	MG/L	0.01	MG/L
W03	ARSENIC	IOC	11/10/2009	0.014	MG/L	0.01	MG/L
W03	ARSENIC	IOC	2/16/2010	0.014	MG/L	0.01	MG/L
W03	ARSENIC	IOC	6/8/2010	0.012	MG/L	0.01	MG/L
W03	ARSENIC	IOC	9/8/2010	0.012	MG/L	0.01	MG/L
W03	ARSENIC	IOC	12/15/2010	0.011	MG/L	0.01	MG/L
W03	NITRATE	IOC	12/29/2003	5.3	MG/L	10	MG/L
W04	ARSENIC	IOC	11/6/2002	0.012	MG/L	0.01	MG/L
W04	ARSENIC	IOC	10/17/2005	0.011	MG/L	0.01	MG/L

Nevada Vulnerability Assessment Program (VAP) Water System Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY
 Water System Number: NV0000223 System Type: C

Report Preparation Date: 12/21/2011
 Date Report Modified: 01/29/2013

Tag Number	Contaminant Name	Contaminant Type	Sample Date	Concentration	Unit	MCL	Unit
W04	ARSENIC	IOC	3/28/2008	0.01	MG/L	0.01	MG/L
W04	ARSENIC	IOC	11/19/2008	0.009	MG/L	0.01	MG/L
W04	ARSENIC	IOC	3/19/2009	0.01	MG/L	0.01	MG/L
W04	ARSENIC	IOC	5/7/2009	0.011	MG/L	0.01	MG/L
W04	ARSENIC	IOC	7/9/2009	0.009	MG/L	0.01	MG/L
W04	ARSENIC	IOC	8/13/2009	0.009	MG/L	0.01	MG/L
W04	ARSENIC	IOC	8/20/2009	0.01	MG/L	0.01	MG/L
W04	ARSENIC	IOC	8/27/2009	0.01	MG/L	0.01	MG/L
W04	ARSENIC	IOC	9/24/2009	0.011	MG/L	0.01	MG/L
W04	ARSENIC	IOC	10/1/2009	0.011	MG/L	0.01	MG/L
W04	ARSENIC	IOC	10/13/2009	0.012	MG/L	0.01	MG/L
W04	ARSENIC	IOC	11/10/2009	0.009	MG/L	0.01	MG/L
W04	ARSENIC	IOC	2/16/2010	0.011	MG/L	0.01	MG/L
W04	ARSENIC	IOC	5/26/2010	0.008	MG/L	0.01	MG/L
W04	ARSENIC	IOC	9/8/2010	0.008	MG/L	0.01	MG/L
W04	ARSENIC	IOC	12/15/2010	0.009	MG/L	0.01	MG/L
W04	ARSENIC	IOC	1/13/2011	0.012	MG/L	0.01	MG/L
W04	ARSENIC	IOC	1/31/2011	0.009	MG/L	0.01	MG/L
W04	ARSENIC	IOC	1/31/2011	0.01	MG/L	0.01	MG/L
W04	ARSENIC	IOC	1/31/2011	0.011	MG/L	0.01	MG/L
W04	ARSENIC	IOC	2/1/2011	0.01	MG/L	0.01	MG/L
W04	ARSENIC	IOC	5/24/2011	0.009	MG/L	0.01	MG/L
W04	ARSENIC	IOC	6/9/2011	0.009	MG/L	0.01	MG/L
W04	ARSENIC	IOC	7/6/2011	0.01	MG/L	0.01	MG/L
W04	NITRATE	IOC	12/4/2001	6.1	MG/L	10	MG/L
W04	NITRATE	IOC	11/6/2002	5.7	MG/L	10	MG/L
W04	NITRATE	IOC	5/16/2003	6.3	MG/L	10	MG/L
W04	NITRATE	IOC	5/16/2005	6.3	MG/L	10	MG/L
W04	NITRATE	IOC	10/13/2005	5.1	MG/L	10	MG/L
W04	NITRATE	IOC	10/17/2005	5.6	MG/L	10	MG/L
W04	NITRATE	IOC	3/8/2006	6	MG/L	10	MG/L
W04	NITRATE	IOC	4/7/2006	6	MG/L	10	MG/L
W04	NITRATE	IOC	9/28/2006	6.5	MG/L	10	MG/L
W04	NITRATE	IOC	12/18/2006	9.4	MG/L	10	MG/L
W04	NITRATE	IOC	1/25/2007	6.1	MG/L	10	MG/L
W04	NITRATE	IOC	9/11/2007	7.4	MG/L	10	MG/L

Nevada Vulnerability Assessment Program (VAP) Water System Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY
 Water System Number: NV0000223 System Type: C

Report Preparation Date: 12/21/2011
 Date Report Modified: 01/29/2013

Tag Number	Contaminant Name	Contaminant Type	Sample Date	Concentration	Unit	MCL	Unit
W04	NITRATE	IOC	3/28/2008	6.9	MG/L	10	MG/L
W04	NITRATE	IOC	4/7/2008	6.8	MG/L	10	MG/L
W04	NITRATE	IOC	11/19/2008	7.5	MG/L	10	MG/L
W04	NITRATE	IOC	4/6/2009	7	MG/L	10	MG/L
W04	NITRATE	IOC	6/9/2009	6.6	MG/L	10	MG/L
W04	NITRATE	IOC	7/9/2009	6.6	MG/L	10	MG/L
W04	NITRATE	IOC	8/13/2009	7.5	MG/L	10	MG/L
W04	NITRATE	IOC	11/10/2009	13	MG/L	10	MG/L
W04	NITRATE	IOC	1/27/2010	7.4	MG/L	10	MG/L
W04	NITRATE	IOC	2/16/2010	7.6	MG/L	10	MG/L
W04	NITRATE	IOC	5/26/2010	7.3	MG/L	10	MG/L
W04	NITRATE	IOC	6/8/2010	6.1	MG/L	10	MG/L
W04	NITRATE	IOC	9/8/2010	8.8	MG/L	10	MG/L
W04	NITRATE	IOC	12/15/2010	11	MG/L	10	MG/L
W04	NITRATE	IOC	1/31/2011	7.6	MG/L	10	MG/L
W04	NITRATE	IOC	1/31/2011	7.7	MG/L	10	MG/L
W04	NITRATE	IOC	1/31/2011	7.8	MG/L	10	MG/L
W04	NITRATE	IOC	1/31/2011	7.9	MG/L	10	MG/L
W04	NITRATE	IOC	1/31/2011	8.4	MG/L	10	MG/L
W04	NITRATE	IOC	1/31/2011	9.6	MG/L	10	MG/L
W04	NITRATE	IOC	1/31/2011	11	MG/L	10	MG/L
W04	NITRATE	IOC	1/31/2011	12	MG/L	10	MG/L
W04	NITRATE	IOC	2/1/2011	7.1	MG/L	10	MG/L
W04	NITRATE	IOC	2/1/2011	7.5	MG/L	10	MG/L
W04	NITRATE	IOC	5/24/2011	6.3	MG/L	10	MG/L
W04	NITRATE	IOC	6/9/2011	6.1	MG/L	10	MG/L
W04	NITRATE	IOC	7/6/2011	6.4	MG/L	10	MG/L
W04	NITRATE-NITRITE	IOC	11/6/2002	5.7	MG/L	10	MG/L
W04	NITRATE-NITRITE	IOC	10/17/2005	5.6	MG/L	10	MG/L
W04	NITRATE-NITRITE	IOC	3/28/2008	6.9	MG/L	10	MG/L
W04	DIQUAT	SOC	5/26/2010	2	ug/L	5	ug/L

Nevada Vulnerability Assessment Program (VAP) Water System Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY
Water System Number: NV0000223

Report Preparation Date: 12/21/2011
Date Report Modified: 01/29/2013

System Type: C

Assessment Report Summary

If checked, the above referenced water system is in compliance with all State of Nevada and Federal water quality standards. If not, then explain below:

Water System Contamination Vulnerability

- If checked, the above referenced water system is considered to have low vulnerability potential from contamination.
- If checked the above referenced water system is considered potentially vulnerable to the following checked contaminant groups:
- Volatile Organic Compounds (VOC)
 - Synthetic Organic Compounds (SOC)
 - Inorganic Compounds (IOC)
 - Radionuclides
 - Microbiological

Volatile Organic Compounds (VOC) are typically associated with gas stations and dry cleaners; Synthetic Organic Compounds (SOC) are typically associated with herbicides and insecticides; Inorganic Compounds (IOC) are typically associated with natural deposits, fertilizers, septic systems, and asbestos components in the distribution system; microbiological contaminants are typically associated with lakes, septic tanks, streams, and animal holding facilities; and radionuclides are typically associated with erosion of natural deposits and with industrial activities.

The water system is considered vulnerable to the activities/sources associated with the contaminant groups checked in the boxes above for the following reasons:

This system is potentially at risk from contamination from several PCSs located with the capture zones of the three wells. The potential contaminant sources present a low overall risk to the water system due their distance from the wells, being down gradient from the well, and the existence of a confining layer that helps retard surface contaminants from impacting the water source. However, with the detection of nitrate at levels over 50% of MCL at W04 quarterly nitrate monitoring is required at W04. Naturally occurring arsenic has occurred at levels above the MCL, however, the water system constructed a arsenic treatment plant reduce arsenic levels and is currently in compliance with arsenic drinking water standards.

Portions of the distribution system have been constructed of asbestos cement pipe and there is a moderate risk for asbestos to contaminate the drinking water.

Nevada Vulnerability Assessment Program (VAP) Water System Report

Water System Name: SILVER SPRINGS MUTUAL WATER COMPANY

Report Preparation Date: 12/21/2011

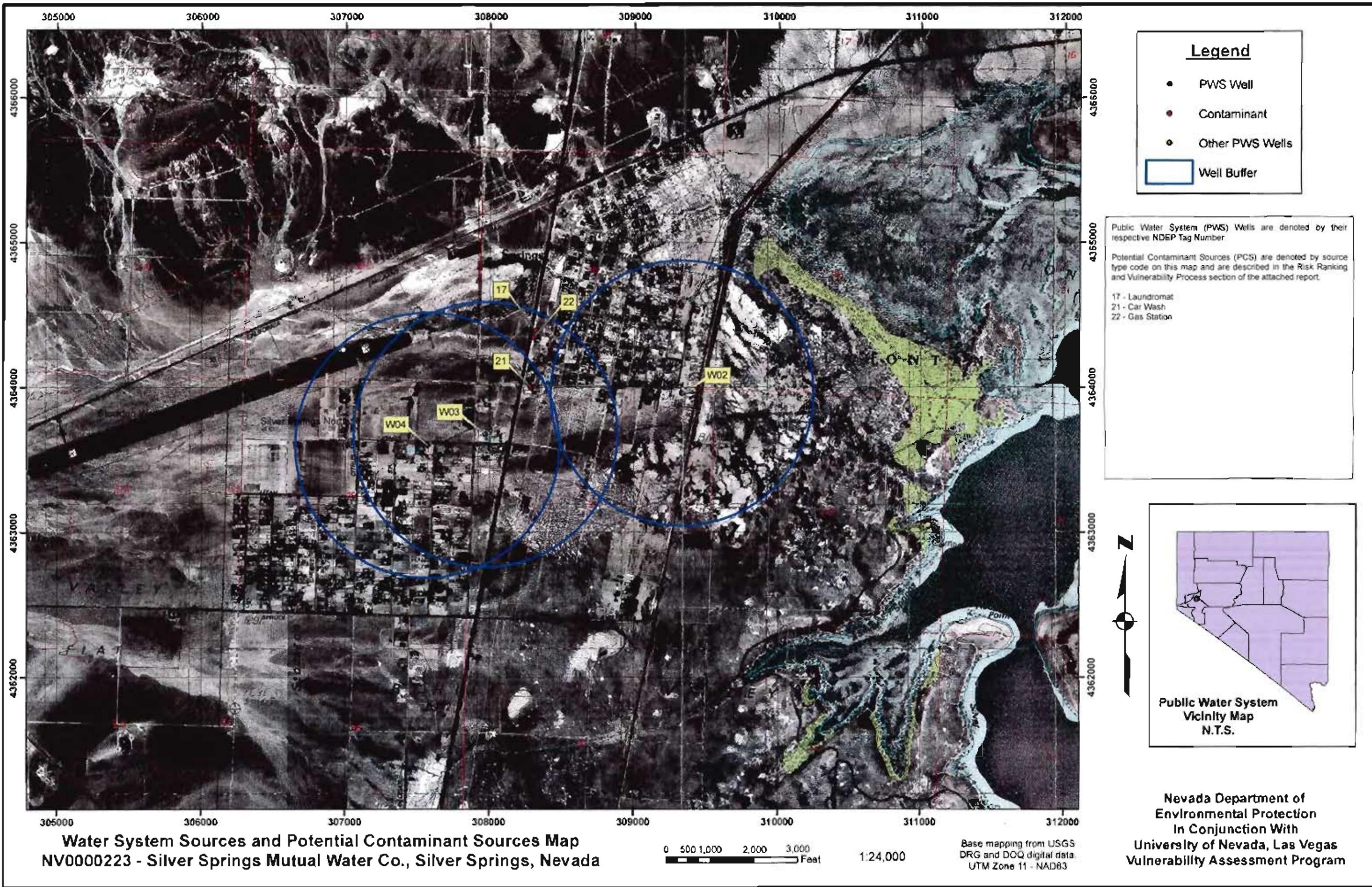
Water System Number: NV0000223

System Type: C

Date Report Modified: 01/29/2013

Glossary of Terms

Assessment	An evaluation of a drinking water source that includes delineation of the boundaries of the protection area of a water source, identification of land uses and possible contaminating activities within that area, and a determination of the vulnerability to contamination.
Capture Zone	Area around a well that ground water will flow towards in a specified length of time.
Community Water System (C)	A public water system that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.
Hydraulic Conductivity	The capacity of a geologic unit to transmit water.
Hydraulic Gradient	The slope of the water table. Determined by measuring the water elevation in several wells.
Inorganic Compound (IOC)	Chemical substance of mineral [natural] origin, such as arsenic and heavy metals.
Maximum Contaminant Level (MCL)	The maximum permissible level of a contaminant in water, which is delivered to any user of a public water system.
Microbiological Contaminant	A contaminant of living, biological origin, such as , E. Coli, coliform, and giardia.
N/A	Not Applicable
Nontransient, Noncommunity Water System (NTNC)	A noncommunity public water system that serves a predominantly stable population such as a school or factory.
Porosity	The ratio of void space to total volume in a geologic unit.
Potential Sources of Contamination	Human activities or natural conditions that are actual or potential origins of significant contamination for a drinking water source. Potential contamination sources include both microbiological and chemical contaminants that could have adverse effects upon human health.
Radionuclide	Radioactive particle, man-made or natural. Can have a long life a a soil or water pollutant.
Service Connection	The point of connection between the customer's piping and the water system's service pipe.
Source Water	Water drawn to supply drinking water from an aquifer by a well or from a surface water body (reservoir, lake, stream, or river) by an intake. Such water may or may not be treated before being distributed by a public water system for consumption.
Synthetic Organic Compounds (SOC)	Man-made (anthropogenic) organic chemicals, such as pesticides, insecticides, and herbicides. Some SOC's are volatile; others tend to stay dissolved in water.
Transient Water System (TNC)	A public water system that meets one of the following criteria: 1) Serves drinking water to at least 25 nonresident individuals daily at least 60 days of the year but not more than 24 yearlong residents, or 2) Serves 15 or more service connections and any number of nonresident individuals at least 60 days of the year, but no yearlong residents.
UNK	Unknown
Volatile Organic Compound (VOC)	Any organic compound that evaporates and is flammable, such as solvents and fuels.
Vulnerability	A description of the likelihood that a contaminant from a significant potential contaminant source/activity identified in a delineated source water protection area will reach a water source.



Legend

- PWS Well
- Contaminant
- Other PWS Wells
- Well Buffer

Public Water System (PWS) Wells are denoted by their respective NDEP Tag Number.

Potential Contaminant Sources (PCS) are denoted by source type code on this map and are described in the Risk Ranking and Vulnerability Process section of the attached report.

17 - Laundromat
 21 - Car Wash
 22 - Gas Station

Public Water System Vicinity Map
 N.T.S.

Water System Sources and Potential Contaminant Sources Map
 NV000223 - Silver Springs Mutual Water Co., Silver Springs, Nevada

0 500 1,000 2,000 3,000 Feet
 1:24,000

Base mapping from USGS
 DRG and DOQ digital data.
 UTM Zone 11 - NAD83

**Nevada Department of
 Environmental Protection
 In Conjunction With
 University of Nevada, Las Vegas
 Vulnerability Assessment Program**

OFFICE USE ONLY
 Log No. 20347
 Permit No. _____
 Basin _____

WELL DRILLERS REPORT

Please complete this form in its entirety

1. OWNER George Peek; ERGS, Inc. ADDRESS P.O. Box 285
Silver Springs, Nevada 89429

2. LOCATION NE 1/4 NE 1/4 Sec. 30 T. 18N N/S R. 25 E. Lyon County _____
 PERMIT NO. 35142

3. TYPE OF WORK	4. PROPOSED USE	5. TYPE WELL
New Well <input checked="" type="checkbox"/> Recondition <input type="checkbox"/>	Domestic <input type="checkbox"/> Irrigation <input type="checkbox"/> Test <input type="checkbox"/>	Cable <input type="checkbox"/> Rotary <input checked="" type="checkbox"/>
Deepen <input type="checkbox"/> Other <input type="checkbox"/>	Municipal <input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Stock <input type="checkbox"/>	Other <input type="checkbox"/>

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thick-ness
Lt. Brown-gray clay		0	29	29
Multicolored sand with clay fine		29	35	6
Gray-brown clay fine		35	102	67
Multicolored sand, blue clay fine, coarse sand		102	114	12
Brown sandy clay finer sand		114	120	6
Multicolored sand coarse		120	154	34
Brown clay, colored sand fine to coarse		154	157	3
Multicolored sand coarse		157	163	6
Multicolored sand coarse brown clay		163	200	37
Multicolored sand-gravel larger gravel		200	210	10
Red brown clay, gravel med		210	220	10
Multicolored gravels, small to large with little bits of clay, coarse sand		220	255	35
Black, brown purple gravel and sand coarse sand, med gravel		255	270	15
White, tan, dark brown very coarse sand some gravel med-fine		270	290	20
Same as above, sand, clay gravels fine-med		290	325	35

8. WELL CONSTRUCTION

Diameter hole 26 inches Total depth 350 feet
 Casing record 0-165' x 16"; 165-350' x 14"
 Weight per foot. 42.05 36.71 Thickness .250

Diameter	From	To
16" inches	0 feet	165 feet
14 inches	165 feet	350 feet

Surface seal: Yes No Type transit mix
 Depth of seal 51 feet
 Gravel packed: Yes No
 Gravel packed from 51 feet to 350 feet

Perforations:
 Type perforation Johnson Irrigator Screen
 Size perforation .040
 From 14" 165 feet to 195 feet
 From 210 feet to 260 feet
 From 280 feet to 320 feet
 From 325 feet to 345 feet
 From _____ feet to _____ feet

Date started 7-9, 1978
 Date completed 9-4, 1979

7. WELL TEST DATA

Pump RPM	G.P.M.	Draw Down	After Hours Pump
<u>N/A</u>	<u>1320</u>	<u>36.24'</u>	<u>24hrs.</u>

BAILER TEST

G.P.M.	Draw down	feet	hours

9. WATER LEVEL

Static water level 20 Feet below land surface
 Flow _____ G.P.M.
 Water temperature cold ° F. Quality not tested

10. DRILLERS CERTIFICATION

This well was drilled under my supervision and the report is true to the best of my knowledge.

Name W.L. McDonald & Co., Inc.
 Address P.O. Box 404 Sparks, Nevada 89431
 Nevada contractor's license number 9767
 Nevada driller's license number 493
 Signed W.L. McDonald
 Date 6 September, 1979

OFFICE USE ONLY
Log No. 13173
Permit No. 27249
Basin. Churchill Val
36638-9

WELL DRILLERS REPORT

Please complete this form in its entirety

1. OWNER SILVER SPRINGS WATER CO ADDRESS BOX 10 - SILVER SPRINGS
2. LOCATION NW 1/4 NW 1/4 Sec 30 T. 18 N/S R. 25 E LYON County
PERMIT NO. _____

3. TYPE OF WORK
New Well Recondition
Deepen Other
4. PROPOSED USE
Domestic Irrigation Test
Municipal Industrial Stock
5. TYPE WELL
Cable Rotary
Other

6. LITHOLOGIC LOG

Material	Water Strata	From	To	Thick-ness
SANDY CLAY		0	8	8
LAYERS SAND, GRAV. CLAY		8	26	18
BROWN CLAY		26	60	34
GRAVELY CLAY		60	115	55
SAND, FINE CLAY		115	120	5
GRAVEL	✓	128	137	9
COBBLES - IN CLAY		137	201	64
LARGE BOULDERS	x	201	220	19
LAYERS, SAND, CLAY & GRAV.		220	250	30
BROWN CLAY		250	270	20
LAYERS, SAND, GRAV-CLAY	✓	270	400	130

8. 0-50-26" WELL CONSTRUCTION
Diameter hole 24 inches Total depth 400 feet
Casing record _____
Weight per foot 25 LBS. Thickness 1.88
Diameter From To
26 inches 0 feet 50 feet
12 3/4 inches +1 feet 400 feet
Surface seal: Yes No Type Charnolite
Depth of seal 50 FT feet
Gravel packed: Yes No
Gravel packed from Surface feet to 400 feet
Perforations:
Type perforation Milled
Size perforation 3/32 x 3
From 200 feet to 400 feet
From _____ feet to _____ feet

Date started NOV 28, 19 72
Date completed MARCH 31, 19 73

7. WELL TEST DATA

Pump RPM	G.P.M.	Draw Down	After Hours Pump
	<u>634</u>	<u>24</u>	<u>10</u>

9. WATER LEVEL
Static water level 3.6 Feet below land surface
Flow _____ G.P.M.
Water temperature 64 ° F. Quality _____

10. DRILLERS CERTIFICATION
This well was drilled under my supervision and the report is true to the best of my knowledge.
ENLOE DRILLING COMPANY
Name 1450 Valley View Drive
Carson City, Nevada 89701
Address _____
Nevada contractor's license number 4739
Nevada driller's license number 249
Signed John W. Enloe
Date May 30 - 19 73

BAILER TEST
G.P.M. _____ Draw down _____ feet _____ hours
G.P.M. _____ Draw down _____ feet _____ hours
G.P.M. _____ Draw down _____ feet _____ hours

WELL LOG AND REPORT TO THE STATE ENGINEER OF NEVADA

Log No. 2543
 Rec. April 23 1954
 Well No. 12 2692
 Permit No. 14982 1710
36637 Do not fill in

Owner M. S. Peek Driller Lukins Bros. Power Well Drill
 Address Silver Springs, Nevada Address Box 35, Tahoe Valley, Calif. Lic. No. 97
 Location of well: ^{SE AD} SW 1/4 NE 1/4 Sec. 25, T. 18 N 8, R. 24 E, in Lyons Coun
 or Silver Springs Nevada
 Water will be used for Irr + Domestic Total depth of well 260 ft.
 Size of drilled hole 14" Weight of casing per linear foot _____
 Thickness of casing 3/16" Temp. of water unknown
 Diameter and length of casing 14" Diameter 260 length of casing
(Casing 12" in diameter and under give inside diameter; casing 12" in diameter give outside diameter)
 If flowing well give flow in c.f.s. or g.p.m. and pressure _____
 If nonflowing well give depth of standing water from surface 64ft.
 If flowing well describe control works _____
(Type and size of valve, etc.)
 Date of commencement of well Feb. 19th. 1954 Date of completion of well April 19, 1954
 Type of well rig Cable Tool 71 Speed Star

LOG OF FORMATIONS

From feet	To feet	Thickness feet	Type of material	Water-bearing Formation, Casing Perforations, Etc.
0	20	20	top soil	
✓ 20	46	26	clay	
✓ 46	64	18	Blue Clay	Chief aquifer (water-bearing formation)
64	72	8	fine sand 1st. water bearing sand	<u>64</u> to <u>72</u> ft.
72	81	9	cement gravel	
81	85	4	pack sand	Other aquifers _____
85	92	7	pea gravel clay	Perforated <u>92ft. to 124</u>
92	94	2	pea gravel sand	2nd water bearing " <u>142ft. " 240</u>
94	124	30	lava formations	" <u>260ft. " 255</u>
124	142	18	lava formations	
142	225	83	pea gravel	
225	250	25	clay with small rocks	
250	260	10	cement gravel	

First water at 64 feet.

Casing perforated
from _____ to _____ ft.

Size of perforations
Mills Perforator

LOG OF FORMATIONS—Continued

From feet	To feet	Thickness	Type of material

CASING RECORD

Diam. casing	From feet	To feet	Length	"Remarks"—Seals, Grouting, Etc.
14"	0	260	260	cement gravel

GENERAL INFORMATION—Pumping Test, Quality of Water, Etc.

WELL DRILLERS STATEMENT

This well was drilled under my jurisdiction and the above information is true to my best information and belief.

Signed Lubin Bros.
Well Driller

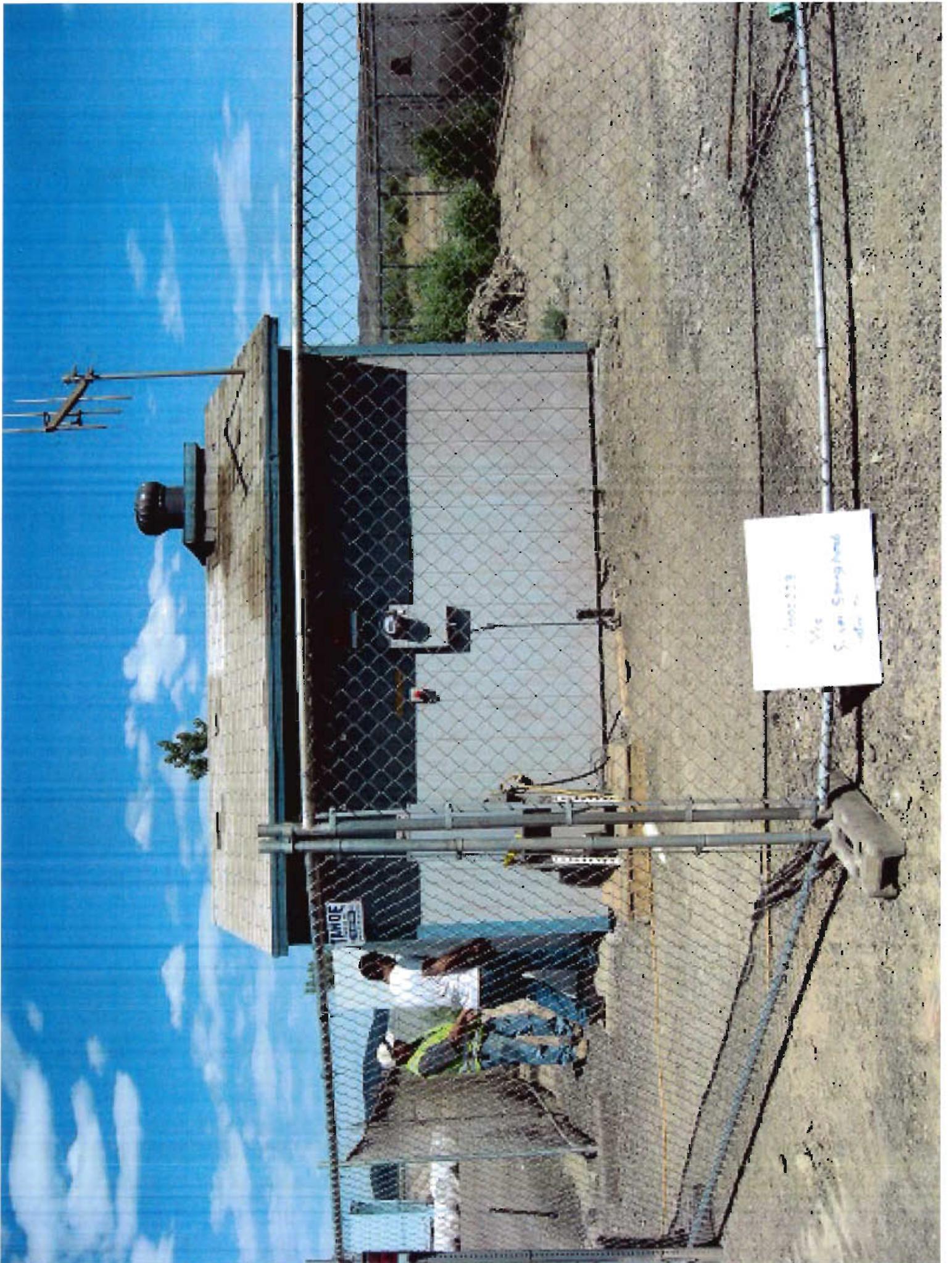
By J. M. Lubin

License No. 97

dated 4/21, 1954

(Not to be filled in by Driller)





1/20/2018
1/2g
S. Van Spring Pond

1/20/2018



NV0000223

We 2

Silver Spring Aetual

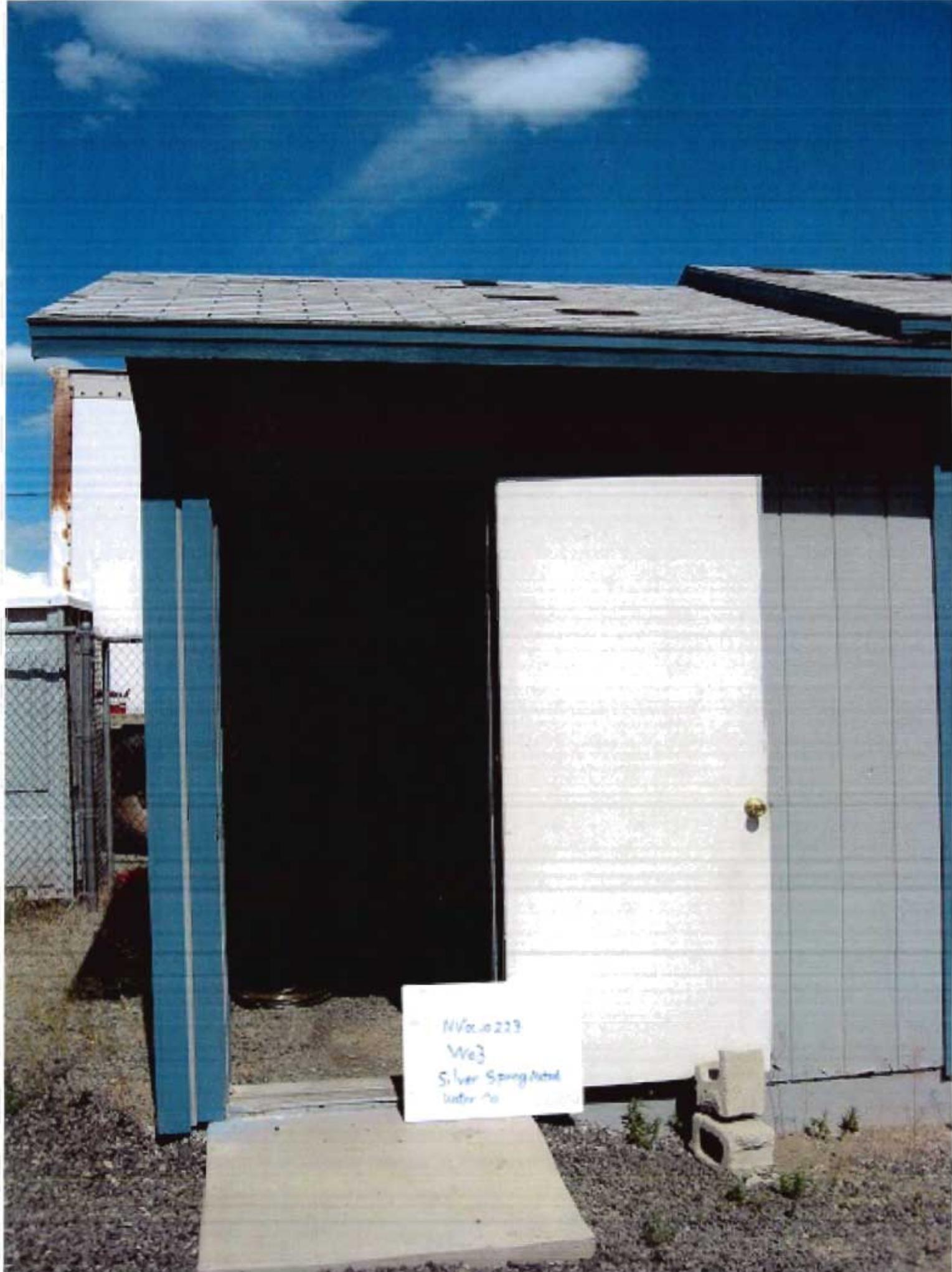
Water Co.



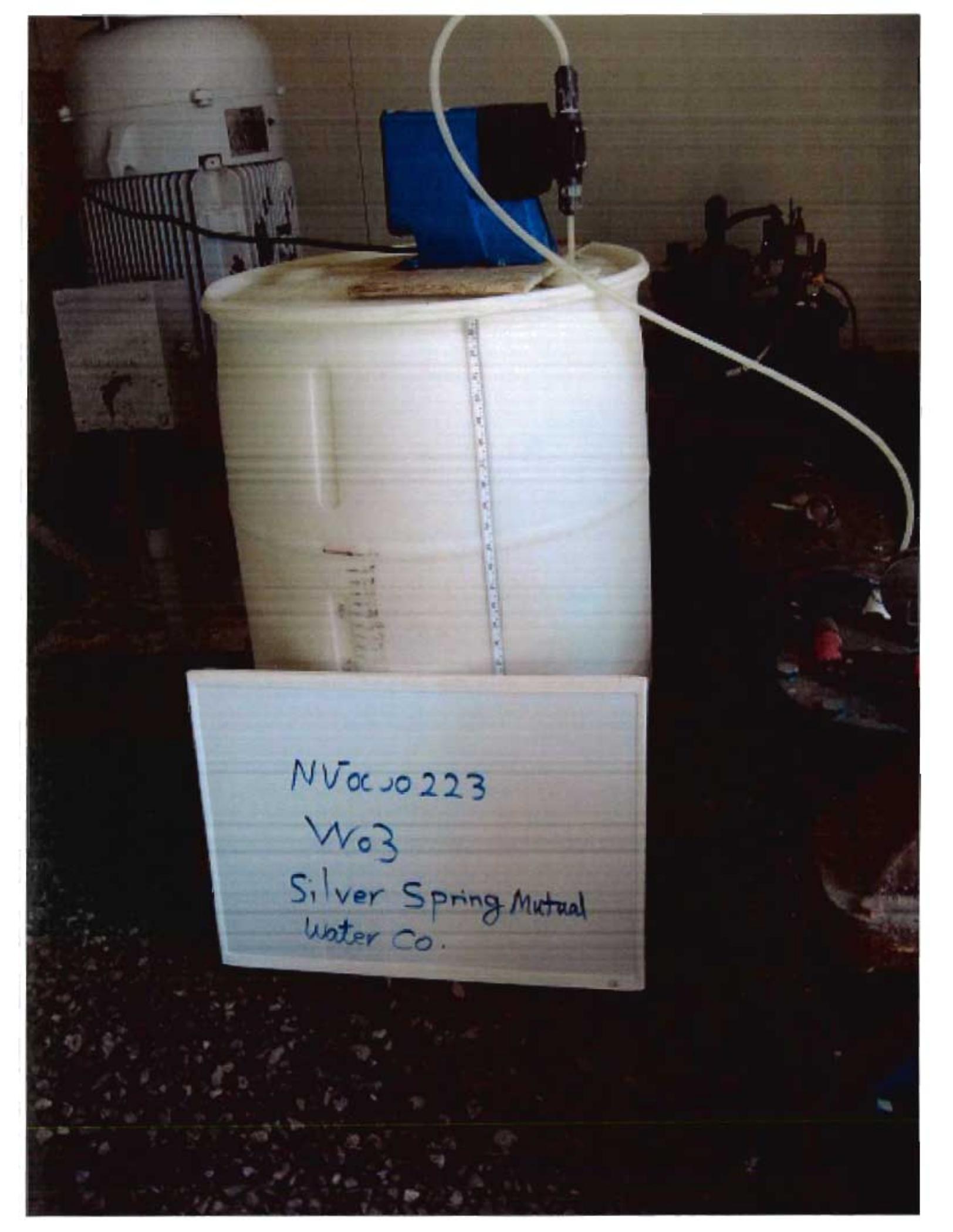
NV000223

V03

Silver Spring Metal
Water Co



NVoc. 223
We3
Silver Spring Hotel
Inter 10



NV000223

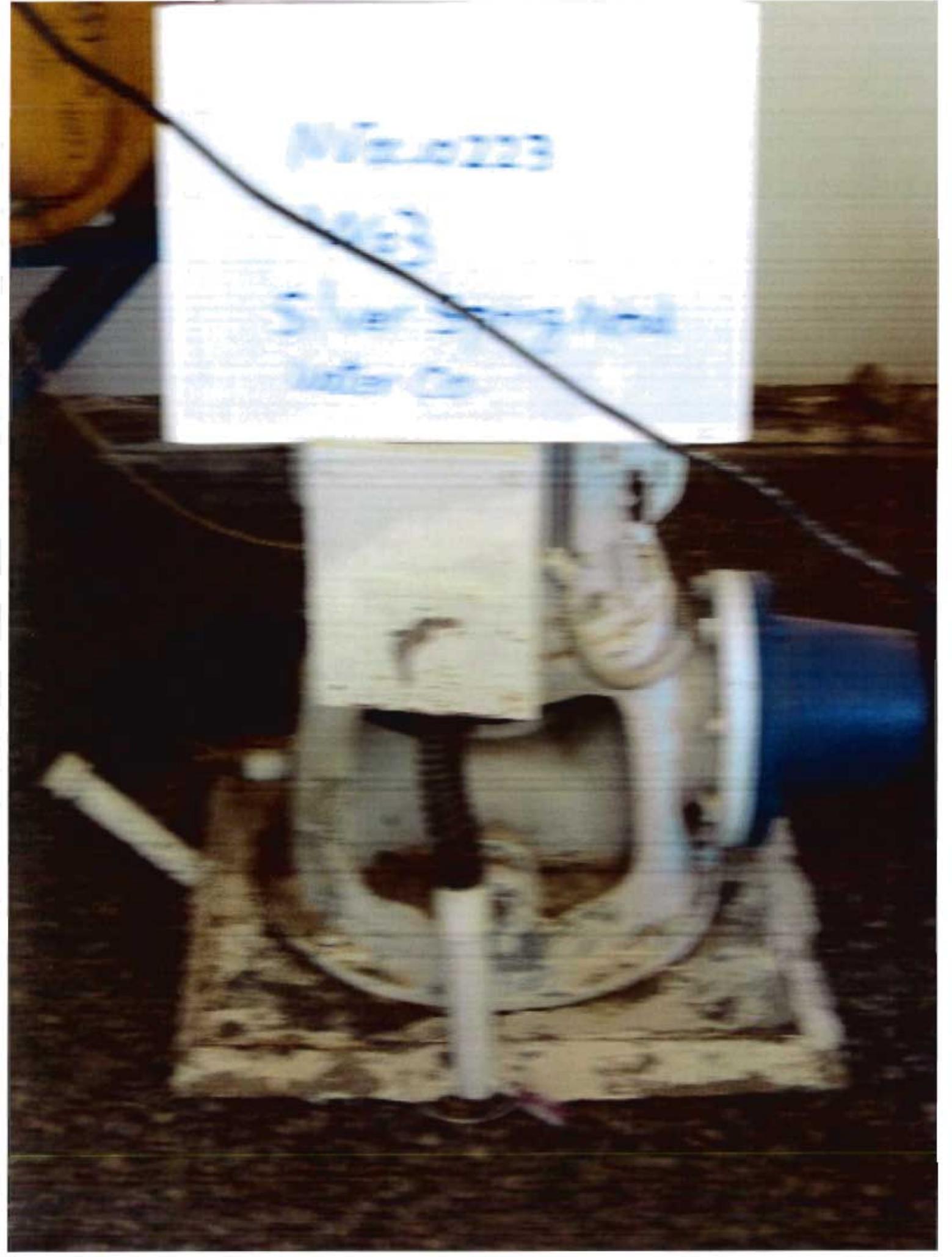
W03

Silver Spring Mutual
Water Co.

Model 223

1963

Silver Spring
Water Co.





11/10/2020
11/10/2020
11/10/2020
11/10/2020



11/2000 323
W-14
Silver Spring Meter
1000 PSI

NV0000223

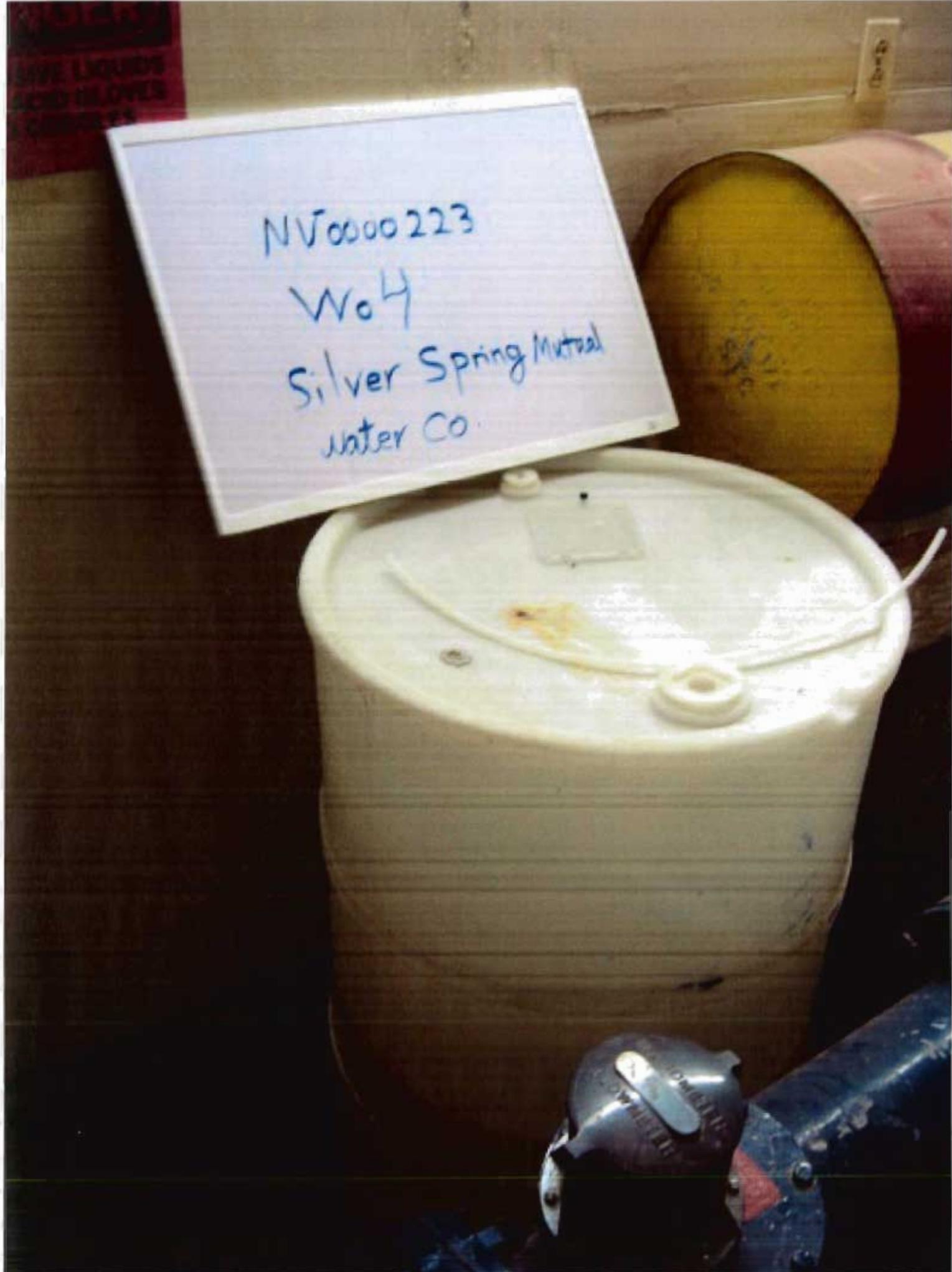
W04

Silver Spring Metal
water Co.

NV0000223

W04

Silver Spring Mutual
Water Co.





MV0000213
W61
Silver Spring Mutual
Water Co.



2840

LAUNDROMAT

OPEN 24 HOURS



VILLAGE MARKET



2-24-14

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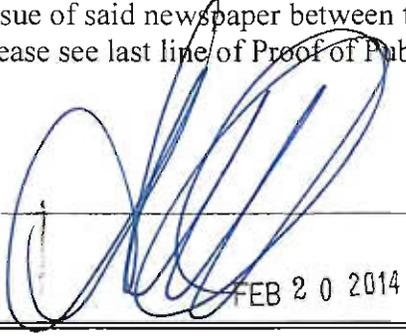
SILVER SPRINGS MUTUAL WATER CO
PO BOX 285
SILVER SPRINGS NV 89429-0285

Customer Acct# 312263
PO# Public Notice
Ad# 2000026669
Legal Ad Cost \$95.16

STATE OF NEVADA
COUNTY OF LYON

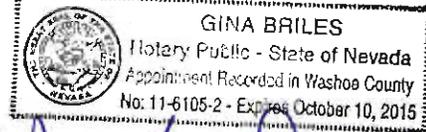
Being first duly sworn, deposes and says: That as the legal clerk of the Mason Valley News – Leader Courier, a weekly newspaper of general circulation published in Yerington, Lyon County, State of Nevada, that the notice referenced below has published in each regular and entire issue of said newspaper between the dates: **2/19/2014 - 2/19/2014**, for exact publication dates please see last line of Proof of Publication below.

Signed: _____



FEB 20 2014

Subscribed and sworn to before me



Proof of Publication

BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA NOTICE OF APPLICATION FOR A PERMIT TO CONSTRUCT UTILITY FACILITIES UNDER THE UTILITY ENVIRONMENTAL PROTECTION ACT Silver Springs Mutual Water Co. (SSMWC) is submitting pursuant to the Nevada Utility Environmental Protection Act (UEPA) and application to the Public Utilities Commission of Nevada (PUC) for authority to construct the following: 1. Deodar well site improvements including the construction of a new 10-foot x 16-foot well house. Improvements to the well itself include the addition of a VFD, and electrical and SCADA improvements. 2. Installation of variable frequency drives (VFD) on the Idaho and Deodar well. 3. A stationary backup generator with appurtenant electrical and SCADA improvements will be installed approximately 6-feet from the east side of the existing booster station building. A 17-foot x 12-foot chainlink security fence will be constructed around the generator area. An additional trailer mounted backup generator for emergency power at both the Idaho and Deodar well sites will also be purchased. 4. The existing 4,900 sq-ft shop will be renovated including the repair of existing block walls, replacement of existing window, a new metal roof, a new chainlink security fence with 36-foot wide-access gate, new office heating/AC unit, new shop heating units, new lighting, new flooring, and new paint 5. Construction of a new

2-24-14

one million gallon water tank at the existing north tank site. 6. Installation of 8" waterline loops in the residential neighborhood at the end of Fort Churchill St, Pueblo St, Donner St, Tonopah St, Tuscarora St, and Eureka St on Elko St. Also install an 8" waterline loop on Virginia Ave/Truckee St. from Fort Churchill and Donner Trail. This project is being undertaken to correct system deficiencies and provide sufficient capacity for SSMWC customers. The contents of the UEPA Application will include but are not limited to: 1. A general description of the project location(s) 2. A general description of the utility facility 3. A summary of any studies made regarding the environmental impact of the proposed utility facilities A copy of the application will be available on the PUC website following SSMWC's filing of the application. Additional information about the UEPA process and a person's right to participate in that process can be found in Nevada Revised Statutes and Nevada Administrative Code Chapters 703 and 704. No. 26669 February 19, 2014

BEFORE THE PUBLIC UTILITIES COMMISSION OF NEVADA NOTICE OF APPLICATION FOR A PERMIT TO CONSTRUCT UTILITY FACILITIES UNDER THE UTILITY ENVIRONMENTAL PROTECTION ACT

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3. A stationary backup generator with appurtenant electrical and SCADA improvements will be installed approximately 6-feet from the east side of the existing booster station building. A 17-foot x 12-foot chainlink security fence will be constructed around the generator area. An additional trailer mounted backup generator for emergency power at both the Idaho and Decodar well sites will also be purchased.
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5. Construction of a new one million gallon water tank at the existing north tank site.
6. Installation of 8" waterline loops in the residential neighborhood at the end of Fort Churchill St, Pueblo St, Donner St, Tonopah St, Tuscarora St, and Eureka St on Elko St. Also install an 8" waterline loop on Virginia Ave/Truckee St. from Fort Churchill and Donner Trail.

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No. 26669 February 19, 2014

Attachment E – Proof of Submission to Clearinghouse
