COMMUNITY DEVELOPMENT
1594 Esmeralda Avenue, Minden, Nevada 89423

Tom Dallaire, P.E.
DIRECTOR

775-782-6201
FAX: 775-782-6297
website: www.douglascountynv.gov

Building Division
Engineering Division
Planning Division
Code Enforcement

NOTICE of MEETING/AGENDA

WATER CONVEYANCE ADVISORY COMMITTEE

A Zoom meeting of the Douglas County Water Conveyance Advisory Committee will be held on **October 5, 2020** beginning at 4:00 pm. The Water Conveyance Advisory Committee reserves the right to: take items in a different order; combine two or more agenda items for consideration; remove items from the agenda; and/or delay discussions relating to an item on the agenda at any time.

Douglas County is actively monitoring and managing the COVID-19 level of risk in our community by closing public offices to minimize contact among individuals and to slow the spread of COVID-19. The Water Conveyance Advisory Committee will be conducting its meeting electronically to reduce social gatherings and interpersonal contact. In adherence to Governor Sisolak's Declaration of Emergency set out in Section 3 of Directive 026 on public meetings, there will be no physical location designated for this meeting.

Public comment will be accepted prior to the Water Conveyance Advisory Committee meeting by calling 775-782-6217, emailing planning@douglasnv.us or setting up an appointment with the Community Development Department's office up until 12:00 pm the day of the meeting. If you would like to attend the Zoom meeting, please request meeting access information to the number and/or email above.

Call to Order

PUBLIC COMMENT (No Action May Be Taken)

- At this time, public comment that was received prior to this meeting will be read into the record if not previously uploaded as supplemental.

APPROVAL OF AGENDA
For Possible Action. Discussion on approval of Agenda.

APPROVAL OF MINUTES
For Possible Action. Discussion on disposition of September 14, 2020 Meeting Minutes.

PUBLIC HEARINGS

1. **For possible action.** Discussion on irrigation, drainage and water facilities which may be impacted by a request for a Tentative Parcel Map that proposes to create two parcels ranging in size from .5 acres to 3.41 acres in size. The subject parcel is located at the northwestern intersection of Zerolene Road and Heybourne Road in the Public Facilities zoning district in the Minden Community Plan Area. The applicant is The Town of Minden, Town Manager, JD Frisby. The property owner is David Park, Park Ranch Holdings, LLC. (APN 1320-32-501-021) Land Division Application DP 20-0217
   Case Engineer: Jeremy Hutchings 775-782-9063 jhutchings@douglasnv.us

ADMINISTRATIVE.

Report of correspondence received since the September 14, 2020 Water Conveyance Advisory Committee Meeting. The correspondence will be identified, including a short discussion of the subject matter, the name of the sender, the name of the person to whom the letter was sent, and the date. No action will be taken on correspondence.

ADJOURNMENT.

NOTE: A quorum of the Board of County Commissioners or Planning Commissioners may be present at this meeting to observe the proceedings. The County Commissioners are prohibited from deliberating towards or making any decisions at this meeting.

Notice to person(s) with disabilities: Members of the public who are disabled and require special assistance or accommodations at the meeting are requested to notify the Development Coordinator by calling at (775) 782-9012 at least 24 hours in advance.

Submitted supporting materials are available, at a minimum, three days prior to the meeting. The final agenda is also posted on the County's website at http://douglascountynv.gov. Members of the public may request an electronic copy of the agenda or the supporting materials by contacting the planning department at 775-782-6217 or by email planning@douglasnv.us. Electronic copies of the agenda and supporting materials are also available at the following websites:

- **State of Nevada Public Notices website:** https://notice.nv.gov/
- **Douglas County Meeting website:** https://douglascountynv.iqm2.com/Citizens/Default.aspx

Copies of this notice are posted at the Douglas County Administrative Building (Historic Courthouse), Douglas County Community Development (Minden Inn), Douglas County Judicial and Law Enforcement Center, and the Minden Post Office.

Water Conveyance Advisory Draft Minutes

from

September 14, 2020 were not available at the time of this posting 9/30/2020

WATER CONVEYANCE ADVISORY COMMITTEE

PROJECT REVIEW & RECOMMENDATIONS

DATE: **September 30, 2020**

AGENDA ITEM #: **1**

PROJECT #: **DP 20-0217**

APPLICANT: **Tow of Minden, JD Frisby**

APN #: **1320-32-501-021**

20.100.070 Irrigation facilities.

A. If proposed development includes or directly impacts existing irrigation facilities, an irrigation plan must be prepared by a registered engineer to analyze and provide mitigation for the impacts of the proposed development. The irrigation plan, together with the drainage plan for the development, must be publicly noticed per section 20.20.030 and presented to the water conveyance advisory committee for their review and written comment to the community development department and to any affected towns or districts.

1. The plan must include the location, size, and capacity of all drainage and irrigation facilities within the proposed area of development. In addition the plan must address upstream areas and facilities tributary to the site and downstream from the site which will be affected or impacted by the proposed development to the point of discharge.

x_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** _____**Not Applicable**

_____**To Be Determined**

2. In all development, the impact on downstream facilities and lands must be analyzed and addressed in the plan. New development is responsible for either improving downstream drainage facilities to meet the increased peak flows as a result of the proposed project or to provide facilities which will result in no increase in peak runoff from that which existed before the development. If downstream peak flows are increased by the project, the plan must provide mitigation to the point of discharge as approved by the county and any affected towns and districts.

x_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** _____**Not Applicable**

_____**To Be Determined**

3. The plans must incorporate water quality and erosion controls in conformance with the *Handbook of Best Management Practices* for all drainage water leaving the site.

The use of irrigation ditches or sloughs for the discharge of urban runoff is highly discouraged and in no case will be permitted without the written notice to, and reasonable efforts to obtain consent of, the affected downstream ditch users. In no case may urban drainage leaving a development be of a quality that will adversely affect downstream water uses.

_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** _____**Not Applicable**

x_____**To Be Determined**

4. As a part of the plan, a ditch may be redesigned or upgraded for low maintenance through the use of riprap, channel lining, culvert or pipe. Landscaping of ditch easements in an urban setting is permitted as part of an approved plan of the water conveyance advisory committee, but must not inhibit the integrity of the ditch bank or the intended maintenance and access function of the ditch easement.

x_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** _____**Not Applicable**

_____**To Be Determined**

B. No development may interfere with the historic custom and use of waters adjacent to and upstream and downstream from the development. Any changes in conveyance facilities or the course of conveyance facilities, including the abandonment of part or all of a conveyance facility, must be done in a reasonable manner with due regard to the rights of the owners of the easement or right-of-way and shall be subject to approval of the water conveyance committee, the county, any affected towns or districts or irrigation companies.

x_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** _____**Not Applicable**

_____**To Be Determined**

C. Standards. Except as set forth herein, all improvements for drainage and irrigation facilities shall be in conformance with this title and the design criteria and improvement standards manual.

x_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** _____**Not Applicable**

_____**To Be Determined**

D. Rights-of-way for water conveyance. All development subject to this title must designate irrigation and drainage rights-of-way or easements as required to implement the approved irrigation and drainage plan for the development. Right-of-way widths must be appropriate for the operation and maintenance of the facilities as shown on the approved plan. Required right-of-way widths will vary depending on the size, type, location and accessibility of the improvements as shown on the plan. In no case shall the rights-of-way be less than 20 feet in width. For open irrigation ditches, a right-

of-way width equal to the top width of the ditch plus 32 feet must be provided to allow adequate access for maintenance and servicing of the ditch. A minimum 20 foot right-of-way must be provided, including cases where the irrigation or drainage is placed in an underground conveyance. These criteria for rights-of-way and piping for irrigation must be met unless otherwise provided by the design criteria and improvement standards manual and approved by the water conveyance advisory committee.

_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** _____**Not Applicable**

x_____**To Be Determined**

E. Where the development contains lots of one net acre or less the right-of-way for an open irrigation or drainage ditch may not be included in the net or gross lot area.

_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** x_____**Not Applicable**

_____**To Be Determined**

F. Maintenance. When water conveyances are placed in an underground culvert or pipe, the plans must address and provide for maintenance of the facilities.

1. If the underground facilities lie under a street or alley dedicated for public use, the town, general improvement district, or other governmental entity in whose jurisdiction the street or alley is located is responsible for maintenance of trash racks, sand and oil separators and the pipe or culvert.

_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** x_____**Not Applicable**

_____**To Be Determined**

2. If the underground facilities cross private property, then the private property owner is responsible for maintenance of trash racks, sand and oil separators and routine maintenance of the pipe. When such property is subdivided, the subdivider shall provide security or other adequate assurances for continuing maintenance.

_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** x_____**Not Applicable**

_____**To Be Determined**

3. When underground facilities cross a combination of public and private property, responsibility for maintenance will be shared by the private and public entities upon whose property the facilities are located. In the absence of a written agreement to the contrary, shares of the costs of maintenance will be in direct relationship with the length of the pipe within such private or public property.

_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** x_____**Not Applicable**

_____**To Be Determined**

4. If the person or entity responsible for maintenance fails or refuses to conduct such maintenance, then the downstream user may enter upon such property and perform the maintenance. The person or entity responsible for maintenance will be liable to the downstream user for the reasonable costs of the maintenance, plus interest, attorneys' fees and court costs.

x_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** _____**Not Applicable**

_____**To Be Determined**

5. The county, on recommendation of the water conveyance advisory committee, may require the developer or property owner, as a condition of development approval, to estimate the annual cost of routine maintenance, and post security to pay for the maintenance, in advance, for a period not to exceed twenty years. In the event security is required and posted, the developer or property owner, as the case may be, or its successor in interest, shall be entitled to a proportionate release of the security on an annual basis after the maintenance is performed. If the developer, property owner or successor fails or refuses to conduct the maintenance, then the downstream user may perform the maintenance, in which case the downstream user shall have recourse to the security for reimbursement of the reasonable costs of the maintenance. Recourse to the security shall not be an exclusive remedy, and does not prevent the downstream user from bringing an action for the balance due, plus reasonable costs, attorneys' fees, and interest. (Ord. 1036, 2003; Ord. 1012, 2002; Ord. 763, 1996; Ord. 539, 1991; Ord. 390, 1981)

_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** x_____**Not Applicable**

_____**To Be Determined**

20.100.080 Irrigation facilities standards.

A. Standards. All ditch rights-of-way must be provided access for maintenance in accordance with these standards and restrictions:

1. Cross fencing of ditches on parcels of 20 net acres and greater may be permitted upon recommendation of the water conveyance advisory committee.

_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** _____**Not Applicable**

x_____**To Be Determined**

2. Lots or parcels of less than 20 net acres must not be designed to require cross fencing of the ditch.

x_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** _____**Not Applicable**

_____**To Be Determined**

3. On parcels of less than 20 net acres, livestock access to the ditch right-of-way may be permitted as long as the integrity of the ditch bank is maintained.

_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** x_____**Not Applicable**

_____**To Be Determined**

4. Where ditch rights-of-way are cross fenced there must be a 16-foot-wide metal gate providing continuous access for ditch maintenance.

x_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** _____**Not Applicable**

_____**To Be Determined**

5. Where a project creates parcels or lots of one acre or less, underground piping for irrigation and storm drainage must be required, unless otherwise approved by the water conveyance advisory committee.

_____**Satisfies Requirement** x_____**Does Not Satisfy Requirement** _____**Not Applicable**

_____**To Be Determined**

6. Where a road or driveway intercepts a ditch and its construction would restrict or prohibit access along the ditch, ramps or other facilities as approved on the drainage and irrigation plan must be provided for both the upstream and downstream faces to facilitate access by ditch maintenance vehicles.

x_____**Satisfies Requirement** _____**Does Not Satisfy Requirement**_____**Not Applicable**

_____**To Be Determined**

7. The culvert installed in a ditch or ditch crossing installed as a consequence of a subdivision or parcel map must be capable of passing 150 percent of the hydraulic capacity of the ditch up to the capacity of a 48-inch culvert. Beyond the capacity of a 48-inch culvert, the culvert must be capable of passing 100 percent of the hydraulic capacity of the ditch. The installation must not change velocity in any manner which increases erosion. Erosion controls may be required to the satisfaction of the water conveyance advisory committee.

_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** _____**Not Applicable**

x_____**To Be Determined**

8. Piping of ditches exclusive of road, street, alley, or driveway crossings must be capable of passing at least 150 percent of the hydraulic capacity of the ditch, up to the

capacity of a 48-inch pipe. Beyond the capacity of a 48-inch pipe, the pipe must be capable of passing 100 percent of the hydraulic capacity of the ditch. Piped ditches must have manholes and other points of access to provide for routine maintenance and cleaning in accordance with the design manual. The installation must not change velocity in any manner which increases erosion. Erosion controls may be required to the satisfaction of the water conveyance advisory committee. The committee may recommend, and the final decision maker may allow, variations in the capacity of the pipe to not less than 100% of the hydraulic capacity of the ditch when supported by sound engineering principles and practical consideration.

_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** _____**Not Applicable**

x_____**To Be Determined**

9. When a culvert greater than 24 feet in length is installed as a consequence of subdivision or a parcel map there must be a trash rack installed on the upstream side. The trash rack must be constructed in compliance with the Standard Details for Public Works Construction.

_____**Satisfies Requirement** _____**Does Not Satisfy Requirement**_____**Not Applicable**

x_____**To Be Determined**

10. A development which is entitled to water from a ditch must provide a headgate and measuring device diversion structure in the ditch, approved by the federal water master or the state engineer.

_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** x_____**Not Applicable**

_____**To Be Determined**

11. A development which is entitled to water from a ditch must form a homeowner's association which will be obligated to their proportionate share of the ditch's maintenance.

_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** x_____**Not Applicable**

_____**To Be Determined**

12. For any development with lots ten acres in size or smaller which are entitled to irrigation water, the developer must provide an irrigation management plan which designates administrative responsibility. The drainage or irrigation plan must show how water will be supplied to and tailwater collected for each lot within the development.

_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** x_____**Not Applicable**

_____**To Be Determined**

13. Where a ditch is piped, where water rights are transferred from a ditch or where drainage goes into a ditch, there must be a continuing responsibility to pay a proportionate share of the costs of ditch maintenance, which can be calculated in terms of the actual costs of ditch maintenance or as though the water rights were still delivered through the ditch by the owner of the water rights. This is required until a change is approved either by all parties holding water rights in the ditch or by the water conveyance advisory committee.

_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** _____**Not Applicable**

x_____**To Be Determined**

B. Use of the ditch right-of-way for the storage or disposal of wood, debris, garbage or other waste or any other use of the right-of-way area which impedes the access along or maintenance of the ditch is prohibited. (Ord. 1012, 2002; Ord. 763, 1996; Ord. 539, 1991; Ord. 390, 1981)

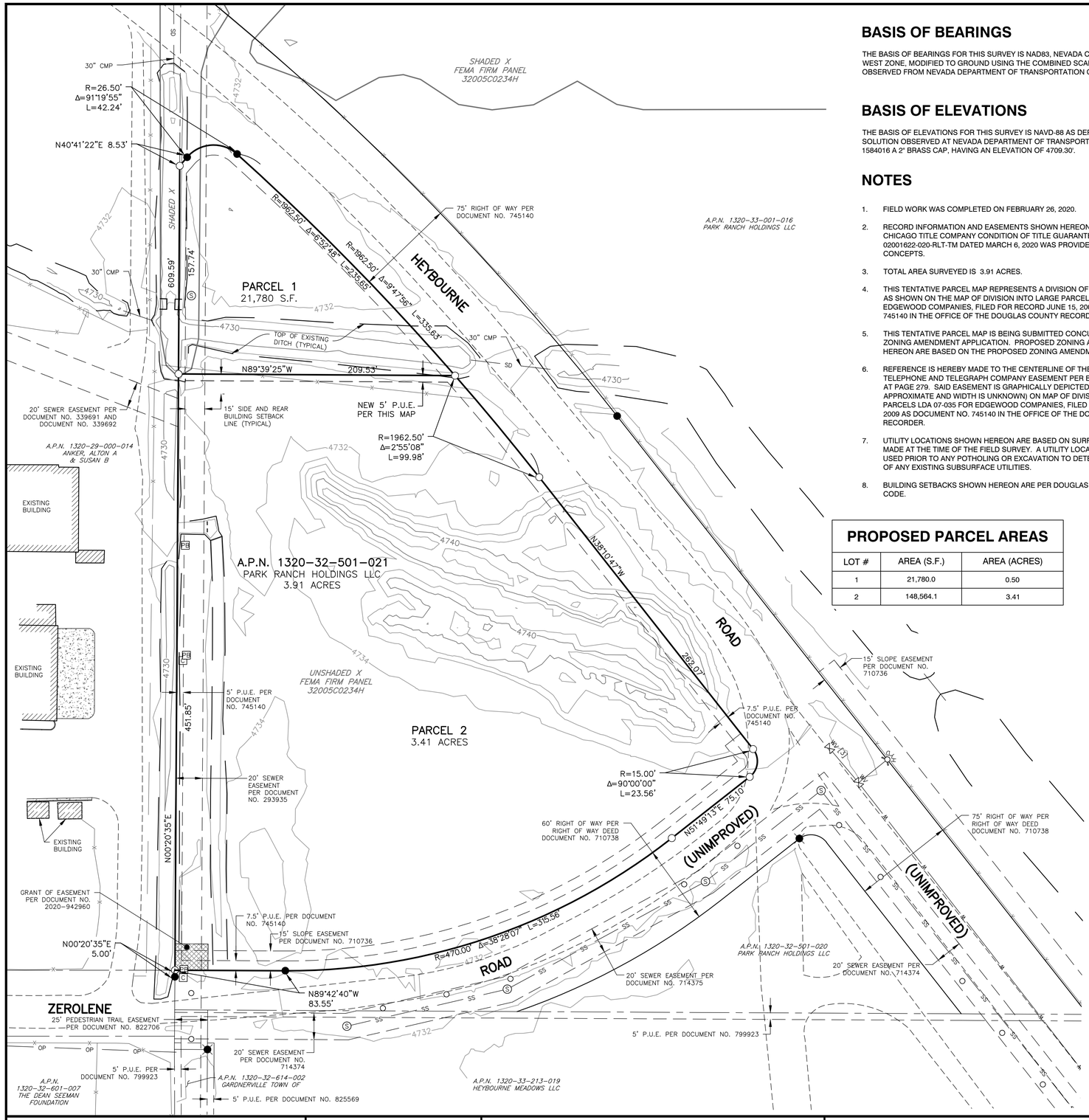
_____**Satisfies Requirement** _____**Does Not Satisfy Requirement** x_____**Not Applicable**

_____**To Be Determined**

STAFF RECOMMENDATION:

Staff recommends approval of the project subject to the following conditions:

1. Open irrigation ditches have an easement recorded over them equivalent to 32-Ft plus the top width.
    a. Where ditches are mainly located on another parcel, the irrigation easement shall be 10-Ft in width.
2. Stormwater run-off is mechanically pre-treated prior to discharge to any irrigation facility.
3. The open ditch shown on Parcel 1 must be piped since it is less than 1 Acre in size.
    a. A 20-ft wide irrigation easement shall be recorded over this pipe.
    b. Culvert shall be sized to pass 150% of the irrigation flow.
    c. A trash rack on the upstream end of the culvert is required.
4. Application shall be responsible for maintenance of pipe on Parcel 1.



BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS SURVEY IS NAD83, NEVADA COORDINATE SYSTEM 1983/94, WEST ZONE, MODIFIED TO GROUND USING THE COMBINED SCALE FACTOR OF 1.0002000. AS OBSERVED FROM NEVADA DEPARTMENT OF TRANSPORTATION CONTROL POINT NO. 1584016.

BASIS OF ELEVATIONS

THE BASIS OF ELEVATIONS FOR THIS SURVEY IS NAVD-88 AS DERIVED FROM AN OPUS SOLUTION OBSERVED AT NEVADA DEPARTMENT OF TRANSPORTATION CONTROL POINT NO. 1584016 A 2" BRASS CAP, HAVING AN ELEVATION OF 4709.30'.

NOTES

1. FIELD WORK WAS COMPLETED ON FEBRUARY 26, 2020.
2. RECORD INFORMATION AND EASEMENTS SHOWN HEREON IS BASED ON THE CHICAGO TITLE COMPANY CONDITION OF TITLE GUARANTEE ORDER NO.: 02001622-020-RLT-TM DATED MARCH 6, 2020 WAS PROVIDED TO RESOURCE CONCEPTS.
3. TOTAL AREA SURVEYED IS 3.91 ACRES.
4. THIS TENTATIVE PARCEL MAP REPRESENTS A DIVISION OF A PORTION OF PARCEL 1 AS SHOWN ON THE MAP OF DIVISION INTO LARGE PARCELS LDA 07-035 FOR EDGEWOOD COMPANIES, FILED FOR RECORD JUNE 15, 2009 AS DOCUMENT NO. 745140 IN THE OFFICE OF THE DOUGLAS COUNTY RECORDER.
5. THIS TENTATIVE PARCEL MAP IS BEING SUBMITTED CONCURRENTLY WITH A ZONING AMENDMENT APPLICATION. PROPOSED ZONING AND SETBACKS SHOWN HEREON ARE BASED ON THE PROPOSED ZONING AMENDMENTS.
6. REFERENCE IS HEREBY MADE TO THE CENTERLINE OF THE UNITED FARMERS TELEPHONE AND TELEGRAPH COMPANY EASEMENT PER BOOK G OF AGREEMENTS AT PAGE 279. SAID EASEMENT IS GRAPHICALLY DEPICTED (EASEMENT LOCATION IS APPROXIMATE AND WIDTH IS UNKNOWN) ON MAP OF DIVISION INTO LARGE PARCELS LDA 07-035 FOR EDGEWOOD COMPANIES, FILED FOR RECORD JUNE 15, 2009 AS DOCUMENT NO. 745140 IN THE OFFICE OF THE DOUGLAS COUNTY RECORDER.
7. UTILITY LOCATIONS SHOWN HEREON ARE BASED ON SURFACE OBSERVATIONS MADE AT THE TIME OF THE FIELD SURVEY. A UTILITY LOCATE SERVICE MUST BE USED PRIOR TO ANY POTHOLING OR EXCAVATION TO DETERMINE THE LOCATIONS OF ANY EXISTING SUBSURFACE UTILITIES.
8. BUILDING SETBACKS SHOWN HEREON ARE PER DOUGLAS COUNTY DEVELOPMENT CODE.

PROPOSED PARCEL AREAS

LOT #	AREA (S.F.)	AREA (ACRES)
1	21,780.0	0.50
2	148,564.1	3.41

LEGEND

- FOUND 5/8" REBAR & CAP, PLS 11172
- FOUND 5/8" REBAR, NO ID
- SET 5/8" REBAR & CAP, PLS 19734
- COMM BOX
- FIRE HYDRANT
- GUY ANCHOR
- POWER BOX
- SANITARY SEWER MANHOLE
- UTILITY BOX
- UTILITY POLE
- UTILITY RISER
- WATER VALVE
- ADJOINING LOT LINE
- BOUNDARY LINE
- BUILDING
- CONCRETE
- DIRT ROAD
- EXISTING EASEMENT
- FENCE LINE
- MAJOR CONTOUR LINE
- MINOR CONTOUR LINE
- NEW/PROPOSED EASEMENT
- OVERHEAD POWER LINE
- RIGHT OF WAY LINE
- TOP OF EXISTING DITCH
- SANITARY SEWER LINE
- STORM DRAIN LINE
- WATER LINE

UTILITY PROVIDERS

WATER:
DOUGLAS COUNTY PUBLIC WORKS
1120 AIRPORT ROAD, BUILDING F-2
MINDEN, NV 89423
775-783-6480

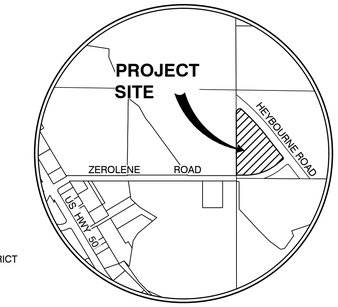
SEWER:
MINDEN GARDNERVILLE SANITATION DISTRICT
1790 US HWY. 395 N.
MINDEN, NV 89423
775-782-3546

POWER:
NV ENERGY
6226 WEST SAHARA AVENUE
LAS VEGAS, NV 89520
775-834-4444

GAS:
SOUTHWEST GAS
400 EAGLE STATION LANE
P.O. BOX 1190
CARSON CITY, NV 89520
775-882-2126

COMMUNICATIONS:
CHARTER COMMUNICATIONS
1338 CENTERVILLE LANE
GARDNERVILLE, NV 89410
887-824-9138

FRONTIER COMMUNICATIONS
1520 CHURCH STREET
GARDNERVILLE, NV 89410
775-782-0969



VICINITY MAP

NO SCALE

PROJECT SUMMARY

SURVEYOR/ENGINEER
TODD ENKE
RESOURCE CONCEPTS INC.
340 NORTH MINNESOTA STREET
CARSON CITY, NV 89703
775-883-1600

A.P.N. 1320-32-501-021 3.91± ACRES

OWNER
DAVID PARK
PARK RANCH HOLDINGS LLC
1300 BUCKEYE ROAD
MINDEN, NV 89423
775-782-7275

APPLICANT
JD FRISBY
TOWN OF MINDEN
1604 ESMERALDA AVENUE
MINDEN, NV 89423
775-782-5976

PARCEL ADDRESS: INTERSECTION OF HEYBOURNE ROAD & ZEROLENE ROAD

PARCEL AREA: 3.91± ACRES

ROADWAY: N/A

PROPOSED TOTAL NUMBER OF PARCELS: 2

PROPOSED TOTAL NUMBER OF RESIDENTIAL PARCELS: 0

SECTION/TOWNSHIP/RANGE: S32/T13N/R20E

CURRENT ZONING: A-19

PROPOSED ZONING: PF AND A-19

BUILDING SETBACK REQUIREMENTS (A-19):

FRONT YARD	30 FEET
REAR YARD	30 FEET
SIDE YARD	20 FEET
SIDE YARD STREET SIDE	20 FEET

BUILDING SETBACK REQUIREMENTS (PF):

FRONT YARD	0 FEET
REAR YARD	15 FEET*
SIDE YARD	15 FEET*
SIDE YARD STREET SIDE	15 FEET

*SIDE AND REAR YARD SETBACKS SHALL BE A MINIMUM OF 15 FEET ADJACENT TO A SINGLE FAMILY RESIDENTIAL DISTRICT. (DOUGLAS COUNTY CODE 20.658.010)

CURRENT MASTER PLAN: AGRICULTURAL

PROPOSED MASTER PLAN: RECEIVING AREA

CURRENT LAND USE: AGRICULTURAL

PROPOSED LAND USE: PUBLIC FACILITIES AND AGRICULTURAL

FLOOD ZONE: 'UNSHADED X' AND 'X' FIRM MAP 32005C0234H

PROFESSIONAL LAND SURVEYOR STATE OF NEVADA
TODD ENKE
No.19734
EXPIRES 12/31/20

REVISION	DATE

0 40 80
SCALE:1"=40'

TOWN OF MINDEN

TENTATIVE PARCEL MAP
A.P.N. 1320-32-501-021

RCI
Resource Concepts Inc.

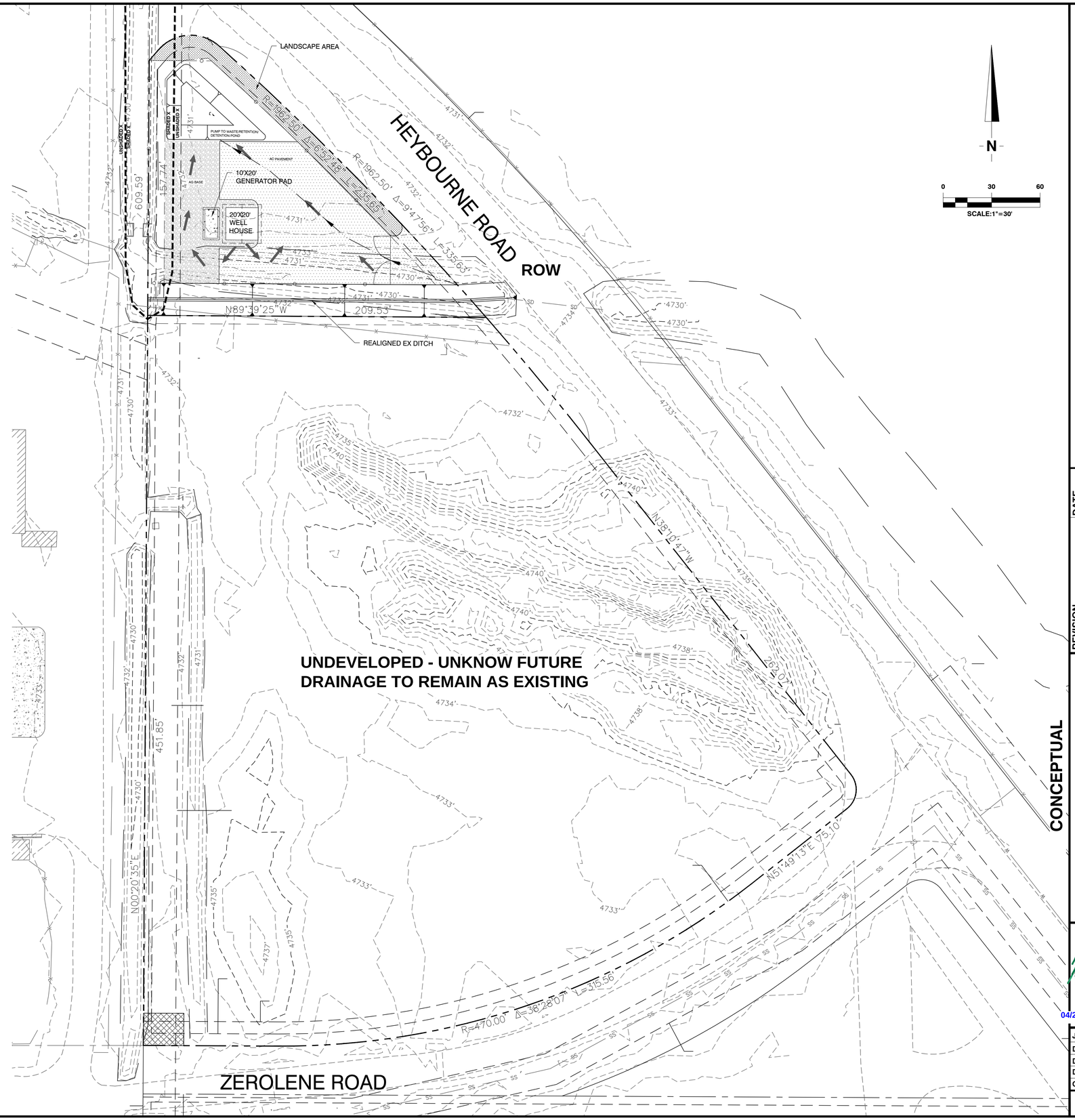
Engineering • Surveying • Water Rights
Resources • Environmental • Services
www.rci-nv.com

Carson City
340 N. Minnesota St. Carson City, NV 89703-4152
775-883-1600

Lake Tahoe
276 Kingsbury Grade, Ste. 206
Stateline, NV 89449
775-588-7500

JOB NO.:	20-003
DATE:	04-16-2020
DESIGNED:	
DRAWN :	JTS
CHECKED:	TAE

SHEET 1 OF 1



Engineering • Surveying • Water Rights
Resources • Environmental Services
www.rci-nv.com

Carson City
340 N. Minnesota St.
Carson City, NV 89703-4152
775-883-1600

Lake Tahoe
276 Kingsbury Grade, Ste. 206
Stateline, NV 89449
775-588-7500

Resource Concepts Inc.

DATE	REVISION

CONCEPTUAL

FUTURE GRADING AND DRAINAGE

TOWN OF MINDEN WELL

REGISTERED PROFESSIONAL ENGINEER
KEITH R SHAFFER
EXP. 06/30/20
CIVIL
STATE OF NEVADA
No. 12106
04/20/20

JOB NO.:	20-003.4
DATE:	04-17-2020
DESIGNED:	DMH
DRAWN :	DMH
CHECKED:	KRS

1 OF 1

April 20, 2020

Conceptual Drainage Study

PARK RANCH HOLDINGS, LLC

Tentative Parcel Map
APN: 1320-32-501-021
Douglas County, Nevada

Prepared For:

Park Ranch Holdings LLC
1300 Buckey Rd
Minden, Nevada 89423

Prepared By:

Resource Concepts, Inc.
340 N. Minnesota St.
Carson City, Nevada 89703

www.rci-nv.com

PROFESSIONAL ENGINEER - STATE OF NEVADA
KEITH R SHAFFER
Exp: 06-30-20
CIVIL
No. 12106

04/20/20

April 20, 2020

Conceptual Drainage Study

PARK RANCH HOLDINGS, LLC

Tentative Parcel Map
APN: 1320-32-501-021
Douglas County, Nevada

(RCI #20-003.4)

Prepared For:

Park Ranch Holdings LLC
1300 Buckey Rd
Minden, Nevada 89423

Prepared By:

Resource Concepts, Inc.
340 N. Minnesota St.
Carson City, Nevada 89703
Office: (775) 883-1600
Fax: (775) 883-1656
www.rci-nv.com

TABLE OF CONTENTS

PAGE

INTRODUCTION **1**

General *1*
Description of Project *1*
Existing Site Conditions *1*

EXISTING AND PROPOSED HYDROLOGY **2**

Existing and Proposed Drainage Boundaries *2*
Design Storm and 100-year Return Period Storm Flow Calculations *3*
Existing Drainage Problems & Floodplain Impacts *4*
Impacts to Existing Irrigation Facilities *4*

PROPOSED DRAINAGE FACILITIES **4**

Flow Routing *4*
Detention Requirements *4*
Floodplain Modifications *4*

CONCLUSION **5**

APPENDICES

Calculations & Mapping

A. *Vicinity Map*
B. *Peak Flow & Storage – Rational Method*
C. *NOAA Atlas 14 – Precipitation & Intensities*
D. *FEMA Floodplain Map*
E. *Pre/Post Development Drainage Maps*
F. *NRCS Soil Resource Report*

INTRODUCTION

General

This Conceptual Drainage Study is prepared for Park Ranch Holdings LLC, owners of the subject 3.91-acre parcel (APN 1320-32-501-021), in support of a Tentative Parcel Map application to divide the subject parcel into two separate parcels. The purpose of this study is to analyze site drainage and ensure existing off-site run-off is not impeded by the future well house on the proposed 0.50-acre parcel. This analysis considers the 2-year, 10-year, 25-year, and 100-year storm events. A comparison of pre- versus post-development flows was conducted to size the future detention pond on the 0.50-acre parcel. Future parcel development is estimated, and a small on-site detention basin will be incorporated when the future development is proposed for the Town of Minden well pumphouse. The remaining parcel has no plans for development and will continue to drain as it historically has.

Description of Project

This project is located north of Zerolene Road and west of the future Heybourne Road extension, Minden, Douglas County, Nevada. The project includes dividing the existing 3.91-acre parcel into one 0.50-acre parcels and one 3.41-acre parcel.

The resulting 3.41-acre parcel will most likely be used for single-family residential development; the 0.50-acre parcel will be provided to the Town of Minden for a future well site. No improvements are proposed with the tentative or final parcel maps. The Town of Minden intends to construct a community well and develop the site with a standard pumphouse, generator, compacted gravel turn around, landscaping where required, and a detention pond/pump-to-waste pond on the north end to mitigate any runoff generated by development. As part of this Conceptual Drainage Study, a future impervious area has been assumed for the 0.50-acre parcel only in order to calculate the future increase in stormwater runoff and associated detention basin. A separate conceptual and technical study will need to be completed for the 3.41-acre parcel since there are no plans to develop it at this time. See Appendix A for project location.

Existing Site Conditions

The existing site is vacant land, with only unimproved dirt trails that cut across the property. There is an existing residence on the parcel to the west (APN 1320-29-000-014), to the north

and east the parcel is bordered by the gravel Heybourne Road and agricultural fields. Zerolene Road boarders the existing 3.91-acre parcel to the south. The topography in the area generally slopes to the northwest at proximately 1%. There are some existing berms on the south edge of the proposed 0.50-acre parcel most likely from the construction of the existing ditches that border the south and west sides of this proposed parcel.

Natural drainage from the subject 0.50-acre parcel generally discharges to the north and west or absorbs into the ground. The existing Heybourne Road to the north and east and the existing ditches to the south and west hydraulically isolate the proposed 0.50-acre parcel from any offsite flows.

Site soils of the 0.50-acre parcel consist of Hussman silty clay loam (6315), 0-2% slopes, which is comprised of clay, with a Hydrologic Soil Group D designation. The frequency of flooding is rare and there is no frequency of ponding.

Site soils for the remainder 3.41-acre parcel consist mostly of Hussman silty clay loam (6315), 0-2% slopes, which is comprised of clay with Hydrologic Soil Group D designation and Hussman clay, 0-2% slopes, which is comprised of clay, with a Hydrologic Soil Group D designation. The frequency of flooding is rare and there is no frequency of ponding (Appendix F).

EXISTING AND PROPOSED HYDROLOGY

Existing and Proposed Drainage Boundaries

The existing project site is 3.91-acres in size. Since the proposed parcels are being created from this parcel, there is no change to the existing drainage boundary. The existing site is hydraulically isolated from offsite flows by existing ditches, Zerolene Road to the south and Heybourne Road to the east and north. A portion of the proposed 0.50-acre parcel on the west property line where the existing ditch is located is in a Shaded X flood zone. The rest of the existing 3.91-acre parcel is in Un-Shaded X flood zone (Appendix E).

The proposed 0.50-acre area will drain toward a proposed detention basin/pump-to-waste pond which will have an engineered outlet discharging to the existing ditch to the west. The runoff will continue in this ditch to its historic discharge point. Refer to the attached Site Drainage Map.

For the purpose of this report it was assumed that 0.50-acre well site would have 11,000 sf of impervious area when developed (approximately 0.25-acres). Actual development may vary from this assumption. Therefore, the future individual detention ponds should be adjusted accordingly if impervious cover is greater than that assumed, when this lot is developed in the future and actual impervious areas are known.

Design Storm and 100-year Return Period Storm Flow Calculations

Peak flow and storage calculations for existing conditions and proposed improvements were determined using the Rational Method procedure. Precipitation depths and rainfall intensities specific to the project area, based on the Time of Concentration, were derived from NOAA Atlas 14 (Appendix C). Once intensities were determined, peak flows for the 2-year, 10-year, 25-year, and 100-year storm events were determined. The basic equation for the Rational Method is:

$$Q = C * Cf * I * A$$

Where,

Q = Peak Rate of Flow
C = Run-off Coefficient
Cf = Frequency Factor
I = Rainfall Intensity
A = Contributing Drainage Area

The run-off coefficients for this project are surface dependent and were selected based on standard values, consisting of 0.35 for native undisturbed areas and 0.90 for the AC driveway, pumphouse, and gravel areas and assumed 11,000 sf impervious area. These factors were adjusted prior to use in the Rational Method equation to generate a weighted factor that accounted for each surface type. Once adjusted values were obtained and peak flows and volumes were determined. Refer to Appendix B for the Rational Method Calculations.

Table 1: Pre and Post Developed flow for the Proposed 0.5-acre Parcel

Rational Method - Pre vs. Post Development				
Storm Event (yrs)	Peak Flow Pre-Dev (cfs)	Peak Flow Post-Dev Area A (cfs)	Peak Flow Increase (cfs)	Volume Increase On-Site (ft^3)
2	0.02	0.41	0.39	56.5
5	0.02	0.54	0.52	75.5
25	0.04	0.90	0.87	124.7
100	0.05	1.33	1.28	184.0

With the assumed impervious area for the lot, it was determined that the on-site detention pond will need to detain approximately 125 CF. The proposed detention pond on the lot will be approximately 3' deep with 3:1 side slopes. This will provide 1550 CF of storage with 1' of free board which is more than the volume required for the 25-yr storm event.

Existing Drainage Problems & Floodplain Impacts

There are no known existing drainage problems in this area. The existing west ditch on proposed site is mostly located in a Flood Hazard Zone X-Shaded, which is in the 0.2% Annual Chance Flood Hazard with an average depth less than 1'; rest of the property is in X-Unshaded, which is outside the 100-yr flood zone. The future building pads will have an elevation at least 1' above the pre-developed highest adjacent grade. The project area is within the FEMA Flood Insurance Rate Map 32005C0234H. Refer to Appendix D for the Flood Map FIRMette.

Impacts to Existing Irrigation Facilities

The existing irrigation ditch on the south property line of the proposed 0.50-acre parcel will be realigned to be parallel to the proposed property line and maintain its existing capacity. No other modifications to existing systems will be impacted by the proposed development, or future parcel improvements.

PROPOSED DRAINAGE FACILITIES

Flow Routing

Since the site is hydrologically isolated offsite flows do not impact the site the existing south ditch on the proposed 0.50-acre parcel will be slightly realigned to be parallel to the proposed property line. The future well building and generator pad will be raised to allow water to drain away from the structures and be directed to a proposed detention basin to the north.

Detention Requirements

Because increased peak flows and volumes as a result of the future improvements on-site detention is proposed with the future development. This onsite detention pond on the north side of the property will mitigate any increase in flow to predeveloped levels. On-site detention shall comply with Section 6.1.5 of the Douglas County Development Code and Design Criteria.

Floodplain Modifications

There are no floodplain modifications proposed as a result of this project. This project area is mostly located in a X-Unshaded flood hazard zone with a small portion of the existing ditch to the west in X-shaded flood zone. As such, the proposed improvements comply with known FEMA regulations. Since any future buildings will be outside of a flood zone they are not

regulated by the requirements of Chapter 20.50 Floodplain Ordinance for Standards of Construction. Accordingly, the proposed improvements comply with the Douglas County Development Code and Design Criteria.

CONCLUSION

This project consists of the dividing a 3.91-acre parcel into 2 individual parcels for future development of a community well on the 0.50-acre parcel and leaving the remaining 3.41-acre parcel undeveloped. This project will comply with all State and local drainage codes, meeting the requirements of the Douglas County Development Code and Design Criteria. The project is mostly located in a X-Unshaded flood hazard zone with the western existing ditch located in an X-Shaded flood hazard zone. It is depicted in the Flood Insurance Rate Map (FIRM) for Douglas County, Map Number 32005C0234H, dated June 15, 2016.

There are no anticipated adverse impacts to downstream properties as a result of this proposed development, as peak flow discharges are negligible and future development will include on-site detention for any future improvements to these new parcels.

APPENDICES

CALCULATIONS & MAPPING

A. Vicinity Map

B. Peak Flow & Storage – Rational Method

C. NOAA Atlas 14 – Precipitation & Intensities

D. FEMA Floodplain Map

E. Pre/Post Development Drainage Maps

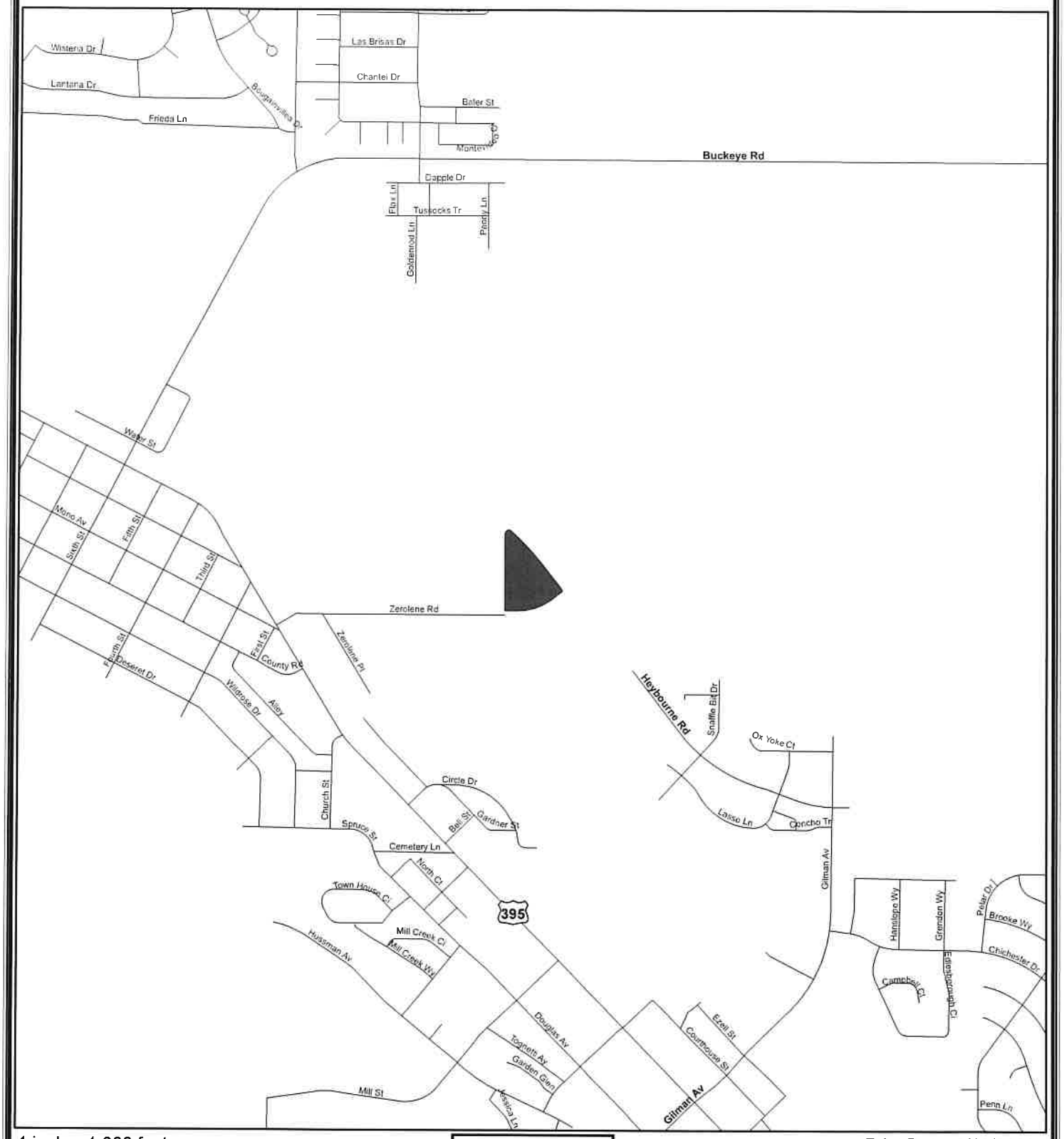
F. NRCS Soil Resource Report

Appendix A

Vicinity Map

Douglas County Vicinity Map

APN: 1320-32-501-021



1 inch = 1,000 feet

Print Date: 3/19/2020

Legend

Subject Parcel

N
W E
S

The data contained herein has been compiled on a geographic information system for the use of Douglas County. The data does not represent survey delineation and should not be construed as a replacement for the authoritative source, plat maps, deeds, resurveys, etc. No liability is assumed by Douglas County as to the sufficiency or accuracy of the data.

DOUGLAS COUNTY GIS

Appendix B

Peak Flow & Storage – Rational Method

Town of Minden - Peak Flow & Storage Calculations On-Site

Conceptual Drainage Study

Project No. 20-003.4

Time of Concentration: Peak Flow Analysis

Find: Pre- & Post-Development Peak flows & Storage volumes for the following storm events

a. 2-Year

b. 5-Year

c. 25-Year

f. 100-Year

Pre-Development

Given:

Total Property Area =	0.05	acres
Impervious Area =	0.00	acres
Remaining Area =	0.05	acres

Assumptions: Run-off coeficients are as follows:

C =	0.35	for existing disturbed and compacted conditions
C =	0.90	for impervious surfaces (asphalt & concrete)

Equations: General equations are as follows:

Rational Method:

$Q = C * I * A$

where

Q = Peak Flow (cfs)

C = Run-Off Coefficient (unitless)

I = Rainfall Intensity (in/hr)

A = Drainage Area (acres)

Intensities are obtained from the Time of Concentration, in conjunction with the National Weather Service, NOAA Atlas 14.

Time of Concentration: Peak Flow Analysis

Equations (Cont):

Time of Concentration (Tc): Sheet Flow Only

$Tc = [0.007 * (n * L)^{0.8}] / [P^{0.5} * S^{0.4}]$ (ref. NRCS Kinematic Eq.)

where

n = Manning's Roughness Coefficient (unitless)

L = Flow Length (ft)

P = 2-Yr, 24-Hr Precipitation (in)

S = Slope of Hydraulic Grade Line (ft/ft)

Time of Concentration (Tc): Shallow Concentrated or Open Channel Flow

$Tc = L / v$ (ref. NRCS TR-55)

where

L = Flow Length (ft)

v = Velocity (fps)

where

v = $16.1345 * (S)^{0.5}$ For Unpaved Areas

v = $20.3282 * (S)^{0.5}$ For Paved Areas

Solution: ***Pre-Development Conditions***

Tc = $[0.007 * (n * L)^{0.8}] / [P^{0.5} * S^{0.4}]$

$[0.007 * (0.06 * 34)^{0.8}] / [1.29^{.5} * 0.059^{.4}]$

0.03 hr (Sheet Flow)

121.75 seconds

Tc = Length (ft) / Velocity (fps)

v = $16.1345 * (0.006)^{0.5}$

1.25 fps (Unpaved)

L = 171 ft

Tc = 136.82 seconds

Tc (total) = 258.57 seconds

4.31 minutes

0.07 hours Min Tc=10min

Time of Concentration: Peak Flow Analysis

Solution (Cont): For Tc = 10.0 minutes. Intensities are as follows:

Event	2-Yr	5-Yr	25-Yr	100-Yr	
Intensity	0.91	1.21	2.00	2.95	(in/hr)

Rational Method - Pre Development					
Storm Event	Run-Off Coefficient 'C'	Rainfall Intensity ' I '	Drainage Area 'A'	Peak Flow 'Q'	Volume 'Vol' (ft^3)
2	0.35	0.91	0.05	0.02	4.1
5	0.35	1.21	0.05	0.02	5.5
25	0.35	2.00	0.05	0.04	9.1
100	0.35	2.95	0.05	0.05	13.3

Post-Development Conditions

Area A (Property)

Given:

Total Property Area =	0.50	acres
Impervious Area =	0.50	acres
Remaining Area =	0.00	acres

Assumptions: Run-off coeficients are as follows:

C = 0.35 for existing disturbed and compacted conditions

C = 0.90 for impervious surfaces (asphalt & concrete)

Tc = $[0.007 * (n * L)^{0.8}] / [P^{0.5} * S^{0.4}]$

$[0.007 * (0.016 * 30)^{0.8}] / [1.42^{5} * 0.01^{4}]$

0.02 hr (Sheet Flow)

77.82 seconds

Tc = Length (ft) / Velocity (fps)

v = $20.3282 * (0.01)^{0.5}$

2.03 fps (Unpaved)

L = 144 ft

Tc = 70.84 seconds

Tc (total) = 148.66 seconds

2.48 minutes

0.04 hours Min Tc=10min

Time of Concentration: Peak Flow Analysis

Solution (Cont):

For Tc = 10.00 min. Intensities are as follows:

Event	2-Yr	5-Yr	25-Yr	100-Yr	
Intensity	0.91	1.21	2.00	2.95	(in/hr)

Rational Method - Post Development Area A

Storm Event	Run-Off Coefficient 'C'	Rainfall Intensity 'I'	Drainage Area 'A'	Peak Flow 'Q'	Volume 'Vol' (ft^3)
2	0.90	0.91	0.50	0.41	60.6
5	0.90	1.21	0.50	0.54	80.9
25	0.90	2.00	0.50	0.90	133.8
100	0.90	2.95	0.50	1.33	197.3

Appendix C

NOAA Atlas 14 – Precipitation & Intensities

NOAA Atlas 14, Volume 1, Version 5
Location name: Gardnerville, Nevada, USA*
Latitude: 38.9525°, Longitude: -119.7528°
Elevation: 4736.85 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.080 (0.071-0.090)	0.100 (0.089-0.115)	0.133 (0.118-0.153)	0.166 (0.147-0.191)	0.218 (0.185-0.253)	0.265 (0.216-0.311)	0.323 (0.252-0.385)	0.393 (0.292-0.481)	0.499 (0.347-0.631)	0.595 (0.391-0.774)
10-min	0.121 (0.107-0.137)	0.151 (0.136-0.175)	0.201 (0.179-0.232)	0.253 (0.223-0.291)	0.333 (0.281-0.385)	0.404 (0.329-0.474)	0.492 (0.384-0.586)	0.598 (0.444-0.733)	0.760 (0.529-0.961)	0.906 (0.595-1.18)
15-min	0.150 (0.133-0.170)	0.188 (0.168-0.217)	0.250 (0.222-0.288)	0.313 (0.277-0.361)	0.412 (0.348-0.477)	0.500 (0.407-0.587)	0.610 (0.476-0.727)	0.741 (0.551-0.908)	0.942 (0.655-1.19)	1.12 (0.738-1.46)
30-min	0.202 (0.179-0.229)	0.252 (0.226-0.292)	0.337 (0.299-0.388)	0.421 (0.372-0.486)	0.555 (0.468-0.642)	0.674 (0.548-0.791)	0.822 (0.641-0.979)	0.998 (0.742-1.22)	1.27 (0.882-1.60)	1.51 (0.993-1.97)
60-min	0.250 (0.222-0.283)	0.312 (0.280-0.361)	0.416 (0.370-0.480)	0.522 (0.461-0.601)	0.687 (0.580-0.795)	0.834 (0.679-0.979)	1.02 (0.793-1.21)	1.24 (0.918-1.51)	1.57 (1.09-1.99)	1.87 (1.23-2.44)
2-hr	0.364 (0.335-0.407)	0.451 (0.410-0.502)	0.573 (0.519-0.636)	0.684 (0.616-0.760)	0.848 (0.737-0.955)	0.986 (0.839-1.13)	1.14 (0.939-1.33)	1.32 (1.04-1.56)	1.60 (1.20-2.01)	1.89 (1.36-2.46)
3-hr	0.442 (0.404-0.483)	0.549 (0.506-0.607)	0.691 (0.629-0.760)	0.797 (0.721-0.876)	0.951 (0.844-1.05)	1.07 (0.925-1.20)	1.20 (1.02-1.37)	1.37 (1.13-1.60)	1.64 (1.30-2.03)	1.91 (1.48-2.48)
6-hr	0.615 (0.561-0.674)	0.765 (0.702-0.843)	0.952 (0.863-1.04)	1.09 (0.989-1.19)	1.28 (1.14-1.41)	1.42 (1.25-1.58)	1.56 (1.34-1.76)	1.71 (1.44-1.96)	1.91 (1.56-2.24)	2.07 (1.64-2.50)
12-hr	0.812 (0.731-0.899)	1.02 (0.922-1.13)	1.29 (1.16-1.43)	1.49 (1.33-1.65)	1.77 (1.55-1.97)	1.97 (1.71-2.22)	2.18 (1.85-2.49)	2.39 (1.99-2.77)	2.66 (2.15-3.18)	2.88 (2.28-3.50)
24-hr	1.03 (0.935-1.14)	1.29 (1.17-1.42)	1.62 (1.47-1.79)	1.89 (1.71-2.08)	2.26 (2.03-2.49)	2.54 (2.28-2.81)	2.85 (2.53-3.15)	3.16 (2.79-3.51)	3.59 (3.12-4.01)	3.92 (3.37-4.41)
2-day	1.24 (1.12-1.37)	1.55 (1.40-1.72)	1.96 (1.78-2.17)	2.30 (2.07-2.54)	2.76 (2.47-3.07)	3.13 (2.78-3.48)	3.51 (3.10-3.93)	3.92 (3.42-4.41)	4.48 (3.86-5.09)	4.92 (4.19-5.64)
3-day	1.35 (1.21-1.50)	1.69 (1.52-1.89)	2.15 (1.93-2.40)	2.53 (2.26-2.81)	3.05 (2.71-3.41)	3.47 (3.06-3.89)	3.91 (3.42-4.40)	4.37 (3.78-4.95)	5.02 (4.27-5.73)	5.53 (4.65-6.37)
4-day	1.46 (1.30-1.63)	1.83 (1.64-2.06)	2.34 (2.09-2.63)	2.76 (2.45-3.09)	3.34 (2.95-3.75)	3.81 (3.34-4.29)	4.31 (3.74-4.86)	4.83 (4.14-5.48)	5.56 (4.69-6.37)	6.15 (5.11-7.10)
7-day	1.65 (1.48-1.85)	2.09 (1.86-2.34)	2.68 (2.39-3.00)	3.15 (2.80-3.52)	3.80 (3.37-4.26)	4.32 (3.80-4.85)	4.86 (4.24-5.48)	5.42 (4.68-6.15)	6.19 (5.26-7.09)	6.79 (5.70-7.85)
10-day	1.83 (1.63-2.04)	2.32 (2.07-2.59)	2.98 (2.66-3.33)	3.50 (3.12-3.90)	4.21 (3.73-4.70)	4.75 (4.18-5.32)	5.31 (4.65-5.97)	5.89 (5.10-6.65)	6.66 (5.69-7.60)	7.25 (6.13-8.34)
20-day	2.22 (1.99-2.48)	2.82 (2.52-3.14)	3.62 (3.24-4.02)	4.22 (3.77-4.69)	5.02 (4.46-5.58)	5.62 (4.97-6.26)	6.22 (5.49-6.96)	6.82 (5.96-7.66)	7.60 (6.57-8.61)	8.18 (7.01-9.34)
30-day	2.53 (2.27-2.81)	3.21 (2.88-3.57)	4.11 (3.69-4.55)	4.78 (4.29-5.28)	5.67 (5.06-6.27)	6.33 (5.62-7.02)	7.00 (6.18-7.78)	7.65 (6.71-8.54)	8.51 (7.38-9.56)	9.14 (7.87-10.4)
45-day	2.91 (2.62-3.22)	3.69 (3.33-4.07)	4.71 (4.26-5.19)	5.46 (4.92-6.01)	6.41 (5.77-7.05)	7.09 (6.37-7.81)	7.75 (6.94-8.56)	8.37 (7.48-9.28)	9.13 (8.11-10.2)	9.63 (8.53-10.8)
60-day	3.35 (3.01-3.71)	4.25 (3.83-4.72)	5.44 (4.90-6.01)	6.26 (5.64-6.92)	7.30 (6.57-8.05)	8.02 (7.21-8.87)	8.70 (7.80-9.64)	9.33 (8.34-10.4)	10.1 (8.97-11.2)	10.5 (9.38-11.8)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Back to Top

NOAA Atlas 14, Volume 1, Version 5
Location name: Gardnerville, Nevada, USA*
Latitude: 38.9525°, Longitude: -119.7528°
Elevation: 4736.85 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.960 (0.852-1.08)	1.20 (1.07-1.38)	1.60 (1.42-1.84)	1.99 (1.76-2.29)	2.62 (2.22-3.04)	3.18 (2.59-3.73)	3.88 (3.02-4.62)	4.72 (3.50-5.77)	5.99 (4.16-7.57)	7.14 (4.69-9.29)
10-min	0.726 (0.642-0.822)	0.906 (0.816-1.05)	1.21 (1.07-1.39)	1.52 (1.34-1.75)	2.00 (1.69-2.31)	2.42 (1.97-2.84)	2.95 (2.30-3.52)	3.59 (2.66-4.40)	4.56 (3.17-5.77)	5.44 (3.57-7.07)
15-min	0.600 (0.532-0.680)	0.752 (0.672-0.868)	1.00 (0.888-1.15)	1.25 (1.11-1.44)	1.65 (1.39-1.91)	2.00 (1.63-2.35)	2.44 (1.90-2.91)	2.96 (2.20-3.63)	3.77 (2.62-4.76)	4.50 (2.95-5.84)
30-min	0.404 (0.358-0.458)	0.504 (0.452-0.584)	0.674 (0.598-0.776)	0.842 (0.744-0.972)	1.11 (0.936-1.28)	1.35 (1.10-1.58)	1.64 (1.28-1.96)	2.00 (1.48-2.45)	2.54 (1.76-3.21)	3.03 (1.99-3.93)
60-min	0.250 (0.222-0.283)	0.312 (0.280-0.361)	0.416 (0.370-0.480)	0.522 (0.461-0.601)	0.687 (0.580-0.795)	0.834 (0.679-0.979)	1.02 (0.793-1.21)	1.24 (0.918-1.51)	1.57 (1.09-1.99)	1.87 (1.23-2.44)
2-hr	0.182 (0.168-0.204)	0.226 (0.205-0.251)	0.286 (0.260-0.318)	0.342 (0.308-0.380)	0.424 (0.368-0.478)	0.493 (0.420-0.564)	0.571 (0.470-0.664)	0.660 (0.522-0.782)	0.800 (0.600-1.00)	0.946 (0.682-1.23)
3-hr	0.147 (0.135-0.161)	0.183 (0.168-0.202)	0.230 (0.209-0.253)	0.265 (0.240-0.292)	0.317 (0.281-0.351)	0.355 (0.308-0.400)	0.399 (0.339-0.455)	0.456 (0.377-0.532)	0.545 (0.434-0.674)	0.637 (0.492-0.827)
6-hr	0.103 (0.094-0.113)	0.128 (0.117-0.141)	0.159 (0.144-0.174)	0.183 (0.165-0.199)	0.214 (0.191-0.235)	0.237 (0.208-0.263)	0.260 (0.224-0.294)	0.285 (0.240-0.328)	0.319 (0.261-0.374)	0.346 (0.274-0.418)
12-hr	0.067 (0.061-0.075)	0.085 (0.077-0.094)	0.107 (0.096-0.119)	0.124 (0.110-0.137)	0.146 (0.129-0.164)	0.163 (0.142-0.185)	0.181 (0.154-0.207)	0.198 (0.165-0.230)	0.221 (0.178-0.264)	0.239 (0.189-0.290)
24-hr	0.043 (0.039-0.047)	0.054 (0.049-0.059)	0.067 (0.061-0.075)	0.079 (0.071-0.087)	0.094 (0.085-0.104)	0.106 (0.095-0.117)	0.119 (0.106-0.131)	0.132 (0.116-0.146)	0.149 (0.130-0.167)	0.163 (0.141-0.184)
2-day	0.026 (0.023-0.029)	0.032 (0.029-0.036)	0.041 (0.037-0.045)	0.048 (0.043-0.053)	0.058 (0.051-0.064)	0.065 (0.058-0.073)	0.073 (0.065-0.082)	0.082 (0.071-0.092)	0.093 (0.080-0.106)	0.102 (0.087-0.117)
3-day	0.019 (0.017-0.021)	0.023 (0.021-0.026)	0.030 (0.027-0.033)	0.035 (0.031-0.039)	0.042 (0.038-0.047)	0.048 (0.043-0.054)	0.054 (0.047-0.061)	0.061 (0.053-0.069)	0.070 (0.059-0.080)	0.077 (0.065-0.088)
4-day	0.015 (0.014-0.017)	0.019 (0.017-0.021)	0.024 (0.022-0.027)	0.029 (0.026-0.032)	0.035 (0.031-0.039)	0.040 (0.035-0.045)	0.045 (0.039-0.051)	0.050 (0.043-0.057)	0.058 (0.049-0.066)	0.064 (0.053-0.074)
7-day	0.010 (0.009-0.011)	0.012 (0.011-0.014)	0.016 (0.014-0.018)	0.019 (0.017-0.021)	0.023 (0.020-0.025)	0.026 (0.023-0.029)	0.029 (0.025-0.033)	0.032 (0.028-0.037)	0.037 (0.031-0.042)	0.040 (0.034-0.047)
10-day	0.008 (0.007-0.009)	0.010 (0.009-0.011)	0.012 (0.011-0.014)	0.015 (0.013-0.016)	0.018 (0.016-0.020)	0.020 (0.017-0.022)	0.022 (0.019-0.025)	0.025 (0.021-0.028)	0.028 (0.024-0.032)	0.030 (0.026-0.035)
20-day	0.005 (0.004-0.005)	0.006 (0.005-0.007)	0.008 (0.007-0.008)	0.009 (0.008-0.010)	0.010 (0.009-0.012)	0.012 (0.010-0.013)	0.013 (0.011-0.015)	0.014 (0.012-0.016)	0.016 (0.014-0.018)	0.017 (0.015-0.019)
30-day	0.004 (0.003-0.004)	0.004 (0.004-0.005)	0.006 (0.005-0.006)	0.007 (0.006-0.007)	0.008 (0.007-0.009)	0.009 (0.008-0.010)	0.010 (0.009-0.011)	0.011 (0.009-0.012)	0.012 (0.010-0.013)	0.013 (0.011-0.014)
45-day	0.003 (0.002-0.003)	0.003 (0.003-0.004)	0.004 (0.004-0.005)	0.005 (0.005-0.006)	0.006 (0.005-0.007)	0.007 (0.006-0.007)	0.007 (0.006-0.008)	0.008 (0.007-0.009)	0.008 (0.008-0.009)	0.009 (0.008-0.010)
60-day	0.002 (0.002-0.003)	0.003 (0.003-0.003)	0.004 (0.003-0.004)	0.004 (0.004-0.005)	0.005 (0.005-0.006)	0.006 (0.005-0.006)	0.006 (0.005-0.007)	0.006 (0.006-0.007)	0.007 (0.006-0.008)	0.007 (0.007-0.008)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

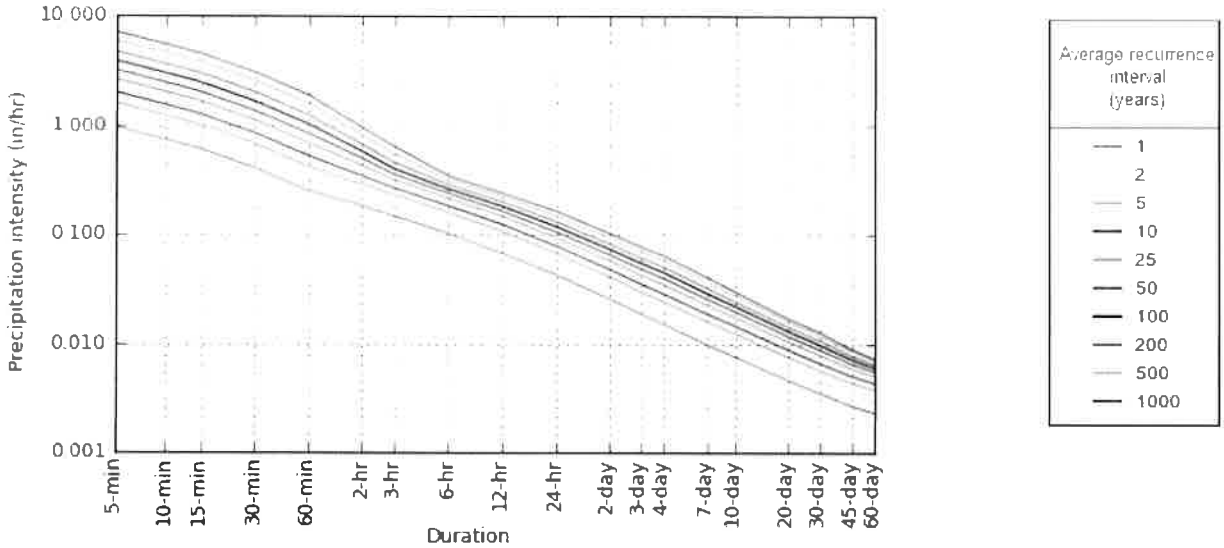
Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

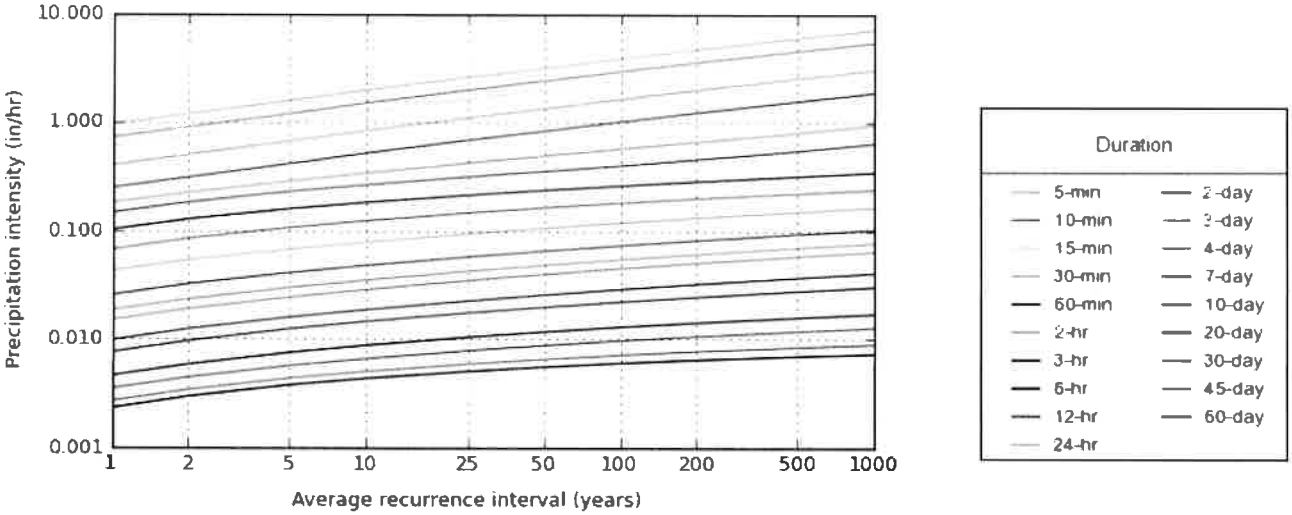
Please refer to NOAA Atlas 14 document for more information.

Back to Top

PF graphical

PDS-based intensity-duration-frequency (IDF) curves
Latitude: 38.9525°, Longitude: -119.7528°





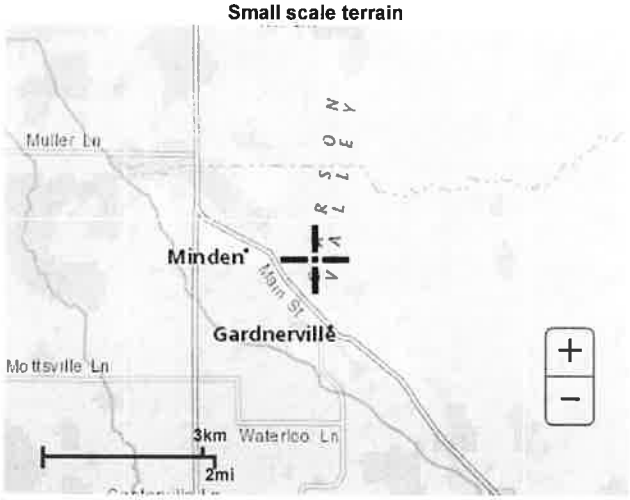
NOAA Atlas 14, Volume 1, Version 5

Created (GMT): Thu Apr 16 22:41:44 2020

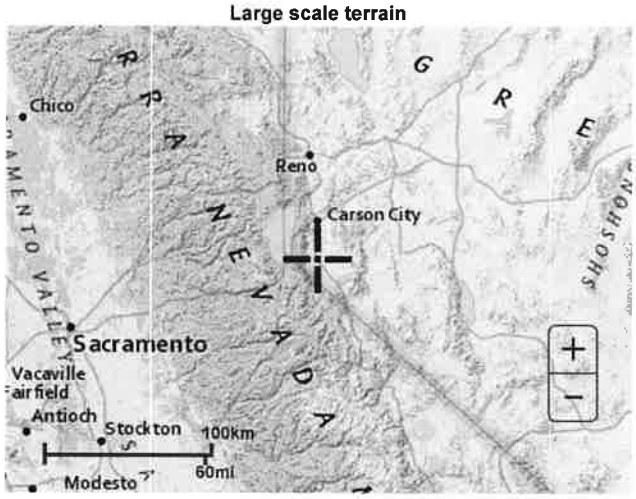
Back to Top

Maps & aerials

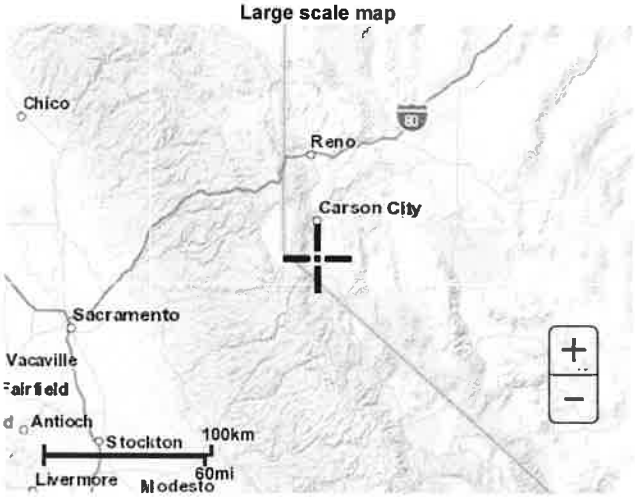
Small scale terrain



Large scale terrain



Large scale map

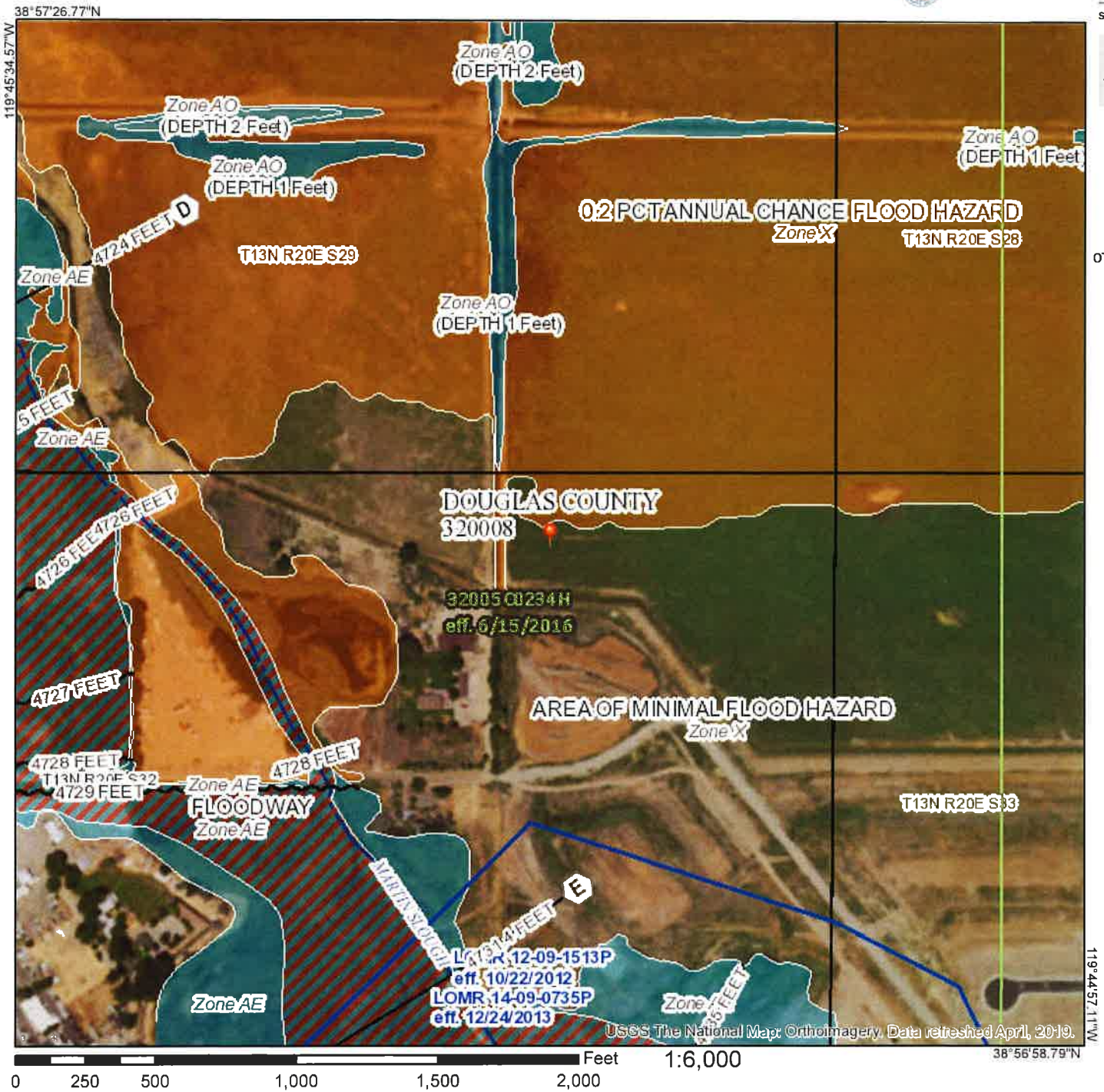


Appendix D

FEMA Floodplain Map

National Flood Hazard Layer FIRMette

FEMA



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

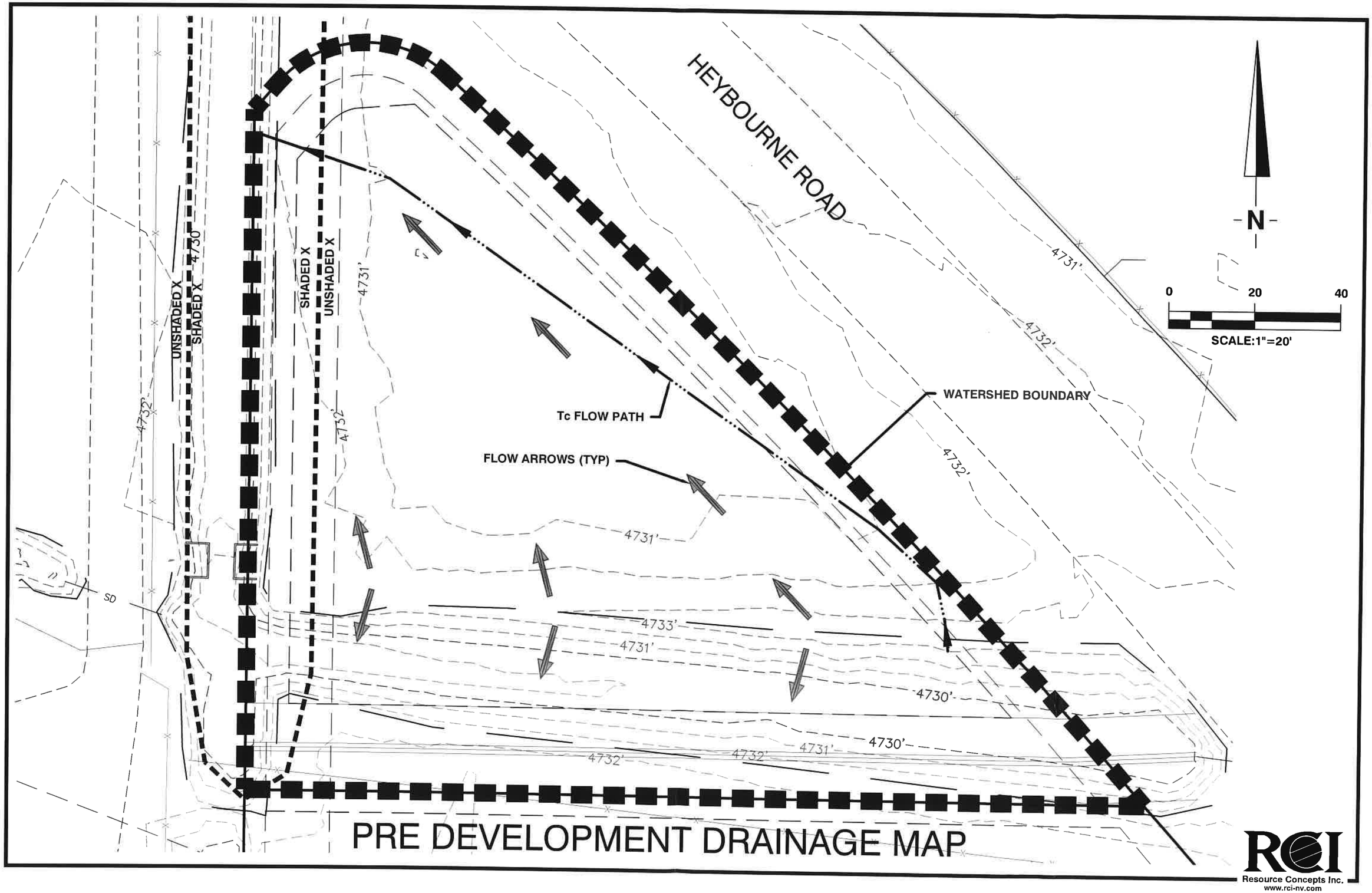
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

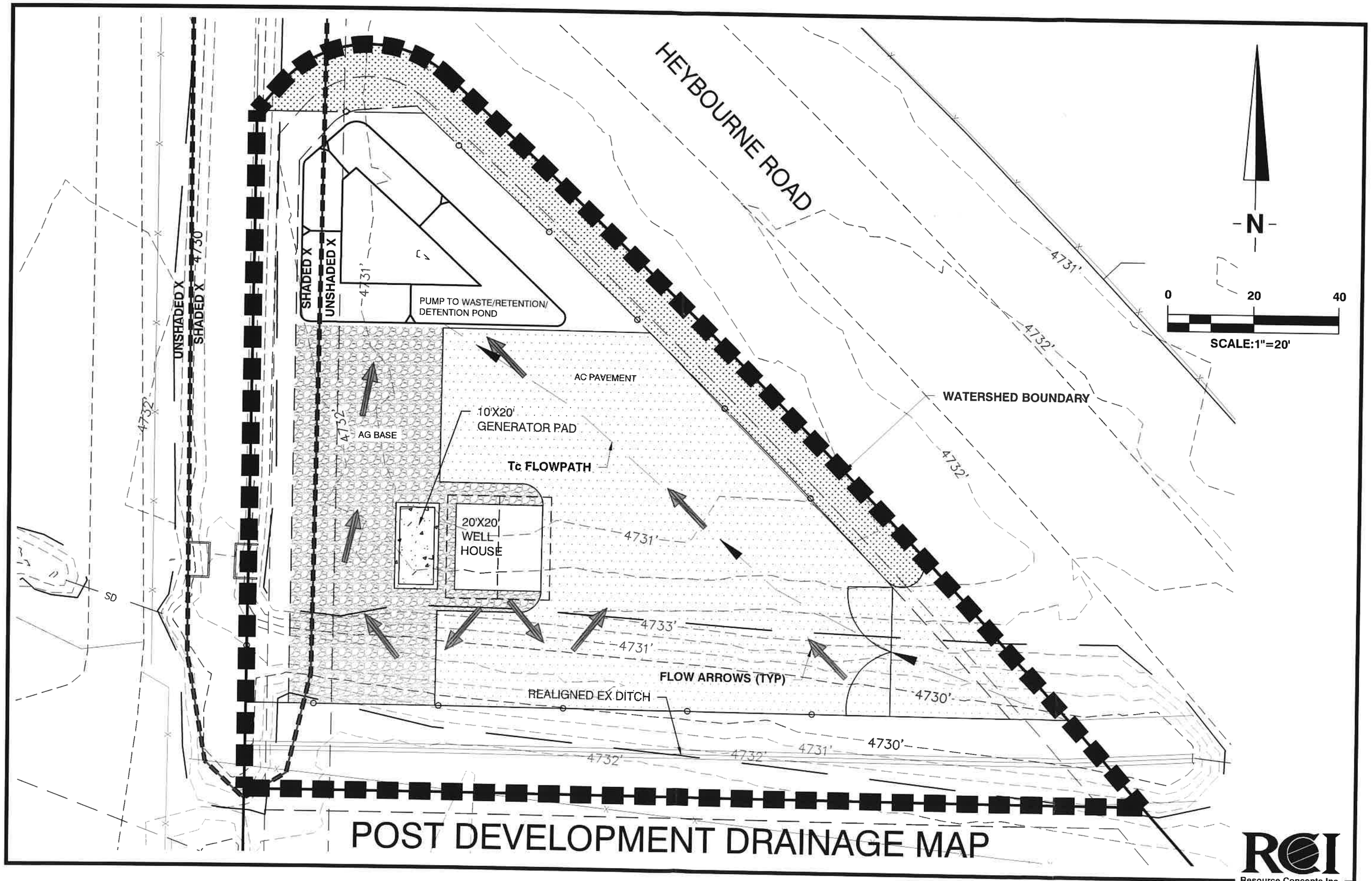
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/16/2020 at 6:49:39 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Appendix E

Pre/Post Development Drainage Maps


HEYBOURNE ROAD
N
0
20
40
SCALE:1"=20'
WATERSHED BOUNDARY
Tc FLOW PATH
FLOW ARROWS (TYP)
UNSHADED X
SHADED X
SHADED X
UNSHADED X
4730'
4731'
4732'
4733'
SD
PRE DEVELOPMENT DRAINAGE MAP
RCI
Resource Concepts Inc.
www.rci-nv.com



POST DEVELOPMENT DRAINAGE MAP

RCI
Resource Concepts Inc.
www.rci-nv.com

Appendix F

NRCS Soil Resource Report

United States Department of Agriculture

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Douglas County Area, Nevada

Minden Well

April 16, 2020

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

Preface..... 2
Soil Map..... 5
Soil Map.....6
Legend.....7
Map Unit Legend..... 8
Map Unit Descriptions..... 8
Douglas County Area, Nevada..... 10
6163—East Fork clay loam, 0 to 2 percent slopes.....10
6313—Hussman clay, 0 to 2 percent slopes..... 11
6315—Hussman silty clay loam, 0 to 2 percent slopes.....12
Soil Information for All Uses.....15
Soil Reports.....15
Soil Erosion.....15
Conservation Planning..... 15
Water Features..... 17
Hydrologic Soil Group and Surface Runoff..... 17
References.....19

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:1,250 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Douglas County Area, Nevada
Survey Area Data: Version 12, Sep 16, 2019

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 26, 2015—Oct 26, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
6163	East Fork clay loam, 0 to 2 percent slopes	0.0	0.4%
6313	Hussman clay, 0 to 2 percent slopes	0.8	19.3%
6315	Hussman silty clay loam, 0 to 2 percent slopes	3.2	80.3%
Totals for Area of Interest		**4.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or

landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Douglas County Area, Nevada

6163—East Fork clay loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: pmrr
Elevation: 4,640 to 4,740 feet
Mean annual precipitation: 8 to 10 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 90 to 110 days
Farmland classification: Prime farmland if irrigated and drained

Map Unit Composition

East fork and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of East Fork

Setting

Landform: Stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from mixed

Typical profile

Ap - 0 to 6 inches: clay loam
A - 6 to 11 inches: clay loam
C - 11 to 60 inches: clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 5.0
Available water storage in profile: High (about 10.5 inches)

Interpretive groups

Land capability classification (irrigated): 2w
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: C
Ecological site: MOIST FLOODPLAIN (R026XY001NV)
Hydric soil rating: No

Minor Components

Henningsen

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: DRY FLOODPLAIN 8-10 P.Z. (R026XY012NV)
Hydric soil rating: No

Hussman

Percent of map unit: 5 percent
Landform: Stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: DRY FLOODPLAIN 8-10 P.Z. (R026XY012NV)
Hydric soil rating: No

6313—Hussman clay, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: pms4
Elevation: 4,640 to 4,770 feet
Mean annual precipitation: 8 to 10 inches
Mean annual air temperature: 46 to 50 degrees F
Frost-free period: 90 to 110 days
Farmland classification: Prime farmland if irrigated and drained

Map Unit Composition

Hussman and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hussman

Setting

Landform: Stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from mixed

Typical profile

A - 0 to 12 inches: clay
Bk - 12 to 42 inches: clay
C - 42 to 60 inches: clay

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained

Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 30 to 48 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Very slightly saline to slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 13.0
Available water storage in profile: High (about 10.5 inches)

Interpretive groups
Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: D
Ecological site: DRY FLOODPLAIN 8-10 P.Z. (R026XY012NV)
Hydric soil rating: No

Minor Components

Milkiway
Percent of map unit: 5 percent
Landform: Stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: WET MEADOW 10-14 P.Z. (R026XY003NV)
Hydric soil rating: No

East fork
Percent of map unit: 5 percent
Landform: Stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: MOIST FLOODPLAIN (R026XY001NV)
Hydric soil rating: No

6315—Hussman silty clay loam, 0 to 2 percent slopes

Map Unit Setting
National map unit symbol: pms6
Elevation: 4,650 to 4,800 feet
Mean annual precipitation: 8 to 10 inches
Mean annual air temperature: 46 to 52 degrees F
Frost-free period: 90 to 120 days
Farmland classification: Not prime farmland

Map Unit Composition
Hussman and similar soils: 85 percent
Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hussman

Setting

Landform: Stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from mixed

Typical profile

A - 0 to 12 inches: silty clay loam
Bk - 12 to 42 inches: clay
C - 42 to 60 inches: clay

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Somewhat poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 30 to 48 inches
Frequency of flooding: Rare
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Slightly saline to moderately saline (4.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 30.0
Available water storage in profile: High (about 10.5 inches)

Interpretive groups

Land capability classification (irrigated): 3w
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: D
Ecological site: DRY FLOODPLAIN 8-10 P.Z. (R026XY012NV)
Hydric soil rating: No

Minor Components

Truckee

Percent of map unit: 5 percent
Landform: Stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: WET SODIC BOTTOM (R026XY002NV)
Hydric soil rating: No

East fork

Percent of map unit: 5 percent
Landform: Stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: MOIST FLOODPLAIN (R026XY001NV)
Hydric soil rating: No

Nofet

Percent of map unit: 5 percent

Landform: Stream terraces
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: DRY FLOODPLAIN 8-10 P.Z. (R026XY012NV)
Hydric soil rating: No

Soil Information for All Uses

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Soil Erosion

This folder contains a collection of tabular reports that present soil erosion factors and groupings. The reports (tables) include all selected map units and components for each map unit. Soil erosion factors are soil properties and interpretations used in evaluating the soil for potential erosion. Example soil erosion factors can include K factor for the whole soil or on a rock free basis, T factor, wind erodibility group and wind erodibility index.

Conservation Planning

This report provides those soil attributes for the conservation plan for the map units in the selected area. The report includes the map unit symbol, the component name, and the percent of the component in the map unit. It provides the soil description along with the slope, runoff, T Factor, WEI, WEG, Erosion class, Drainage class, Land Capability Classification, and the engineering Hydrologic Group and the erosion factors Kf, the representative percentage of fragments, sand, silt, and clay in the mineral surface horizon. Missing surface data may indicate the presence of an organic surface layer. Further information on these factors can be found in the National Soil Survey Handbook section 618 found at the url http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/ref/?cid=nrcs142p2_054223#00 .

Soil properties and interpretations for conservation planning. The surface mineral horizon properties are displayed. Organic surface horizons are not displayed.

Conservation Planning–Douglas County Area, Nevada																	
Map symbol and soil name	Pct. of map unit	Slope RV	USLE Slope Length ft.	Runoff	T Factor	WEI	WEG	Erosion	Drainage	NIRR LCC	Hydrologic Group	Surface					
												Depths in.	Kf Factor	Frag-ments RV	Sand RV	Silt RV	Clay RV
6163—East Fork clay loam, 0 to 2 percent slopes																	
East Fork	90	1.0	—	Medium	5	48	6	—	Somewhat poorly drained	6w	C	0 - 5	.28	—	35	33	31
6313—Hussman clay, 0 to 2 percent slopes																	
Hussman	90	1.0	—	High	5	86	4	—	Somewhat poorly drained	6w	D	0 - 11	.24	—	26	28	45
6315—Hussman silty clay loam, 0 to 2 percent slopes																	
Hussman	85	1.0	—	High	5	48	6	—	Somewhat poorly drained	6w	D	0 - 11	.37	—	16	48	35

Water Features

This folder contains tabular reports that present soil hydrology information. The reports (tables) include all selected map units and components for each map unit. Water Features include ponding frequency, flooding frequency, and depth to water table.

Hydrologic Soil Group and Surface Runoff

This table gives estimates of various soil water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. The concept indicates relative runoff for very specific conditions. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

Report—Hydrologic Soil Group and Surface Runoff

Absence of an entry indicates that the data were not estimated. The dash indicates no documented presence.

Hydrologic Soil Group and Surface Runoff–Douglas County Area, Nevada			
Map symbol and soil name	**Pct. of map unit**	**Surface Runoff**	**Hydrologic Soil Group**
6163—East Fork clay loam, 0 to 2 percent slopes			
East fork	90	Medium	C
6313—Hussman clay, 0 to 2 percent slopes			
Hussman	90	High	D
6315—Hussman silty clay loam, 0 to 2 percent slopes			
Hussman	85	High	D

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

US District Court Water Master Ownership Records

3/18/2020

Douglas County Water Conveyance Committee - Adjacent and Downstream Right Holder Request

Subject Property: 1320-32-501-021

Requested By: Keith R Shaffer, PE
Resource Concepts Inc.
340 N. Minnesota St., Carson City, NV 89703
Phone: 775-883-1600 Ext. 4144
Email: Keith@rci-nv.com Website: www.rci-nv.com

Allerman-Upper Virginia System:

Alpine Decree Right Number	Acres	Old Parcel	State Appli	State Certil	Water Mas	Claimant N	Address
93-0-00-1	0.16	23-250-02			10	ALTON & S	P.O. BOX 995 MINDEN, NV 89423
94-0-00-2	0.08	23-250-02			10	ALTON & S	P.O. BOX 995 MINDEN, NV 89423
96-0-00-3	0.13	23-250-02			10	ALTON & S	P.O. BOX 995 MINDEN, NV 89423
93-0-00-9	0.06		67872P		47	BENTLY FA	P.O. BOX 127 MINDEN, NV 89423
95-0-00-2	2.35				47	BENTLY FA	P.O. BOX 127 MINDEN, NV 89423
95-0-00-3	0.15			67873	47	BENTLY FA	P.O. BOX 127 MINDEN, NV 89423
95-0-00-4	2.21			74600	47	BENTLY FA	P.O. BOX 127 MINDEN, NV 89423
93-0-00-7	0.43	23-590-07			40	DANGBERG	% GORDON DEPAOLI P.O. BOX 2311 RENO, NV 89511
96-0-00-4	0	ZEROLENE P			261	DOUGLAS (	C/O CARL RUSCHMEYER P.O. BOX 218 MINDEN, NV 89423
93-0-00-5	0.05	23-590-02			52	DOUGLAS (	1638 MONO AVE. MINDEN, NV 89423
93-0-00-4	0.89	23-590-01			41	PARK CATT	% COMPTROLLER 1300 BUCKEYE ROAD MINDEN, NV 89423
93-0-00-2	0.78	23-570-16			46	PARK RANC	% CHIEF FINANCIAL OFFICER 1300 BUCKEYE ROAD, SUITE A MINDEN, NV 89423
93-0-00-3	0.79	23-570-17			46	PARK RANC	% CHIEF FINANCIAL OFFICER 1300 BUCKEYE ROAD, SUITE A MINDEN, NV 89423
93-0-00-6	0.59	23-590-03			46	PARK RANC	% CHIEF FINANCIAL OFFICER 1300 BUCKEYE ROAD, SUITE A MINDEN, NV 89423
93-0-00-8	0.43	23-590-17			46	PARK RANC	% CHIEF FINANCIAL OFFICER 1300 BUCKEYE ROAD, SUITE A MINDEN, NV 89423
95-0-00-1	2.91				46	PARK RANC	% CHIEF FINANCIAL OFFICER 1300 BUCKEYE ROAD, SUITE A MINDEN, NV 89423
96-0-00-1	0.06	23-590-17			46	PARK RANC	% CHIEF FINANCIAL OFFICER 1300 BUCKEYE ROAD, SUITE A MINDEN, NV 89423
96-0-00-2	0.17	23-590-12			46	PARK RANC	% CHIEF FINANCIAL OFFICER 1300 BUCKEYE ROAD, SUITE A MINDEN, NV 89423
94-0-00-1	0.71	BK23 PG59			161	UNKNOWN	XXXX XXXX, XX 99999

Cottonwood-Martin Slough System

Alpine Decree Right Number	Acres	Old Parcel	State Appli	State Certil	Water Mas	Claimant N	Address			
395 - 0 - 00 - 19	1.21	25-050-56				1650 LLC	1650 N. HIGHWAY 395	MINDEN	NV	89423
395 - 0 - 00 - 20	2.02	25-050-57				1652 HWY	11004 ROMAGNOLA C	RENO	NV	89511
390 - 0 - 00 - 60	0.33	25-200-07				ALAN G. RE	C/O A. G. &	P.O. BOX 1	MINDEN	NV	89423
383 - 0 - 00 - 1	0.6	25-284-01				ALTON & S	P.O. BOX 995	MINDEN	NV	89423
383 - 0 - 00 - 2	0.2	25-284-02				ALTON & S	P.O. BOX 995	MINDEN	NV	89423
383 - 0 - 00 - 3	0.3	25-284-03				ALTON & S	P.O. BOX 995	MINDEN	NV	89423
383 - 0 - 00 - 4	0.3	25-284-04				ALTON & S	P.O. BOX 995	MINDEN	NV	89423
385 - 0 - B - 17	0.2	25-284-06				ALTON & S	P.O. BOX 995	MINDEN	NV	89423

387 - 0 - 00 - 17	0.2	25-284-06		ALTON & S	P.O. BOX 995	MINDEN	NV	89423
397 - 0 - 00 - 2	7.61	23-250-02		ALTON & S	P.O. BOX 995	MINDEN	NV	89423
385 - 0 - A - 5	0.43	25-270-19		AMERICAN	2560 BUSINESS PARKV	MINDEN	NV	89423
404 - 0 - 00 - 3	0.5	25-030-08		ANTHONY	3988 LAKE TAHOE BLV	S. LAKE TAI	CA	96150
396 - 0 - 00 - 11	1.85	25-050-48		B&D WORK	1116 MONTERRA DRIV	MINDEN	NV	89423
385 - 0 - B - 19	0.46	25-281-01		B. ARRAIZ &	1532 GARDNER	GARDNERV	NV	89410
385 - 0 - B - 20	0.29	25-281-02		B. ARRAIZ &	1532 GARDNER	GARDNERV	NV	89410
387 - 0 - 00 - 19	0.46	25-281-01		B. ARRAIZ &	1532 GARDNER	GARDNERV	NV	89410
387 - 0 - 00 - 20	0.29	25-281-02		B. ARRAIZ &	1532 GARDNER	GARDNERV	NV	89410
395 - 0 - 00 - 18	1.08	1646 N 395		BANK OF A	% BOFA CC NC1-001-0	CHARLOTT	NC	28255
396 - 0 - 00 - 3	0.51	25-050-42		BENJAMIN	3410 NAMBE DRIVE	RENO	NV	89511
390 - 0 - 00 - 61	0.36	25-200-08		BENTLY FA	P.O. BOX 127	MINDEN	NV	89423
427 - 0 - 00 - 1	15.21		46520P	BENTLY FA	P.O. BOX 127	MINDEN	NV	89423
427 - 0 - 00 - 2	14.72		46521P	BENTLY FA	P.O. BOX 127	MINDEN	NV	89423
427 - 0 - 00 - 3	65.39		46522P	BENTLY FA	P.O. BOX 127	MINDEN	NV	89423
427 - 0 - 00 - 4	14.67		46523P	BENTLY FA	P.O. BOX 127	MINDEN	NV	89423
427 - 0 - 00 - 5	24.89	23-010-56	46520P	BENTLY FA	P.O. BOX 127	MINDEN	NV	89423
427 - 0 - 00 - 6	24.1		46520P	BENTLY FA	P.O. BOX 127	MINDEN	NV	89423
427 - 0 - 00 - 7	107	23-010-56	46520P	BENTLY FA	P.O. BOX 127	MINDEN	NV	89423
427 - 0 - 00 - 8	24.02	23-010-56	46520P	BENTLY FA	P.O. BOX 127	MINDEN	NV	89423
428 - 0 - 00 - 2	0.8		46524P	BENTLY FA	P.O. BOX 127	MINDEN	NV	89423
428 - 0 - 00 - 3	1.31		51314	BENTLY FA	P.O. BOX 127	MINDEN	NV	89423
428 - 0 - 00 - 4	41			BENTLY FA	P.O. BOX 127	MINDEN	NV	89423
388 - 0 - 00 - 3	0.69	25-180-17		BENTLY RA	P.O. BOX 127	MINDEN	NV	89423
389 - 0 - 00 - 2	4.81	25-180-01		BENTLY RA	P.O. BOX 127	MINDEN	NV	89423
389 - 0 - 00 - 3	2.67	25-180-02		BENTLY RA	P.O. BOX 127	MINDEN	NV	89423
390 - 0 - 00 - 1	0.32	25-180-06		BENTLY RA	P.O. BOX 127	MINDEN	NV	89423
390 - 0 - 00 - 2	0.18	25-200-24		BENTLY RA	P.O. BOX 127	MINDEN	NV	89423
390 - 0 - 00 - 72	0.54	25-212-01		BENTLY RA	P.O. BOX 127	MINDEN	NV	89423
390 - 0 - 00 - 73	0.24	25-200-26		BENTLY RA	P.O. BOX 127	MINDEN	NV	89423
390 - 0 - 00 - 74	0.24	25-200-29		BENTLY RA	P.O. BOX 127	MINDEN	NV	89423
390 - 0 - 00 - 75	0.47	25-200-53		BENTLY RA	P.O. BOX 127	MINDEN	NV	89423
395 - 0 - 00 - 21	1.84	25-050-59		BENTLY RA	P.O. BOX 127	MINDEN	NV	89423
396 - 0 - 00 - 18	0.16	25-050-59		BENTLY RA	P.O. BOX 127	MINDEN	NV	89423
397 - 0 - 00 - 1	12.4	23-250-03	74512	BENTLY RA	P.O. BOX 127	MINDEN	NV	89423
419 - 0 - 00 - 3	4.65	23-250-03	74513	BENTLY RA	P.O. BOX 127	MINDEN	NV	89423
419 - 0 - 00 - 4	0.28	23-180-17		BENTLY RA	P.O. BOX 127	MINDEN	NV	89423
419 - 0 - 00 - 5	0.04	23-180-18		BENTLY RA	P.O. BOX 127	MINDEN	NV	89423
390 - 0 - 00 - 11	0.23	25-190-08		BILL & SHA	7123 FRANKTOWN RO	WASHOE V	NV	89704
406 - 0 - 00 - 4	0.61	25-030-33		BOB E. & W	89 SOUTH MAIN ST.	MILPITAS	CA	95035
395 - 0 - 00 - 33	0.28	25-560-12		BRIAN & B	1626 CARVAL COURT	MINDEN	NV	89423
390 - 0 - 00 - 23	0.17	25-190-20		BRIAN & JA	8855 STARFALL WAY	ELK GROVE	CA	95624

415 - 0 - 00 - 7	1.18	25-020-09		BRUCE G. M	P.O. BOX 1587	MINDEN	NV	89423
415 - 0 - 00 - 8	1	25-020-10		BRUCE G. M	P.O. BOX 1587	MINDEN	NV	89423
385 - 0 - B - 13	0.35	25-283-02		CARL STRA	P.O. BOX 2368	MINDEN	NV	89423
387 - 0 - 00 - 13	0.35	25-283-02		CARL STRA	P.O. BOX 2368	MINDEN	NV	89423
385 - 0 - A - 15	1.07	25-270-17		CHRISTOPH	1365 DELORES WAY	GARDNERV	NV	89460
415 - 0 - 00 - 11	64.98	25-020-02	36693P	CITY OF CA	CARSON CI 3505 BUTT	CARSON CI	NV	89701
416 - 0 - 00 - 1	36.8	25-020-02	36693	CITY OF CA	CARSON CI 3505 BUTT	CARSON CI	NV	89701
417 - 0 - 00 - 0	39	25-020-02	36693P	CITY OF CA	CARSON CI 3505 BUTT	CARSON CI	NV	89701
398 - 0 - 00 - 3	0.49	25-050-68		CRAIG A. &	P.O. BOX 196	GENOA	NV	89411
385 - 0 - B - 1	0.4	25-283-14		CRAIG M. &	1509 CIRCLE DRIVE	GARDNERV	NV	89410
387 - 0 - 00 - 1	0.4	25-283-14		CRAIG M. &	1509 CIRCLE DRIVE	GARDNERV	NV	89410
390 - 0 - 00 - 69	0.17	25-200-16		DAVID L. II	P.O. BOX 1422	MINDEN	NV	89423
390 - 0 - 00 - 31	0.17	25-190-30		DAVID W. &	P.O. BOX 1287	MINDEN	NV	89423
385 - 0 - A - 17	15.09	25-060-01		DEAN SEEN	1692 COUNTY ROAD S	MINDEN	NV	89423
397 - 0 - 00 - 3	4.4	25-060-01		DEAN SEEN	1692 COUNTY ROAD S	MINDEN	NV	89423
390 - 0 - 00 - 4	1.1	25-190-60		DELCO PRC	P.O. BOX 261	GENOA	NV	89411
395 - 0 - 00 - 6	1.16	25-190-60		DELCO PRC	P.O. BOX 261	GENOA	NV	89411
385 - 0 - B - 3	0.3	25-283-12		DENISE DA	% JOANN T 1736 WEST	MINDEN	NV	89423
387 - 0 - 00 - 3	0.3	25-283-12		DENISE DA	% JOANN T 1736 WEST	MINDEN	NV	89423
390 - 0 - 00 - 28	0.32	25-190-25		DEONNE Y(	1631 COUNTY ROAD	MINDEN	NV	89423
387 - 0 - 00 - 22	0.19	25-281-03		DINO NAT/	700 JOETTE DRIVE	GARDNERV	NV	89460
387 - 0 - 00 - 23	0.44	25-281-05		DINO NAT/	700 JOETTE DRIVE	GARDNERV	NV	89460
389 - 0 - 00 - 1	4.14	25-170-19		DOUGLAS (	C/O CARL F	P.O. BOX 2	MINDEN	NV	89423
390 - 0 - 00 - 12	0.11	25-190-09		DOUGLAS (	C/O CARL F	P.O. BOX 2	MINDEN	NV	89423
390 - 0 - 00 - 16	0.11	25-190-13		DOUGLAS (	C/O CARL F	P.O. BOX 2	MINDEN	NV	89423
390 - 0 - 00 - 40	0.34	25-190-39		DOUGLAS (	C/O CARL F	P.O. BOX 2	MINDEN	NV	89423
395 - 0 - 00 - 25	0.51	25-560-04		DOUGLAS (	C/O CARL F	P.O. BOX 2	MINDEN	NV	89423
395 - 0 - 00 - 35	1.13	ROADS		DOUGLAS (	C/O CARL F	P.O. BOX 2	MINDEN	NV	89423
390 - 0 - 00 - 51	0.7	25-190-50		DOUGLAS (	1638 MONO AVE.	MINDEN	NV	89423
390 - 0 - 00 - 52	0.7	25-190-51		DOUGLAS (	1638 MONO AVE.	MINDEN	NV	89423
404 - 0 - 00 - 4	0.5	25-030-09		DRAGO & J	1667 HIGHWAY 395	MINDEN	NV	89423
390 - 0 - 00 - 67	0.2	25-200-14		DRAGO & M	1595 COUNTY ROAD	MINDEN	NV	89423
390 - 0 - 00 - 48	0.11	25-190-47		DUANE MA	MACK LAN	P.O. BOX 1	MINDEN	NV	89423
398 - 0 - 00 - 1	1.24	25-050-65		EAST FORK	1694 COUNTY ROAD	MINDEN	NV	89423
395 - 0 - 00 - 14	1.61	25-050-37		EDWARD B	P.O. BOX 232	MINDEN	NV	89423
390 - 0 - 00 - 7	0.99	25-190-04		EDWARD F	P.O. BOX 4	MINDEN	NV	89423
390 - 0 - 00 - 8	0.4	25-190-05		EDWARD F	P.O. BOX 4	MINDEN	NV	89423
395 - 0 - 00 - 11	5.93	25-050-29		EDWARD F	P.O. BOX 4	MINDEN	NV	89423
395 - 0 - 00 - 2	1	25-190-04		EDWARD F	P.O. BOX 4	MINDEN	NV	89423
395 - 0 - 00 - 3	0.43	25-190-05		EDWARD F	P.O. BOX 4	MINDEN	NV	89423
396 - 0 - 00 - 12	0.6	25-050-49		EH FERNLE	3629 SWETZER ROAD	LOOMIS	CA	95650
390 - 0 - 00 - 47	0.23	25-190-46		ERIC & KIR	P.O. BOX 2608	MINDEN	NV	89423

390 - 0 - 00 - 9	0.5	25-190-56	FRANK & D	1564 DESERET DRIVE	MINDEN	NV	89423
395 - 0 - 00 - 4	0.54	25-190-56	FRANK & D	1564 DESERET DRIVE	MINDEN	NV	89423
385 - 0 - A - 10	0.82	25-270-12	FUKUI FAM	29 MELVILLE ROAD	HILLSDALE	NJ	6742
410 - 0 - 00 - 1	40.79	17-420-01	GALEPPI LA	1512 DESERET	MINDEN	NV	89423
410 - 0 - 00 - 10	44.99	17-420-10	GALEPPI LA	1512 DESERET	MINDEN	NV	89423
410 - 0 - 00 - 11	5.03	17-420-11	GALEPPI LA	1512 DESERET	MINDEN	NV	89423
410 - 0 - 00 - 12	13.4	17-420-12	GALEPPI LA	1512 DESERET	MINDEN	NV	89423
410 - 0 - 00 - 14	43.43	17-410-03	GALEPPI LA	1512 DESERET	MINDEN	NV	89423
410 - 0 - 00 - 15	42.94	17-410-04	GALEPPI LA	1512 DESERET	MINDEN	NV	89423
410 - 0 - 00 - 16	1.71	17-410-05	GALEPPI LA	1512 DESERET	MINDEN	NV	89423
410 - 0 - 00 - 17	6.64	17-410-17	GALEPPI LA	1512 DESERET	MINDEN	NV	89423
410 - 0 - 00 - 18	10.38	17-410-07	GALEPPI LA	1512 DESERET	MINDEN	NV	89423
410 - 0 - 00 - 2	40.77	17-420-02	GALEPPI LA	1512 DESERET	MINDEN	NV	89423
410 - 0 - 00 - 3	40.75	17-420-03	GALEPPI LA	1512 DESERET	MINDEN	NV	89423
410 - 0 - 00 - 4	40.73	17-420-04	GALEPPI LA	1512 DESERET	MINDEN	NV	89423
410 - 0 - 00 - 5	44.85	17-420-05	GALEPPI LA	1512 DESERET	MINDEN	NV	89423
410 - 0 - 00 - 6	44.75	17-420-06	GALEPPI LA	1512 DESERET	MINDEN	NV	89423
410 - 0 - 00 - 7	44.65	17-420-07	GALEPPI LA	1512 DESERET	MINDEN	NV	89423
410 - 0 - 00 - 8	42.57	17-420-08	GALEPPI LA	1512 DESERET	MINDEN	NV	89423
410 - 0 - 00 - 9	43.62	17-420-09	GALEPPI LA	1512 DESERET	MINDEN	NV	89423
411 - 0 - 00 - 1	105.8	17-160-01	GALEPPI LA	1512 DESERET	MINDEN	NV	89423
412 - 0 - 00 - 0	112	17-160-01	GALEPPI LA	1512 DESERET	MINDEN	NV	89423
385 - 0 - B - 21	0.19	25-281-03	GARDNERV	1579 VIRGINIA RANCH	GARDNERV	NV	89410
390 - 0 - 00 - 44	0.17	25-190-43	GARDNERV	1579 VIRGINIA RANCH	GARDNERV	NV	89410
395 - 0 - 00 - 8	2.32	25-050-13	GARY ALDA	P.O. BOX 194	MINDEN	NV	89423
394 - 0 - 00 - 2	7.28	25-040-10	GPEG2 CAF	1627 HIGHWAY 395	MINDEN	NV	89423
394 - 0 - 00 - 3	0.5	25-170-26	GPEG2 CAF	1627 HIGHWAY 395	MINDEN	NV	89423
394 - 0 - 00 - 4	9.5	25-170-27	GPEG2 CAF	1627 HIGHWAY 395	MINDEN	NV	89423
401 - 0 - 00 - 1	1.5	25-030-13	GPEG2 CAF	1627 HIGHWAY 395	MINDEN	NV	89423
401 - 0 - 00 - 2	0.41	25-030-14	GPEG2 CAF	1627 HIGHWAY 395	MINDEN	NV	89423
401 - 0 - 00 - 3	0.35	25-030-22	GPEG2 CAF	1627 HIGHWAY 395	MINDEN	NV	89423
385 - 0 - B - 26	0.87	25-265-02	GREGORY I	1285 OLD FOOTHILL R	GARDNERV	NV	89460
385 - 0 - B - 27	0.21	25-265-03	GREGORY I	1285 OLD FOOTHILL R	GARDNERV	NV	89460
385 - 0 - B - 28	0.21	25-265-04	GREGORY I	1285 OLD FOOTHILL R	GARDNERV	NV	89460
385 - 0 - B - 30	0.27	25-265-06	H L R ASSO	1521 HIGHWAY 395 N	GARDNERV	NV	89410
387 - 0 - 00 - 30	0.27	25-265-06	H L R ASSO	1521 HIGHWAY 395 N	GARDNERV	NV	89410
395 - 0 - 00 - 9	0.58	25-050-15	HERBERT &	14 PILLON REAL	PLEASANT	CA	94523
396 - 0 - 00 - 6	0.21	25-050-15	HERBERT &	14 PILLON REAL	PLEASANT	CA	94523
390 - 0 - 00 - 18	0.23	25-190-15	J. & R. INVE	P.O. BOX 2080	MINDEN	NV	89423
390 - 0 - 00 - 45	0.17	25-190-44	JAMES E. &	1622 ESMERALDA AVE	MINDEN	NV	89423
415 - 0 - 00 - 9	1	25-020-11	JAMES G. D	1090 FRIEDA LANE	MINDEN	NV	89423
387 - 0 - 00 - 21	0.19	25-281-03	JASON T. &	637 CUNNINGHAM LA	GARDNERV	NV	89410

390 - 0 - 00 - 13	0.11	25-190-10	JAY S. ALDF	P.O. BOX 1807	MINDEN	NV	89423
390 - 0 - 00 - 15	0.23	25-190-12	JAY S. ALDF	P.O. BOX 1807	MINDEN	NV	89423
385 - 0 - B - 10	0.21	25-283-19	JEANETTE E	1521 CIRCLE DRIVE	GARDNERV	NV	89410
385 - 0 - B - 11	0.23	25-283-04	JEANETTE E	1521 CIRCLE DRIVE	GARDNERV	NV	89410
385 - 0 - B - 8	0.21	25-283-05	JEANETTE E	1521 CIRCLE DRIVE	GARDNERV	NV	89410
385 - 0 - B - 9	0.08	25-283-06	JEANETTE E	1521 CIRCLE DRIVE	GARDNERV	NV	89410
387 - 0 - 00 - 10	0.21	25-283-19	JEANETTE E	1521 CIRCLE DRIVE	GARDNERV	NV	89410
387 - 0 - 00 - 11	0.23	25-283-04	JEANETTE E	1521 CIRCLE DRIVE	GARDNERV	NV	89410
387 - 0 - 00 - 8	0.21	25-283-05	JEANETTE E	1521 CIRCLE DRIVE	GARDNERV	NV	89410
387 - 0 - 00 - 9	0.08	25-283-06	JEANETTE E	1521 CIRCLE DRIVE	GARDNERV	NV	89410
387 - 0 - 00 - 4	0.21	25-283-11	JEFF & JON	P.O. BOX 245	MINDEN	NV	89423
385 - 0 - A - 4	0.67	25-270-04	JOHN & DC	1607 HERON COVE	GARDNERV	NV	89410
390 - 0 - 00 - 10	0.64	25-190-07	JOHN S. & I	P.O. BOX 6366	BURBANK	CA	91510
395 - 0 - 00 - 27	0.22	25-560-06	KENNETH &	1637 CARVAL COURT	MINDEN	NV	89423
390 - 0 - 00 - 53	0.17	25-200-01	KIM SUE RE	1618 US HIGHWAY 39	MINDEN	NV	89423
385 - 0 - B - 24	0.33	25-281-06	KNOX JOHN	498 MOTTSVILLE LANE	GARDNERV	NV	89460
387 - 0 - 00 - 24	0.33	25-281-06	KNOX JOHN	498 MOTTSVILLE LANE	GARDNERV	NV	89460
390 - 0 - 00 - 29	0.26	1600 9TH	LARRY E. &	546 BOULEVARD SE	ATLANTA	GA	30312
390 - 0 - 00 - 57	0.17	25-200-04	LAWRENCE	P.O. BOX 367	MINDEN	NV	89423
390 - 0 - 00 - 64	0.14	25-200-11	LAWRENCE	P.O. BOX 367	MINDEN	NV	89423
390 - 0 - 00 - 68	0.08	25-200-15	LAWRENCE	P.O. BOX 367	MINDEN	NV	89423
390 - 0 - 00 - 26	0.23	25-190-23	LEE & JULIE	1608 NINTH ST.	MINDEN	NV	89423
415 - 0 - 00 - 10	1	25-020-12	LEE R. & N.	P.O. BOX 1268	MINDEN	NV	89423
385 - 0 - A - 12	1.52	25-270-10	LEKUMBER	P.O. BOX 64	GARDNERV	NV	89410
385 - 0 - A - 16	0.17	25-270-14	LEKUMBER	P.O. BOX 64	GARDNERV	NV	89410
390 - 0 - 00 - 66	0.17	25-200-13	LORI ANN S	P.O. BOX 101	GARDNERV	NV	89410
385 - 0 - B - 12	0.19		MARIE UH/	9825 S. Virginia St	Reno	NV	89511
390 - 0 - 00 - 5	0.2	25-190-02	MARLEANE	J&M SCOT	1624 HIGH	MINDEN	NV	89423
395 - 0 - 00 - 1	0.24	25-190-02	MARLEANE	J&M SCOT	1624 HIGH	MINDEN	NV	89423
390 - 0 - 00 - 35	0.17	25-190-34	MARY WHI	2617 SWEET CLOVER C	MINDEN	NV	89423
395 - 0 - 00 - 32	0.25	25-560-11	MATTHEW	1628 CARVAL COURT	MINDEN	NV	89423
395 - 0 - 00 - 13	0.2	25-050-36	MCDONALI	2001 N. CARSON ST.	CARSON CI	NV	89706
396 - 0 - 00 - 2	0.72	25-050-36	MCDONALI	2001 N. CARSON ST.	CARSON CI	NV	89706
390 - 0 - 00 - 71	0.17	25-190-58	MICHAEL N	P.O. BOX 1355	MINDEN	NV	89423
396 - 0 - 00 - 13	1.08	25-050-50	MINDEN G	1311 CENTERVILLE LN.	GARDNERV	NV	89410
396 - 0 - 00 - 5	0.8	25-050-40	MINDEN G	P.O. BOX 910	GENOA	NV	89411
396 - 0 - 00 - 15	0.51	25-050-52	MINDEN G	2248 MERIDIAN BL SU	MINDEN	NV	89423
398 - 0 - 00 - 4	0.43	25-050-69	MINDEN M	1131 MONTERRA DRIV	MINDEN	NV	89423
395 - 0 - 00 - 10	0.39	25-050-22	MINDEN PI	P.O. BOX 903	MINDEN	NV	89423
396 - 0 - 00 - 1	0.55	25-050-22	MINDEN PI	P.O. BOX 903	MINDEN	NV	89423
396 - 0 - 00 - 9	2.11	25-050-44	MINDEN T	COMMON 1678 N HIG	MINDEN	NV	89423
398 - 0 - 00 - 2	0.16	25-050-67	NEDD FAM	1693 COUNTY ROAD #	MINDEN	NV	89423

401 - 0 - 00 - 4	0.33	25-030-24		NEVADA N	P.O. BOX 12488	OGDEN	UT	84412
402 - 0 - 00 - 2	0.02	25-030-27		NEVADA N	P.O. BOX 12488	OGDEN	UT	84412
404 - 0 - 00 - 7	0.99	25-030-38		NEVADA N	P.O. BOX 12488	OGDEN	UT	84412
418 - 0 - B - 2	2.09	25-020-14		NEVADA N	P.O. BOX 12488	OGDEN	UT	84412
385 - 0 - A - 8	0.54	25-270-08		NV COMM	P.O. BOX 2128	CARSON CI	NV	89702
385 - 0 - B - 25	0.35	25-265-01		NV COMM	P.O. BOX 2128	CARSON CI	NV	89702
387 - 0 - 00 - 25	0.35	25-265-01		NV COMM	P.O. BOX 2128	CARSON CI	NV	89702
389 - 0 - 00 - 5	0.68	25-180-04		NV ENERG	ATTN: ANN	6226 W. SA	LAS VEGAS	NV	89446
415 - 0 - 00 - 4	1.29	25-020-06		PARK FAMI	W. BRUCE	1030 FRIED	MINDEN	NV	89423
428 - 0 - 00 - 1	79.68			PARK RANCH HOLDING ACCOUNT			GARDNERV	NV	89410
428 - 0 - 00 - 5	44.5		70885	PARK RANC	% CHIEF FI	1300 BUCK	MINDEN	NV	89423
428 - 0 - 00 - 6	73.01		70893	PARK RANC	% CHIEF FI	1300 BUCK	MINDEN	NV	89423
428 - 0 - 00 - 7	184.7		70892	PARK RANC	% CHIEF FI	1300 BUCK	MINDEN	NV	89423
428 - 0 - 00 - 8	82	17-190-20		PARK RANC	% CHIEF FI	1300 BUCK	MINDEN	NV	89423
429 - 0 - 00 - 0	180		70886	PARK RANC	% CHIEF FI	1300 BUCK	MINDEN	NV	89423
430 - 0 - 00 - 1	99.34		70889	PARK RANC	% CHIEF FI	1300 BUCK	MINDEN	NV	89423
430 - 0 - 00 - 2	60.66		70891	PARK RANC	% CHIEF FI	1300 BUCK	MINDEN	NV	89423
431 - 0 - 00 - 0	97		70890	PARK RANC	% CHIEF FI	1300 BUCK	MINDEN	NV	89423
432 - 0 - 00 - 1	12.31		70888	PARK RANC	% CHIEF FI	1300 BUCK	MINDEN	NV	89423
432 - 0 - 00 - 2	47.69		70887	PARK RANC	% CHIEF FI	1300 BUCK	MINDEN	NV	89423
395 - 0 - 00 - 16	0.52	25-050-44		PATRICIA D	P.O. BOX 1923	MINDEN	NV	89423
390 - 0 - 00 - 6	0.5	25-190-59		PHILIP J. &	1624 10TH ST.	MINDEN	NV	89460
395 - 0 - 00 - 5	0.52	25-190-59		PHILIP J. &	1624 10TH ST.	MINDEN	NV	89460
387 - 0 - 00 - 16	0.19	25-284-05		RANDALL &	P.O. BOX 912	MINDEN	NV	89423
415 - 0 - 00 - 6	1	25-020-08		RAY JR. & T	P.O. BOX 2917	MINDEN	NV	89423
398 - 0 - 00 - 6	1.29	25-050-74		RED OAK IN	231 MARKET PLACE #2	SAN RAMO	CA	94583
385 - 0 - B - 14	0.19	25-283-01		REED FAMI	ALAN G & I	P.O. BOX 1	MINDEN	NV	89423
387 - 0 - 00 - 14	0.19	25-283-01		REED FAMI	ALAN G & I	P.O. BOX 1	MINDEN	NV	89423
395 - 0 - 00 - 31	0.31	25-560-10		RICHARD &	1632 CARVAL COURT		MINDEN	NV	89423
385 - 0 - B - 2	0.32	25-283-15		ROBERT H. DINSMORE	1505 CIRCL	GARDNERV	NV	89410
387 - 0 - 00 - 2	0.32	25-283-15		ROBERT H. DINSMORE	1505 CIRCL	GARDNERV	NV	89410
390 - 0 - 00 - 41	0.14	25-190-40		ROGER & S	P.O. BOX 2680	MINDEN	NV	89423
400 - 0 - 00 - 1	2.78	25-030-11		ROLAND &	P.O. BOX 254	MINDEN	NV	89423
402 - 0 - 00 - 1	14.57	25-030-11		ROLAND &	P.O. BOX 254	MINDEN	NV	89423
405 - 0 - B - 0	1.67	25-020-15		ROLAND &	P.O. BOX 254	MINDEN	NV	89423
407 - 0 - A - 0	15.82	25-020-15		ROLAND &	P.O. BOX 254	MINDEN	NV	89423
407 - 0 - B - 0	0.31	25-020-15		ROLAND &	P.O. BOX 254	MINDEN	NV	89423
407 - 0 - C - 0	2.34	25-020-15		ROLAND &	P.O. BOX 254	MINDEN	NV	89423
407 - 0 - D - 1	20.87	25-020-26		ROLAND &	P.O. BOX 254	MINDEN	NV	89423
416 - 0 - 00 - 2	2.2	25-020-14		ROLAND &	P.O. BOX 254	MINDEN	NV	89423
418 - 0 - A - 0	2	25-020-14		ROLAND &	P.O. BOX 254	MINDEN	NV	89423
418 - 0 - B - 1	8.76	25-020-26		ROLAND &	P.O. BOX 254	MINDEN	NV	89423

385 - 0 - B - 31	0.04	25-283-07		RONALD K. P.O. BOX 598	GARDNERV	NV	89410
385 - 0 - B - 7	0.21	25-283-08		RONALD K. P.O. BOX 598	GARDNERV	NV	89410
387 - 0 - 00 - 7	0.21	25-283-08		RONALD K. P.O. BOX 598	GARDNERV	NV	89410
390 - 0 - 00 - 17	0.11	25-190-14		RUDY & ES 1620 ESMERALDA AVE	MINDEN	NV	89423
396 - 0 - 00 - 10	2.22	25-050-47		SAFEWAY, MS#6516 P.O. BOX 2	PHOENIX	AZ	85038
396 - 0 - 00 - 17	1.27	25-050-54		SAFEWAY, MS#6516 P.O. BOX 2	PHOENIX	AZ	85038
394 - 0 - 00 - 1	22.72	25-040-12		SEEMAN TI JUDY S. KE 1692 COUN	MINDEN	NV	89423
413 - 0 - 00 - 1	8.37	25-040-11		SEEMAN TI JUDY S. KE 1692 COUN	MINDEN	NV	89423
413 - 0 - 00 - 2	31.63	25-040-12		SEEMAN TI JUDY S. KE 1692 COUN	MINDEN	NV	89423
414 - 0 - 00 - 0	7	25-040-11		SEEMAN TI JUDY S. KE 1692 COUN	MINDEN	NV	89423
387 - 0 - 00 - 26	0.87	25-265-02		SESSER 198 P.O. BOX 201	GENOA	NV	89411
387 - 0 - 00 - 27	0.21	25-265-03		SESSER 198 P.O. BOX 201	GENOA	NV	89411
387 - 0 - 00 - 28	0.21	25-265-04		SESSER 198 P.O. BOX 201	GENOA	NV	89411
408 - 0 - 00 - 0	77.8		72395P	SETTELME ARTHUR & 2388 HIGH	MINDEN	NV	89423
409 - 0 - 00 - 0	419.9		72395P	SETTELME ARTHUR & 2388 HIGH	MINDEN	NV	89423
390 - 0 - 00 - 27	0.11	25-190-24		SHERALYN P.O. BOX 986	MINDEN	NV	89423
385 - 0 - A - 11	0.59	25-270-20		SHIRLEY FR 1561 ZEROLENE PLACE	MINDEN	NV	89423
385 - 0 - A - 13	1.46	25-270-15		SHIRLEY FR 1561 ZEROLENE PLACE	MINDEN	NV	89423
385 - 0 - A - 14	1.45	25-270-16		SHIRLEY FR 1561 ZEROLENE PLACE	MINDEN	NV	89423
415 - 0 - 00 - 3	1.27	25-020-05		SMITH 201 1022 FRIEDA LANE	MINDEN	NV	89423
396 - 0 - 00 - 19	1.47	US 395		STATE OF N % FT. CHUF 10,000 HIG	SILVER SPR	NV	89429
411 - 0 - 00 - 2	30.02	17-150-02		STEVE K. & 661 GENOA LANE	MINDEN	NV	89423
390 - 0 - 00 - 63	0.14	25-200-10		STRATTON P.O. BOX 187	MINDEN	NV	89423
406 - 0 - 00 - 5	0.81	25-030-32		SUNAGAW % LEE & NC P.O. BOX 1	MINDEN	NV	89423
385 - 0 - A - 6	0.17	25-270-06		TAOMARA 1130 LINDA ANNE CT.	GARDNERV	NV	89410
385 - 0 - A - 7	0.19	25-270-07		TAOMARA 1130 LINDA ANNE CT.	GARDNERV	NV	89410
388 - 0 - 00 - 1	0.82	23-250-03		TERRY M. F 29 MELVILLE ROAD	HILLSDALE	NJ	7642
390 - 0 - 00 - 20	0.11	25-190-17		THOMAS S 1 WESTSIDE LANE	GARDNERV	NV	89410
390 - 0 - 00 - 62	0.23	1592 6TH		TIM B. & A 1592 SIXTH ST.	MINDEN	NV	89423
395 - 0 - 00 - 34	0.3	25-560-13		TOD F. CAR CARLINI TR P.O. BOX 1	MINDEN	NV	89423
385 - 0 - A - 18	0.55	ROADS		TOWN OF (1407 HIGHWAY 395 N	GARDNERV	NV	89410
385 - 0 - B - 15	0.29	25-283-18		TOWN OF (1407 HIGHWAY 395 N	GARDNERV	NV	89410
385 - 0 - B - 16	0.19	25-284-05		TOWN OF (1407 HIGHWAY 395 N	GARDNERV	NV	89410
385 - 0 - B - 18	0.75	25-282-01		TOWN OF (1407 HIGHWAY 395 N	GARDNERV	NV	89410
385 - 0 - B - 22	0.19	25-281-07	RSVN.	TOWN OF (1407 HIGHWAY 395 N	GARDNERV	NV	89410
385 - 0 - B - 23	0.44	25-281-08		TOWN OF (1407 HIGHWAY 395 N	GARDNERV	NV	89410
385 - 0 - B - 32	1.05	ROADS		TOWN OF (1407 HIGHWAY 395 N	GARDNERV	NV	89410
385 - 0 - B - 4	0.21	25-283-11		TOWN OF (1407 HIGHWAY 395 N	GARDNERV	NV	89410
385 - 0 - B - 5	0.21	25-283-09		TOWN OF (1407 HIGHWAY 395 N	GARDNERV	NV	89410
385 - 0 - B - 6	0.05	25-283-10		TOWN OF (1407 HIGHWAY 395 N	GARDNERV	NV	89410
387 - 0 - 00 - 15	0.29	25-283-18		TOWN OF (1407 HIGHWAY 395 N	GARDNERV	NV	89410
387 - 0 - 00 - 18	0.75	25-282-01		TOWN OF (1407 HIGHWAY 395 N	GARDNERV	NV	89410

387 - 0 - 00 - 31	1.05	ROADS	TOWN OF (	1407 HIGHWAY 395 N	GARDNERV	NV	89410
387 - 0 - 00 - 5	0.21	25-283-09	TOWN OF (	1407 HIGHWAY 395 N	GARDNERV	NV	89410
387 - 0 - 00 - 6	0.05	25-283-10	TOWN OF (	1407 HIGHWAY 395 N	GARDNERV	NV	89410
395 - 0 - 00 - 17	0.34	25-050-51	TOWN OF (	1407 HIGHWAY 395 N	GARDNERV	NV	89410
396 - 0 - 00 - 14	1.14	25-050-51	TOWN OF (	1407 HIGHWAY 395 N	GARDNERV	NV	89410
389 - 0 - 00 - 4	0.22	25-180-03	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
389 - 0 - 00 - 7	0.12	25-190-53	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 14	0.23	25-190-11	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 19	0.23	25-190-16	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 21	0.08	25-190-18	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 22	0.26	25-190-19	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 24	0.17	25-190-21	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 25	0.11	1650 MONO	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 3	0.15	25-180-09	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 30	0.7	25-190-29	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 32	0.17	25-190-31	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 33	0.17	25-190-32	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 34	0.17	25-190-33	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 37	0.17	25-190-36	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 38	0.29	25-190-37	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 42	0.2	25-190-41	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 43	0.23	25-190-42	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 46	0.11	25-190-45	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 49	0.11	25-190-48	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 50	0.23	25-190-49	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 54	1	25-200-25	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 55	0.12	25-200-32	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 56	0.17	25-200-74	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 58	0.23	25-200-05	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 65	0.11	25-200-12	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
390 - 0 - 00 - 70	0.11	25-200-17	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
395 - 0 - 00 - 12	2.15	25-050-30	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
395 - 0 - 00 - 22	0.35	25-560-01	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
395 - 0 - 00 - 23	0.34	25-560-02	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
395 - 0 - 00 - 24	0.39	25-560-03	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
395 - 0 - 00 - 26	0.28	25-560-05	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
395 - 0 - 00 - 28	0.4	25-560-07	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
395 - 0 - 00 - 29	0.28	25-560-08	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
395 - 0 - 00 - 30	0.34	25-560-09	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
395 - 0 - 00 - 7	2.11	25-050-04	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
396 - 0 - 00 - 7	0.25	25-050-30	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
403 - 0 - A - 1	4.76	25-030-29	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423

403 - 0 - A - 2	2.41	25-030-28	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
403 - 0 - B - 0	2.5	25-030-29	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
404 - 0 - 00 - 1	2.46	25-030-28	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
404 - 0 - 00 - 6	4.95	25-030-27	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
406 - 0 - 00 - 1	0.69	25-030-30	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
406 - 0 - 00 - 2	0.97	25-030-19	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
406 - 0 - 00 - 3	0.6	25-030-21	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
406 - 0 - 00 - 7	1.02	HWY 395	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
415 - 0 - 00 - 1	2.51	25-020-03	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
415 - 0 - 00 - 2	1.77	25-020-04	TOWN OF I	1604 ESMERALDA AVE	MINDEN	NV	89423
388 - 0 - 00 - 2	4.3	23-250-02	UNKNOWN	XXXX	XXXX	XX	99999
389 - 0 - 00 - 6	2.36	25-180-05	UNKNOWN	XXXX	XXXX	XX	99999
395 - 0 - 00 - 15	0.03	25-050-38	UNKNOWN	XXXX	XXXX	XX	99999
396 - 0 - 00 - 20	1.75	25-050-32	UNKNOWN	XXXX	XXXX	XX	99999
396 - 0 - 00 - 4	0.89	25-050-04	UNKNOWN	XXXX	XXXX	XX	99999
404 - 0 - 00 - 2	1	25-030-37	UNKNOWN	XXXX	XXXX	XX	99999
385 - 0 - B - 29	0.55	25-265-05	US BANK N	301 VASSA FOR GARDI	RENO	NV	89502
387 - 0 - 00 - 29	0.55	25-265-05	US BANK N	301 VASSA FOR GARDI	RENO	NV	89502
396 - 0 - 00 - 16	0.3	25-050-53	VICKIE J. R(	2003 VR FA	1369 TOLE	GARDNERV	NV	89410
384 - 0 - A - 0	2	BK23 PG59	VIDLER WA	3480 GS RI	SUITE 101	CARSON CI	NV	89703
384 - 0 - B - 1	0.6	25-283-13	VIDLER WA	3480 GS RI	SUITE 101	CARSON CI	NV	89703
384 - 0 - B - 2	1.24	25-283-17	VIDLER WA	3480 GS RI	SUITE 101	CARSON CI	NV	89703
384 - 0 - B - 3	0.57	BK23 PG59	VIDLER WA	3480 GS RI	SUITE 101	CARSON CI	NV	89703
384 - 0 - B - 4	0.59	25-283-16	VIDLER WA	3480 GS RI	SUITE 101	CARSON CI	NV	89703
396 - 0 - 00 - 8	0.83	25-050-43	VIDLER WA	3480 GS RI	SUITE 101	CARSON CI	NV	89703
397 - 0 - 00 - 4	4.99	23-250-02	VIDLER WA	3480 GS RI	SUITE 101	CARSON CI	NV	89703
400 - 0 - 00 - 2	1.18	25-030-11	VIDLER WA	3480 GS RI	SUITE 101	CARSON CI	NV	89703
402 - 0 - 00 - 3	0.43	WATER DEED	VIDLER WA	3480 GS RI	SUITE 101	CARSON CI	NV	89703
404 - 0 - 00 - 5	1	25-030-10	VIDLER WA	3480 GS RI	SUITE 101	CARSON CI	NV	89703
405 - 0 - A - 0	8.27	25-030-20	VIDLER WA	3480 GS RI	SUITE 101	CARSON CI	NV	89703
406 - 0 - 00 - 6	1.11	25-030-20	VIDLER WA	3480 GS RI	SUITE 101	CARSON CI	NV	89703
407 - 0 - D - 2	14.24	25-020-14	VIDLER WA	3480 GS RI	SUITE 101	CARSON CI	NV	89703
418 - 0 - B - 3	67.91	25-020-14	VIDLER WA	3480 GS RI	SUITE 101	CARSON CI	NV	89703
419 - 0 - 00 - 1	11.1	23-590-07+	VIDLER WA	3480 GS RI	SUITE 101	CARSON CI	NV	89703
390 - 0 - 00 - 39	0.4	25-190-38	WAB TRUS	1830 HIGHWAY 50	GLENBROC	NV	89413
398 - 0 - 00 - 5	1.2	25-050-70	WILDGOOS	1701 COUNTY ROAD S	MINDEN	NV	89423
390 - 0 - 00 - 36	0.17	25-190-57	WILLIAM &	1195 CENTERVILLE LA	GARDNERV	NV	89410
419 - 0 - 00 - 2	4.93	23-250-02	WILLOW S	1178 ZEROLENE ROAD	MINDEN	NV	89423
385 - 0 - A - 1	0.31	32-501-004	ZEROLENE	1300 BUCKEYE ROAD S	MINDEN	NV	89423
385 - 0 - A - 2	0.32	32-501-005	ZEROLENE	1300 BUCKEYE ROAD S	MINDEN	NV	89423
385 - 0 - A - 3	0.32	32-501-006	ZEROLENE	1300 BUCKEYE ROAD S	MINDEN	NV	89423
385 - 0 - A - 9	0.29	32-501-008	ZEROLENE	1300 BUCKEYE ROAD S	MINDEN	NV	89423