39661

Lund / West Side

Class IV Landfill Permit Application
West Side Landfill

RECEIVED
SEP 07 2010
UTAH DIVISION OF
SOLID & HAZARDOUS WASTE
2010.03044

Prepared For

Barton Excavating
250 West Center Street
Ephraim, UT 84627

August 2010

Jones & DeMille Engineering, Inc

1535 South 100 West • Richfield, UT 84701 • Ph 435-896-8266 • Fax 435-896-8268

1675 South Highway 10 • Price, UT 84501 • Ph 435-637-8266 • Fax 435-637-8268

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A Facility General Information
B Location Standards
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Utah Class IV Landfill Application

Introduction

With this Checklist for Class IV Landfill, Barton Excavating is submitting the enclosed application for the landfill permit for the proposed landfill to be sited West of Ephraim located on property owned by Karl Lund

Facility General Information

Description of Facility

The facility in question is a wash where debris from building demolition has been dumped The landfill is located in Township 17 South, Range 2 East in Sanpete County, Utah west of Ephraim Starting at Ephraim Mam Street and 100 North (Street Light), go west approximately 3 9 miles (just as the paved road turns south) The dirt road heading north just a few feet from the turn enters Karl Lund property The landfill is located at the Southeast corner of his property where there is a wash The landfill will not be a commercial facility No new debris will be added to the landfill It will only contain the debris that is already in place which consists of waste from building demolition The wash will be realigned to the west of the landfill and the debris will be capped with at least 18" of material excavated from the wash realignment

Land use in the surrounding area consists of predominantly agriculture The land immediately around the facility is in its undisturbed natural state

Legal Description of Property

The legal description of the property is SW ¼ NE ¼, Lot 2, Sec 2-17-2E cont 80 33 ac

Proof of Ownership

A Sanpete County tax roll is contained in the Appendices with the parcel number showing the ownership of the property in question The owner of the property is Karl Lund

Schedule of Construction

The wash where the material was dumped will be realigned and the excavated material from the realignment will be used to cap the debris piled in the existing wash The cap will be compacted so as to prevent erosion Erosion control measures such as geo grid and/or rip rap will be implemented where necessary Construction is expected to begin within a few weeks of the permit approval

Adjacent Property Owners within 1000 Feet

A letter was sent to all the adjacent property owners informing them of the opening and closing of the landfill in order to comply with federal law Included in the Appendices is the letter sent from Karl Lund to the adjacent property owners Also included m the Appendices are certified mail receipts showing that the letters were sent via certified mail

Location Standards

Land Use

Existing Land use Maps

Due to the proposed landfill's location on the far west end of the valley, there are only a few residences to the east, but none directly adjacent to the landfill There are no national parks, monuments, or wilderness areas in the immediate vicinity There are no parks or other recreation areas nearby Please see the design drawings m the Appendices for topography and other information

Surface Water

24 Hour Storm Events

The total precipitation from a 100 year, 24 hour storm event at the landfill is estimated to be about 2 65 inches The maximum runoff through the realigned channel around the landfill from a 100 year storm is estimated to be 285 cubic feet per second Included in the Appendices are the 24 hour storm event intensities The normal precipitation, temperature, snowfall, and freeze data are also included in the Appendices

Ground Water

Well Logs

Attached is the well log for the closest well to the landfill site It is approximately 750 feet from the landfill The water well log shows the depth to water in the area to be 21 feet

Technical Information

Maps

Topographic map with contours, landfill boundary, monitoring well locations

Attached in the Appendices are the technical plans for the channel realignment and the capping of the debris pile

Geohydrological Assessment

Local and regional hydrology

As mentioned above the 100 year storm discharge through the wash where the debris is piled is estimated at 285 cubic feet per second Included in the Appendices are the calculations of storm water discharge using the regional regression equations from the USGS Also included are the characteristics of the watershed contributing to the channel where the debris is located

Depth to ground Water

According to the survey done by Jones and DeMille Engineering, Inc the existing wash is about 6 to 8 feet deep upstream of the debris pile The attached well log for the closest well to the landfill shows that the depth to water is around 21 feet Therefore, it is reasonable to assume that the bottom of the

debris will be about 13 to 15 feet above the ground water level See the Appendices for more information

Private Wells within 2,000 feet of Facility

There is one well with 2,000 feet of the facility It has been mentioned above already The owner of the well is Glen S Larson See the Appendices for well and owner information

Ground and Surface Water Rights within 2,000 feet of Facility

There are four water rights within 2,000 feet of the facility The table below contains the information for those water rights More information on these water rights can be found in the Appendices

Water Right	Owner	Type of Right
65-1517	Manti Irrigation & Reservoir Company	Underground Water Claim
91-87	Sanpete County Water Conservancy District	Application to Appropriate
93-1006	USA Bureau of Reclamation – Provo Area Office	Application to Appropriate
93-1007	USA Bureau of Reclamation – Provo Area Office	Application to Appropriate

Engineering Report, Plans, Specifications, and Calculations

Cover Design and Plans

The cover over the landfill will be a minimum of 24" of compacted fill excavated from the wash realignment Calculations show that the channel realignment will generate approximately 9,400 cubic yards The landfill area is about 98,425 square feet Therefore, the required volume of fill to cap the landfill area with at least 24" of compacted fill is 8,750 cubic yards A shrinkage factor of 1 20 was used for that calculation See the Appendices for more information

Design and location of run-on and run-off control systems

Calculations show that the channel, as designed, is sufficient for a 100 year storm event The 100 year storm event is equal to 285 cubic feet per second In order to carry 285 cubic feet per second the channel, as designed, would need to be about 4 8 feet deep However, the minimum depth of the channel is 5 feet The maximum flow the channel is able to carry without overtopping is about 477 cubic feet per second which is about 190 cubic feet per second more than the predicted flow rate See the Appendices for more information

Identification of Borrow Sources

The borrow site for the landfill is the material generated from the re-alignment of the existing channel where the debris is piled As mentioned above the fill generated from the channel realignment is estimated at 9,400 cubic yards, and it is anticipated that 8,750 cubic yards will be required to cap the landfill That figure includes a shrinkage factor of 1 20 as mentioned above and shown in the Appendices

Closure Requirements

Design of Final Cover

The hnal cover of the landfill will be a minimum of 18 inches of compacted fill material generated from the channel realignment

Capacity of the Site

It is anticipated that the debris pile is about 6 to 8 feet deep throughout the wash If you assume the depth is constant at 8 feet throughout the entire area of the landfill site, about 98,425 square feet, then you end up with an approximate volume of 29,163 cubic yards However, the actual volume of the debris is probably less because it is not likely that the debris has a constant depth of 8 feet throughout the entire area Also, the 98,425 square feet is based on an encompassing area around the debris pile The actual debris pile area is less than the area used in the calculation Therefore, the volume estimate of 29,163 cubic yards is likely much greater than the actual debris volume

Post Closure Requirements

Maintenance

Maintenance of the closed landfill will consist of maintaining the 18 inch cap over the debris, maintaining the relocated channel depth to a minimum of 6 feet, and reseeding the areas of the cap that needed maintenance It is anticipated that excavation from the channel will be used to maintain areas of the cap as required

Contact Information

Contact Barton Excavating with maintenance concerns about the facility during the post closure period Their contact information is

Barton Excavating
250 West Center Street
Ephraim, UT 84627
Phone (435) 283-4762
Fax (435) 283-5860

Financial Assurance

Closure and Post Closure Costs

The probable costs for closure and post-closure care were computed as part of this application The probable cost for closure work is estimated at $12,900 for engineering work and $42,481 for construction work for a total of $55,381 for closure services The probable cost for post-closure care is estimated at $67,443 The total probable cost for both closure and post-closure care is estimated at $122,824 Opinions of probable cost for closure and post closure care can be found in the Appendices

Financial Assurance Mechanism

The financial assurance mechanism for the landfill will be provided by Zion's Bank Zion's Bank will issue a letter of credit for the total amount of post-closure care

Appendix A

Facility General Information

Utah Class IV and VI Landfill Permit Application Form

Part I General Information APPLICANT PLEASE COMPLETE ALL SECTIONS

I Landfill Type	☐ Class IVa ☐ Class IVb ☐ Class VI	II. Application Type	☐ New Application ☐ Renewal Application ☐ Facility Expansion ☐ Modification

For Renewal Applications, Facility Expansion Applications and Modifications Enter Current Permit Number ____

III Facility Name and Location

Legal Name of Facility: Westside Landfill

Site Address (street or directions to site): See attached. County: Sanpete

City: Ephraim State: Ut Zip Code: 84627 Telephone: 435 340-1257

Township: Range: Section(s): Quarter/Quarter Section: Quarter Section:

Main Gate Latitude degrees minutes seconds Longitude degrees minutes seconds

IV. Facility Owner(s) Information

Legal Name of Facility Owner: Ralph A Lund etal Trust

Address (mailing): c/o Karl Lund 53 So 180 W

City: Ephraim State: Ut Zip Code: 84627 Telephone: 435 340-1257

V Facility Operator(s) Information

Legal Name of Facility Operator: Barton Excavating Inc

Address (mailing): 160 No Main

City: Ephraim State: Ut Zip Code: 84627 Telephone: 435 283-4762

VI Property Owner(s) Information

Legal Name of Property Owner: See attached Sanpete Co parcel Description

Address (mailing): c/o Karl Lund 53 So 180 W

City: Ephraim State: Ut Zip Code: 84627 Telephone: 435 340-1257

VII. Contact Information

Owner Contact: Karl Lund Title: Part owner

Address (mailing): 53 SO 180 west

City: Ephraim State: Ut Zip Code: 84627 Telephone: 435 340-1257

Email Address: Alternative Telephone (cell or other): 435 283-8856

Operator Contact: Lamar Barton Title: President

Address (mailing): 160 NO main

City: Ephraim State: Ut Zip Code: 84627 Telephone: 435 283-4762

Email Address: bartex@mail.manti.com Alternative Telephone (cell or other): 435 851-0021

Property Owner Contact: Karl Lund Title: part owner

Address (mailing): 53 SO 180 west

City: Ephraim State: Ut Zip Code: 84627 Telephone: 435 -283-8856

Email Address: Alternative Telephone (cell or other): 435- 851-0021

Utah Class IV and VI Landfill Permit Application Form

Part I General Information (Continued)

VIII Waste Types (check all that apply)

☐ Landfill will accept all wastes allowed in Class IV or VI landfills Or landfill will accept only the following wastes

Waste Type	Combined Disposal Unit	Monofill Unit
☒ Construction & Demolition	☐	☐
☐ Tires	☐	☐
☐ Yard Waste	☐	☐
☐ Animals	☐	☐
☐ Contaminated Soil	☐	☐
☐ Other _____	☐	☐

Note Disposal of dead animals must be approved by the Executive Secretary

IX Facility Area

Facility Area	_____	acres
Disposal Area	_____	acres
Design Capacity		
Yearc	_____	
Cubic Yards	_____	
Tons	_____	

X. Fee and Application Documents

Indicate Documents Attached To This Application ☐ Application Fee Amount $

☐ Facility Map or Maps ☐ Facility Legal Description ☐ Plan of Operation ☐ Waste Description
☐ Ground Water Report ☐ Closure Design ☐ Cost Estimates ☐ Financial Assurance

Class VI Special Requirements
☐ Documents required by UCA 19-6-108(9) and (10)

I HEREBY CERTIFY THAT THIS INFORMATION AND ALL ATTACHED PAGES ARE CORRECT AND COMPLETE

Signature	Title	Date
Signature of Authorized Owner Representative: Karl Lund Name typed or printed: KARL LUND	Title: Part owner Address: 53 So 180 W, Ephraim, Ut 84627	
Signature of Authorized Land Owner Representative (if applicable): Karl Lund Name typed or printed: KARL LUND	Title: Same as above Address:	
Signature of Authorized Operator Representative (if applicable): Lamar A Barton Name typed or printed: LAMAR A BARTON	Title: President Address: 160 No Main, Ephraim, Ut 84627	

Westside Landfill

Starting at Ephraim Main Street and 100 North (Street hght), go West approximately 3 9 miles [just at the paved road turns South]. The dirt road heading North just a few feet from the turn, enters Karl Lund property. The landfill is will be located at the Southeast comer of his property where there is a wash

Legal descnption of parcel No. 5523:
SW ¼ NE ¼, Lot 2, Sec 2-17-2E cont 80.33 ac see Bk 397 Pg 623 for easement.

SANPETE COUNTY CORPORATION

Taxroll Owners/Interest/Legals

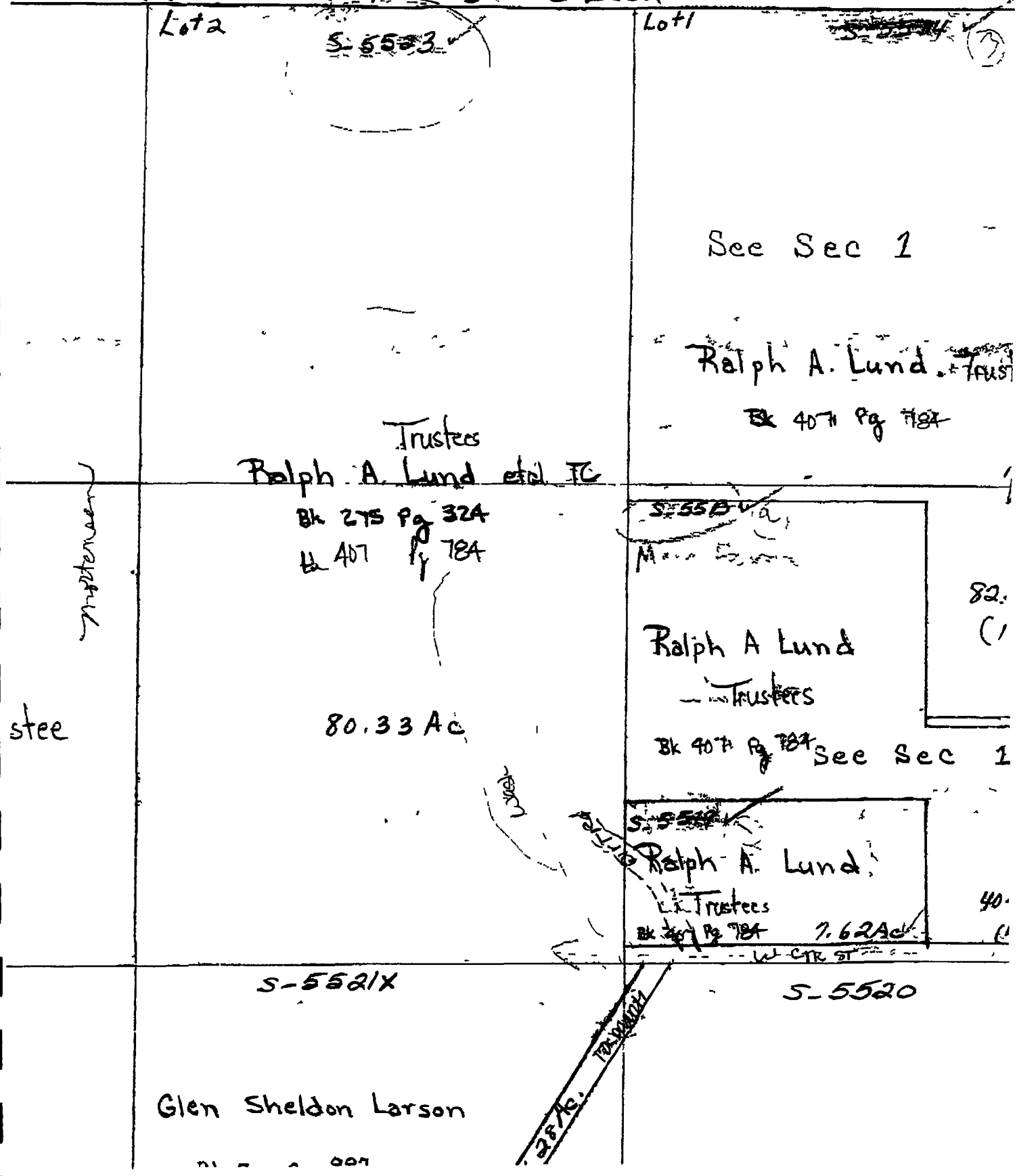
Parcel Order

03/03/2009
11 05AM

Parcel Number	Primary/Secondary Owners	Mailing Address/Interest	City	ST	Zip Code	Acres
0000005523	LUND THOMAS E ETUX JT 1/2	207 N 100 W	EPHRAIM	UT	84627-0000	80 33
	LUND LESLIE J ETAL JT 1/2 ETAL	580/1463				
	LUND KARL LEE 1/4 ETAL	275/324				
	LUND JULIE C 1/4 ETAL	275/324				
	SW1/4 NE1/4 LOT 2 SEC 2 17-2E CONT 80 33 AC SEE BK 397 PG 623 FOR EASEMENT					
000005521X	LARSON GLEN S TRUSTEE	PMS 269	SAN DIEGO	OA	92154-4798	40 60
	BEG 2 70 C N SW COR SE1/4 SEC 2-17-2E N17°E 4 10 C N30°20 E 38 66 C W 20 73 C S 37 30 C TO BEG CONT 40 60 AC BK341 PG813 FOR UP&L EASEMENT					

Christensen

Township 17 South, Range 2 East



Barton Excavating Inc.

Description of Debris in Westside Landfill

Cement

Dirt

Boulders

Building Demolish debris

Karl L Lund
53 South 180 West
Ephraim, UT 84627

435 283-8856

435 340-1257

March 18, 2009

Glen Larson
c/o Mark Larson
PSC Box 3405
Building 304
Altus Air Force Base, OK 73523
7005 1820 0004 8804 7679

Richard Christensen
120 West Center
Ephraim, UT 84627
7005 1820 0004 8804 7662

Benny Mortensen
1060 Windsor Drive
Logan, UT 84321
7005 1820 0004 8804 7655

RE Notification of Landfill Closure Permit

Dear Landowner

Material from the Ephraim West Ward, plus other home demolition debris, has been dumped in a wash on my land We have been informed that this was illegal and are required to go through a Landfill Closure Application [This means we are going to open a landfill and close it at the same time]

As an adjacent landowner, we are directed to notify you of our intentions to comply with the application process of the State Division of Solid and Hazardous Waste for a landfill closure permit

If you would like further details and/or to be put on a mailing list for the permitting process, please contact Ralph Bohn at the Division of Solid and Hazardous Waste He may be reached at 801-538-6794 Monday through Thursday

Cordially yours,

Karl L Lund

Karl L Lund

7005 1820 0004 8804 7662

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Restricted Delivery Fee (Endorsement Required)
Total Postage & Fees $

Postmark Here
MAR 18 2009

Sent To
Richard Christensen
Street, Apt. No. or PO Box No. 120 W Center
City, State, ZIP+4 Fairview, Ut 84627

PS Form 3800, June 2002 See Reverse for Instructions

7005 1820 0004 8804 7655

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Return Receipt Fee (Endorsement Required)
Restricted Delivery Fee (Endorsement Required)
Total Postage & Fees $

Postmark Here
MAR 18 2009

Sent To
Benny Mortensen
Street, Apt. No. or PO Box No. 1060 Windsor Dr
City, State, ZIP+4 Logan, Ut 84321

PS Form 3800, June 2002 See Reverse for Instructions

7005 1820 0004 8804 7679

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Restricted Delivery Fee (Endorsement Required)
Total Postage & Fees $

Postmark Here
MAR 18 2009

Sent To
Glen Larson c/o Mark Larson
Street, Apt. No. or PO Box No. PSC Box 3405, Bldg 304
City, State, ZIP+4 Altus Air Force Base, OK 73523

PS Form 3800, June 2002 See Reverse for Instructions

Appendix B

Location Standards

POINT PRECIPITATION FREQUENCY ESTIMATES FROM NOAA ATLAS 14

Utah 39 327 N 111 54 W 7378 **feet**

from Precipitation Frequency Atlas of the United States NOAA Atlas 14 Volume 1 Version 4
G M Bonnin, D Martin B Lin T Parzybok M Yekta and D Riley
NOAA National Weather Service Silver Spring, Maryland, 2006

Extracted Mon Feb 22 2010

Confidence Limits | Seasonality | Location Maps | Other Info | GIS data | Maps | Docs | Return to State Map

Precipitation Frequency Estimates (inches)

ARI* (years)	5 mm	10 mm	15 mm	30 mm	60 mm	120 mm	3 hr	6 hr	12 hr	24 hr	48 hr	4 day	7 day	10 day	20 day	30 day	45 day	60 day
1	0 12	0 18	0 22	0 29	0 36	0 47	0 54	0 71	0 92	1 02	1 19	1 46	1 78	2 06	2 84	3 46	4 39	5 28
2	0 15	0 23	0 28	0 38	0 47	0 59	0 67	0 88	1 12	1 26	1 47	1 81	2 22	2 57	3 54	4 31	5 45	6 57
5	0 21	0 32	0 39	0 53	0 65	0 78	0 86	1 08	1 36	1 56	1 81	2 24	2 75	3 17	4 36	5 28	6 65	8 00
10	0 26	0 39	0 48	0 65	0 81	0 95	1 03	1 26	1 55	1 80	2 10	2 60	3 19	3 66	5 01	6 05	7 58	9 09
25	0 33	0 51	0 63	0 85	1 05	1 21	1 28	1 50	1 82	2 13	2 50	3 11	3 79	4 32	5 86	7 08	8 81	10 52
50	0 40	0 61	0 76	1 02	1 26	1 44	1 50	1 70	2 03	2 38	2 81	3 52	4 27	4 84	6 51	7 86	9 74	11 58
100	0 47	0 72	0 90	1 21	1 50	1 70	1 75	1 94	2 25	2 65	3 15	3 96	4 77	5 38	7 17	8 65	10 68	12 63
200	0 56	0 86	1 06	1 43	1 77	2 01	2 06	2 19	2 49	2 91	3 49	4 42	5 29	5 92	7 83	9 44	11 61	13 67
500	0 70	1 07	1 32	1 78	2 20	2 48	2 53	2 67	2 88	3 28	3 98	5 06	6 00	6 67	8 71	10 48	12 84	15 03
1000	0 82	1 25	1 55	2 09	2 58	2 90	2 96	3 08	3 30	3 57	4 36	5 58	6 56	7 25	9 38	11 27	13 77	16 04

These precipitation frequency estimates are based on a partial duration series ARI is the Average Recurrence Interval
Please refer to NOAA Atlas 14 Document for more information NOTE Formatting forces estimates near zero to appear as zero

*** Upper bound of the 90% confidence interval Precipitation Frequency Estimates (inches)**

ARI** (years)	5 mm	10 mm	15 mm	30 mm	60 mm	120 mm	3 hr	6 hr	12 hr	24 hr	48 hr	4 day	7 day	10 day	20 day	30 day	45 day	60 day
1	0 13	0 20	0 25	0 34	0 41	0 52	0 59	0 78	0 99	1 14	1 29	1 61	1 96	2 26	3 12	3 78	4 79	5 74
2	0 17	0 26	0 32	0 44	0 54	0 66	0 74	0 96	1 22	1 41	1 61	1 99	2 45	2 82	3 88	4 71	5 96	7 16
5	0 24	0 36	0 45	0 60	0 74	0 87	0 96	1 19	1 48	1 74	1 98	2 47	3 02	3 48	4 77	5 78	7 27	8 72
10	0 29	0 45	0 55	0 74	0 92	1 07	1 15	1 38	1 69	2 00	2 29	2 86	3 50	4 01	5 48	6 62	8 29	9 91
25	0 38	0 58	0 72	0 97	1 20	1 37	1 43	1 66	1 99	2 37	2 73	3 42	4 16	4 74	6 41	7 74	9 62	11 47
50	0 46	0 70	0 87	1 17	1 44	1 63	1 68	1 90	2 23	2 65	3 08	3 88	4 70	5 32	7 13	8 60	10 66	12 65
100	0 55	0 84	1 04	1 40	1 73	1 95	1 98	2 17	2 48	2 95	3 46	4 36	5 26	5 93	7 88	9 50	11 72	13 85
200	0 66	1 00	1 25	1 68	2 08	2 32	2 35	2 48	2 78	3 25	3 86	4 89	5 86	6 55	8 64	10 41	12 79	15 06
500	0 84	1 28	1 58	2 13	2 64	2 92	2 96	3 08	3 26	3 68	4 42	5 63	6 69	7 42	9 68	11 63	14 22	16 66
1000	1 00	1 52	1 88	2 54	3 14	3 48	3 51	3 61	3 78	4 02	4 87	6 25	7 37	8 12	10 48	12 59	15 35	17 88

The upper bound of the confidence interval at 90% confidence level is the value which 5% of the simulated quantile values for a given frequency are greater than
These precipitation frequency estimatss are based on a partial duration series. ARI is the Average Recurrence Interval

Please refer to NOAA Atlas 14 Document for more information NOTE Formatting prevents estimates near zero to appear as zero

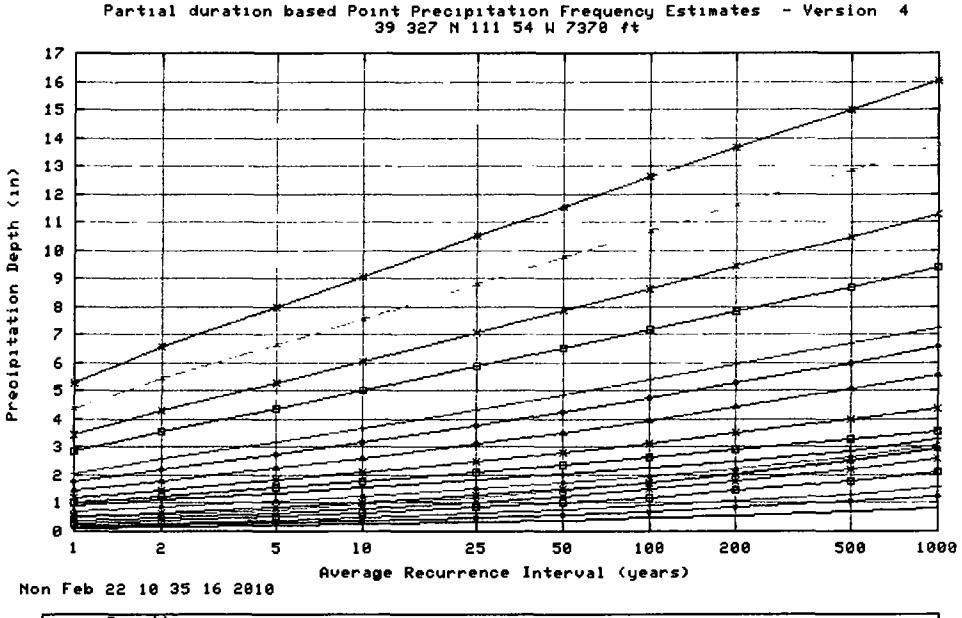
*** Lower bound of the 90% confidence interval Precipitation Frequency Estimates (inches)**

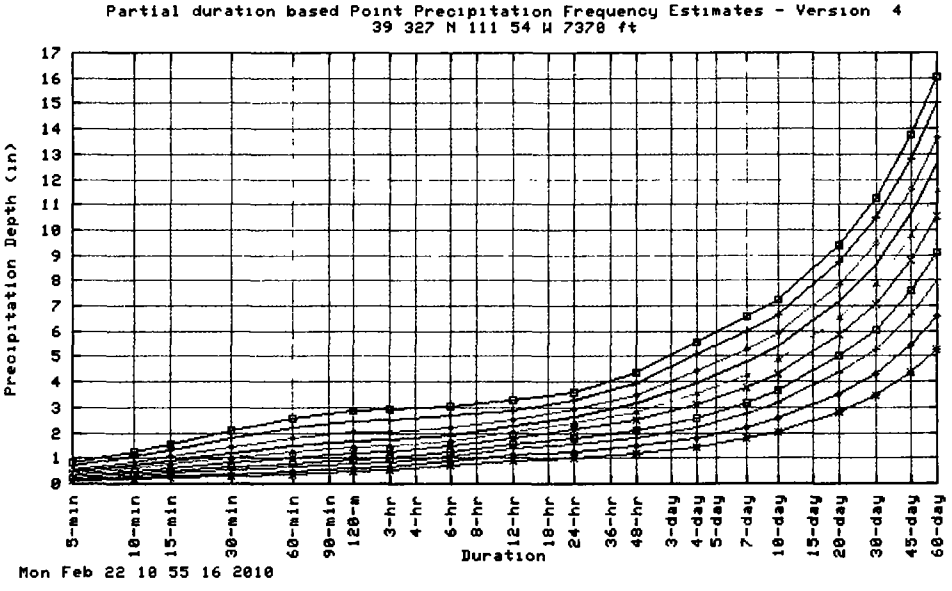
ARI** (years)	5 mm	10 mm	15 mm	30 mm	60 mm	120 mm	3 hr	6 hr	12 hr	24 hr	48 hr	4 day	7 day	10 day	20 day	30 day	45 day	60 day
1	0 10	0 16	0 20	0 26	0 33	0 42	0 49	0 65	0 84	0 93	1 09	1 33	1 64	1 90	2 60	3 17	4 03	4 86
2	0 13	0 20	0 25	0 34	0 42	0 53	0 61	0 81	1 04	1 15	1 36	1 65	2 04	2 36	3 24	3 94	5 00	6 04
5	0 18	0 28	0 35	0 47	0 58	0 70	0 79	1 00	1 25	1 42	1 67	2 04	2 52	2 91	3 98	4 82	6 09	7 35
10	0 22	0 34	0 42	0 57	0 70	0 85	0 93	1 15	1 43	1 63	1 93	2 37	2 91	3 35	4 56	5 51	6 92	8 35
25	0 28	0 43	0 54	0 72	0 89	1 06	1 14	1 35	1 65	1 92	2 28	2 82	3 44	3 93	5 32	6 42	8 00	9 61
50	0 34	0 51	0 63	0 85	1 05	1 24	1 31	1 52	1 83	2 14	2 56	3 17	3 85	4 38	5 87	7 10	8 82	10 53
100	0 39	0 59	0 74	0 99	1 23	1 42	1 50	1 70	2 01	2 36	2 84	3 53	4 27	4 83	6 43	7 78	9 61	11 42
200	0 45	0 68	0 85	1 14	1 41	1 63	1 73	1 89	2 19	2 58	3 12	3 90	4 69	5 28	6 98	8 43	10 37	12 28
500	0 54	0 81	1 01	1 36	1 68	1 93	2 05	2 24	2 49	2 88	3 50	4 41	5 25	5 86	7 67	9 27	11 35	13 36
1000	0 61	0 92	1 14	1 54	1 91	2 18	2 32	2 54	2 82	3 10	3 79	4 80	5 68	6 30	8 19	9 89	12 07	14 14

The lower bound of the confidence interval at 90 % confidence level is the value which 5% of the simulated quantile values for a given frequency are less than
These precipitation frequency estimates are based on a partial duration maxima series. ARI is the Average Recurrence Interval

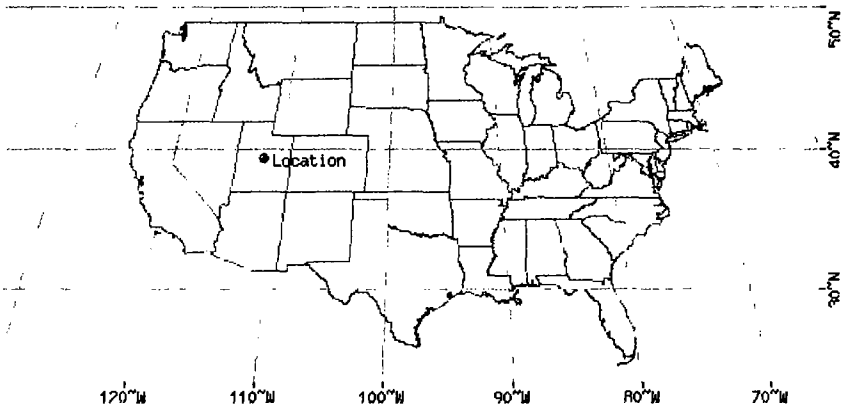
Please refer to NOAA Atlas 14 Document for more information NOTE Formatting prevents estimates near zero to appear as zero

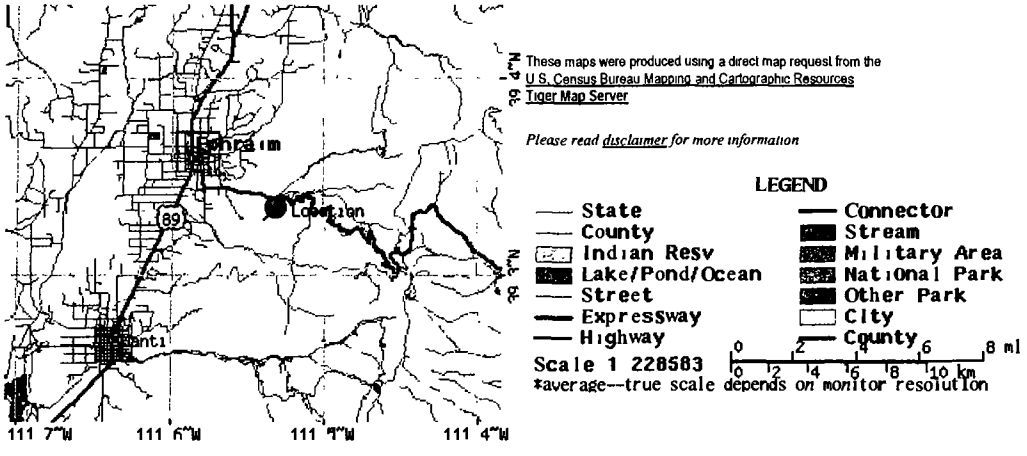
Text version of tables





Maps -





Other Maps/Photographs -

View USGS digital orthophoto quadrangle (DOQ) covering this location from TerraServer USGS Aerial Photograph may also be available from this site A DOQ is a computer generated image of an aerial photograph in which image displacement caused by terrain relief and camera tilts has been removed It combines the image characteristics of a photograph with the geometric qualities of a map Visit the USGS for more information

Watershed/Stream Flow Information -

Find the Watershed for this location using the U S Environmental Protection Agency's site

Climate Data Sources -

Precipitation frequency results are based on data from a variety of sources but largely NCDC The following links provide general information about observing sites in the area, regardless of if their data was used in this study For detailed information about the stations used in this study please refer to NOAA Atlas 14 Document

Using the National Climatic Data Center's (NCPC) station search engine, locate other climate stations within

15-30 minutes OR 1/2 degree of this location (39 327/ 111 540) Digital ASCII data can be obtained directly from NCDC

Find Natural Resources Conservation Service (NRCS) SNOTEL (SNOwpack TELemetry) stations by visiting the Western Regional Climate Center's state-specific SNOTEL station maps

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Hydrometeorological Design Studies Center
DOC/NOAA/National Weather Service
1325 East West Highway
Silver Spring MD 20910
(301) 713-1669
Questions? HDSC.Questions@noaa.gov

Disclaimer

POINT PRECIPITATION FREQUENCY ESTIMATES FROM NOAA ATLAS 14

Utah 39 327 N 111 54 W 7378 **feet**

from Precipitation Frequency Atlas of the United States NOAA Atlas 14 Volume 1 Version 4
G M Bonnin D Martin B Lin T Parzybok M Yekta and D Riley
NOAA National Weather Service Silver Spring, Maryland 2006

Extracted Fri May 15 2009

Confidence Limits | Seasonality | Location Maps | Other Info | GIS data | Maps | Docs | Return to State Map

Precipitation Intensity Estimates (in/hr)

ARI* (years)	5 min	10 min	15 min	30 min	60 min	120 min	3 hr	6 hr	12 hr	24 hr	48 hr	4 day	7 day	10 day	20 day	30 day	45 day	60 day
1	1 38	1 06	0 87	0 59	0 36	0 23	0 18	0 12	0 08	0 04	0 02	0 02	0 01	0 01	0 01	0 00	0 00	0 00
2	1 79	1 36	1 12	0 76	0 47	0 29	0 22	0 15	0 09	0 05	0 03	0 02	0 01	0 01	0 01	0 01	0 01	0 00
5	2 50	1 90	1 57	1 06	0 65	0 39	0 29	0 18	0 11	0 07	0 04	0 02	0 02	0 01	0 01	0 01	0 01	0 01
10	3 07	2 34	1 93	1 30	0 81	0 48	0 34	0 21	0 13	0 08	0 04	0 03	0 02	0 02	0 01	0 01	0 01	0 01
25	4 00	3 04	2 51	1 69	1 05	0 61	0 43	0 25	0 15	0 09	0 05	0 03	0 02	0 02	0 01	0 01	0 01	0 01
50	4 80	3 65	3 02	2 03	1 26	0 72	0 50	0 28	0 17	0 10	0 06	0 04	0 03	0 02	0 01	0 01	0 01	0 01
100	5 70	4 34	3 59	2 42	1 50	0 85	0 58	0 32	0 19	0 11	0 07	0 04	0 03	0 02	0 01	0 01	0 01	0 01
200	6 76	5 14	4 25	2 86	1 77	1 00	0 68	0 37	0 21	0 12	0 07	0 05	0 03	0 02	0 02	0 01	0 01	0 01
500	8 40	6 40	5 28	3 56	2 20	1 24	0 84	0 45	0 24	0 14	0 08	0 05	0 04	0 03	0 02	0 01	0 01	0 01
1000	9 85	7 50	6 20	4 17	2 58	1 45	0 99	0 51	0 27	0 15	0 09	0 06	0 04	0 03	0 02	0 02	0 01	0 01

These precipitation frequency estimates are based on a partial duration series ARI is the Average Recurrence Interval
Please refer to NOAA Atlas 14 Document for more information NOTE Formatting forces estimates near zero to appear as zero

*** Upper bound of the 90% confidence interval**
Precipitation Intensity Estimates (in/hr)

ARI** (years)	5 min	10 min	15 min	30 min	60 min	120 min	3 hr	6 hr	12 hr	24 hr	48 hr	4 day	7 day	10 day	20 day	30 day	45 day	60 day
1	1 58	1 21	1 00	0 67	0 41	0 26	0 20	0 13	0 08	0 05	0 03	0 02	0 01	0 01	0 01	0 01	0 00	0 00
2	2 05	1 57	1 29	0 87	0 54	0 33	0 25	0 16	0 10	0 06	0 03	0 02	0 01	0 01	0 01	0 01	0 01	0 00
5	2 83	2 15	1 78	1 20	0 74	0 44	0 32	0 20	0 12	0 07	0 04	0 03	0 02	0 01	0 01	0 01	0 01	0 01
10	3 52	2 68	2 21	1 49	0 92	0 53	0 38	0 23	0 14	0 08	0 05	0 03	0 02	0 02	0 01	0 01	0 01	0 01
25	4 57	3 48	2 88	1 94	1 20	0 68	0 48	0 28	0 17	0 10	0 06	0 04	0 02	0 02	0 01	0 01	0 01	0 01
50	5 51	4 19	3 46	2 33	1 44	0 82	0 56	0 32	0 19	0 11	0 06	0 04	0 03	0 02	0 01	0 01	0 01	0 01
100	6 61	5 03	4 16	2 80	1 73	0 98	0 66	0 36	0 21	0 12	0 07	0 05	0 03	0 02	0 02	0 01	0 01	0 01
200	7 92	6 03	4 98	3 35	2 08	1 16	0 78	0 41	0 23	0 14	0 08	0 05	0 03	0 03	0 02	0 01	0 01	0 01
500	10 07	7 66	6 33	4 26	2 64	1 46	0 99	0 51	0 27	0 15	0 09	0 06	0 04	0 03	0 02	0 02	0 01	0 01
1000	11 98	9 11	7 53	5 07	3 14	1 74	1 17	0 60	0 31	0 17	0 10	0 07	0 04	0 03	0 02	0 02	0 01	0 01

The upper bound of the confidence interval at 90% confidence level is the value which 5% of the simulated quantile values for a given frequency are greater than
These precipitation frequency estimates are based on a partial duration series ARI is the Average Recurrence Interval

Please refer to NOAA Atlas 14 Document for more information NOTE Formatting prevents estimates near zero to appear as zero

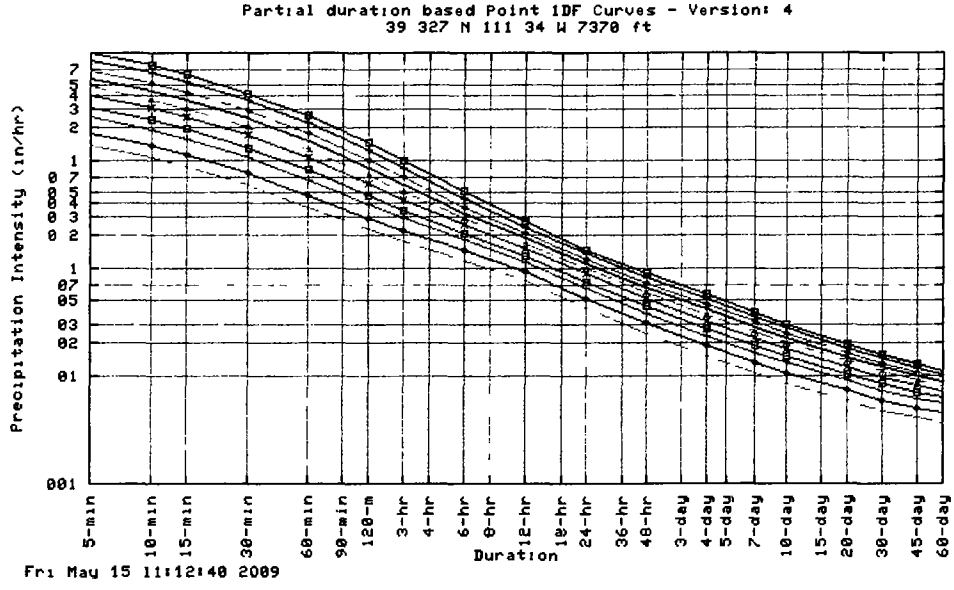
*** Lower bound of the 90% confidence interval**
Precipitation Intensity Estimates (in/hr)

ARI** (years)	5 min	10 min	15 min	30 min	60 min	120 min	3 hr	6 hr	12 hr	24 hr	48 hr	4 day	7 day	10 day	20 day	30 day	45 day	60 day
1	1 24	0 94	0 78	0 53	0 33	0 21	0 16	0 11	0 07	0 04	0 02	0 01	0 01	0 01	0 01	0 00	0 00	0 00
2	1 58	1 21	1 00	0 67	0 42	0 26	0 20	0 14	0 09	0 05	0 03	0 02	0 01	0 01	0 01	0 01	0 00	0 00
5	2 21	1 68	1 39	0 94	0 58	0 35	0 26	0 17	0 10	0 06	0 03	0 02	0 01	0 01	0 01	0 01	0 01	0 01
10	2 69	2 05	1 69	1 14	0 70	0 42	0 31	0 19	0 12	0 07	0 04	0 02	0 02	0 01	0 01	0 01	0 01	0 01
25	3 41	2 60	2 14	1 44	0 89	0 53	0 38	0 23	0 14	0 08	0 05	0 03	0 02	0 02	0 01	0 01	0 01	0 01
50	4 02	3 07	2 53	1 70	1 05	0 62	0 44	0 25	0 15	0 09	0 05	0 03	0 02	0 02	0 01	0 01	0 01	0 01
100	4 69	3 56	2 95	1 98	1 23	0 71	0 50	0 28	0 17	0 10	0 06	0 04	0 03	0 02	0 01	0 01	0 01	0 01
200	5 40	4 10	3 39	2 29	1 41	0 82	0 57	0 32	0 18	0 11	0 07	0 04	0 03	0 02	0 01	0 01	0 01	0 01
500	6 42	4 88	4 04	2 72	1 68	0 97	0 68	0 37	0 21	0 12	0 07	0 05	0 03	0 02	0 02	0 01	0 01	0 01
1000	7 27	5 54	4 58	3 08	1 91	1 09	0 77	0 42	0 23	0 13	0 08	0 05	0 03	0 03	0 02	0 01	0 01	0 01

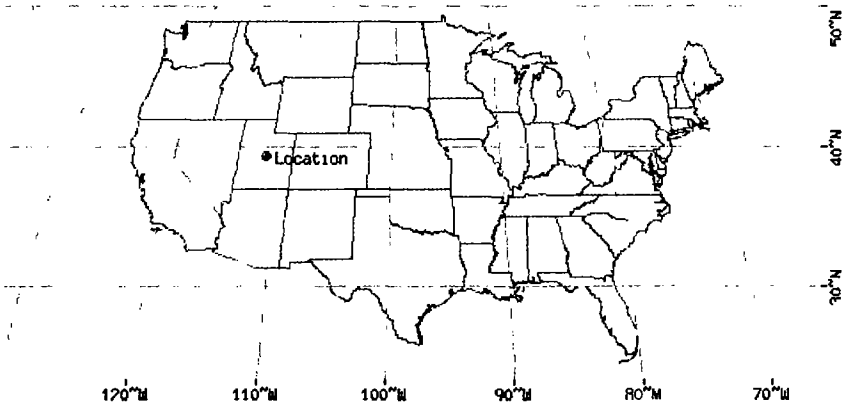
The lower bound of the confidence interval at 90% confidence level is the value which 5% of the simulated quantile values for a given frequency are less than

These precipitation frequency estimates are based on a partial duration maxima series. ARI is the Average Recurrence Interval
Please refer to NOAA Atlas 14 Document for more information NOTE Formatting prevents estimates near zero to appear as zero

Text version of tables

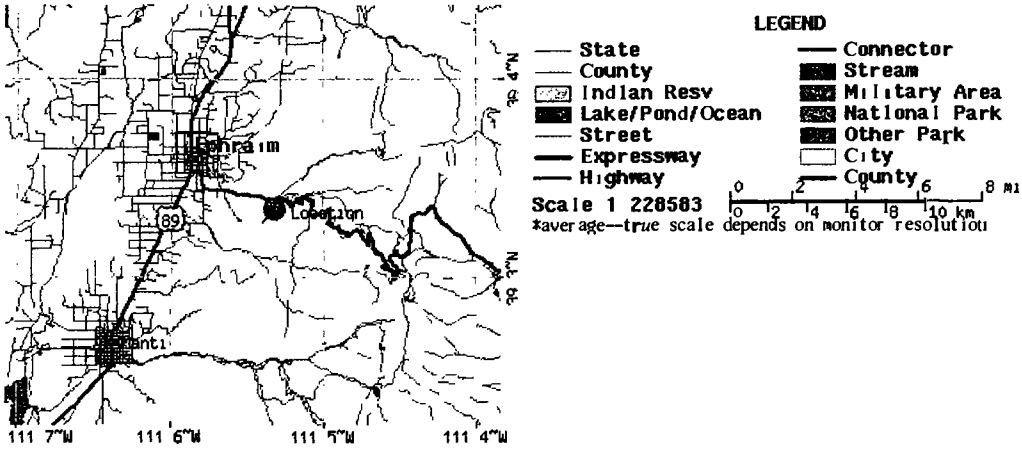


Maps -



These maps were produced using a direct map request from the
U.S. Census Bureau Mapping and Cartographic Resources
Tiger Map Server

Please read disclaimer for more information



Other Maps/Photographs -

View USGS digital orthophoto quadrangle (DOQ) covering this location from TerraServer USGS Aerial Photograph may also be available from this site A DOQ is a computer generated image of an aerial photograph in which image displacement caused by terrain relief and camera tilts has been removed It combines the image characteristics of a photograph with the geometric qualities of a map Visit the USGS for more information

Watershed/Stream Flow Information -

Find the Watershed for this location using the U S Environmental Protection Agency s site

Climate Data Sources -

Precipitation frequency results are based on data from a variety of sources but largely NCDC The following links provide general information about observing sites in the area regardless of if their data was used in this study For detailed information about the stations used in this study please refer to NOAA Atlas 14 Document

Using the National Climatic Data Center's (NCDC) station search engine locate other climate stations within

+/-30 minutes OR +/-1 degree of this location (39 327/ 111 540) Digital ASCII data can be obtained directly from NCDC

Find Natural Resources Conservation Service (NRCS) SNOTEL (SNOwpack TELemetry) stations by visiting the Western Regional Climate Center's state-specific SNOTEL station maps

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Climatography of the United States No. 20 1971-2000

National Climatic Data Center
Federal Building
151 Patten Avenue
Asheville, North Carolina 28801
www ncdc noaa gov

Station EPHRAIM SORENSENS FLD, UT **COOP ID 422578**

Climate Division UT 4 **NWS Call Sign** **Elevation 5,510 Feet Lat 39°22N Lon 111°55W**

Temperature (°F)																						
Mean (1)				Extremes											Degree Days (1) Base Temp 65		Mean Number of Days (3)					
Month	Daily Max	Daily Mm	Mean	Highest Daily(2)	Year	Day	Highest Month(1) Mean	Year	Lowest Daily(2)	Year	Day	Lowest Month(1) Mean	Year		Heating	Cooling	Max >= t00	Max >= 90	Max >= 50	Max <= 32	Min <= 32	Mm <= 0
Jan	37 4	13 7	25 6	59+	1981	2	33 5	1981	28	1982	7	17 9	1989		1222	0	0	0	2 1	10 0	30 3	4 0
Feb	43 7	18 8	31 3	70	1972	28	38 8	1995	22	1982	6	23 6	1974		945	0	0	0	5 8	3 7	26 9	1 5
Mar	53 1	26 4	39 8	76	1997	20	46 8	1986	9	1997	1	35 1	1977		784	0	0	0	16 7	9	24 9	1
Apr	62 1	32 0	47 1	88	2000	27	53 7	1992	9	1975	2	40 5	1975		540	1	0	0	24 1	1	16 2	0
May	72 6	39 4	56 0	94+	1989	7	60 8	1974	20	1978	5	49 9	1995		294	15	0	3	29 8	0	4 6	0
Jun	84 5	47 0	65 8	102	2001	30	70 5	1994	26	1976	14	58 1	1995		89	112	1	6 1	30 0	0	5	0
Jul	91 7	53 7	72 7	108	1998	18	75 8	1994	34	1983	11	68 7	1995		6	244	1 0	17 4	31 0	0	0	0
Aug	88 9	52 4	70 7	104	2000	2	75 9	1994	34+	1964	30	68 1	1975		7	182	5	12 8	31 0	0	0	0
Sep	78 5	44 0	61 3	97+	2000	14	65 8	1990	16	1965	18	56 7	1986		148	36	0	1 9	29 8	0	2 2	0
Oct	65 5	34 0	49 8	90	1996	9	56 5	1988	12+	1991	31	42 5	1984		476	2	0	@	27 4	2	13 2	0
Nov	49 3	23 8	36 6	76	1999	6	41 7	1995	5	1994	23	30 3	1979		854	0	0	0	14 0	2 2	26 3	3
Dec	38 9	14 9	26 9	66	1995	1	36 9	1980	-34	1990	23	17 3	1990		1182	0	0	0	3 3	8 5	30 2	3 1
Ann	63 9	33 3	48 6	108	Jul 1998	18	75 9	Aug 1994	34	Dec 1990	23	17 3	Dec 1990		6547	592	1 6	38 5	245 0	25 6	175 3	9 0

+ Also occurred on an earlier date(s)

@ Denotes mean number of days greater than 0 but less than 05

Complete documentation available from www ncdc noaa gov/oa/climate/normals/usnormals html

Issue Date February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record 1949-2001

(3) Derived from 1971-2000 serially complete daily data

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National Environmental Satellite, Data,
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Climatography of the United States No. 20 1971-2000

National Climatic Data Center
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151 Patton Avenue
Asheville, North Carolina 28801
www ncdc noaa gov

Station EPHRAIM SORENSENS FLD, UT **COOP ID 422578**

Climate Division UT 4 **NWS Call Sign** **Elevation 5,510 Feet Lat 39°22N Lon 111°35W**

Precipitation (inches)

	Precipitation Totals									Mean Number of Days (3)				Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
	Means/ Medians(1)		Extremes							Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels These values were determined from the incomplete gamma distribution										
Month	Mean	Median	Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year	>= 0 01	>= 0 10	>= 0 50	>= 1 00	05	10	20	30	40	50	60	70	80	90	95
Jan	1 01	80	1 10	2000	25	2 18	1993	16	1972	8 2	3 4	4	@	16	25	40	54	68	84	1 02	1 23	1 53	2 00	2 45
Feb	1 08	95	1 45	1980	18	3 82	1980	17	1972	8 5	3 8	2	@	17	26	42	57	72	89	1 08	1 32	1 63	2 14	2 63
Mar	1 39	1 45	95	1993	28	2 52	1983	03	1997	10 7	5 1	4	0	23	35	56	75	94	1 16	1 40	1 70	2 10	2 74	3 35
Apr	1 14	1 04	82	1957	1	2 75	1999	06	1977	9 0	4 2	4	0	21	32	48	64	80	97	1 16	1 39	1 70	2 20	2 68
May	1 29	1 09	1 18	1964	7	4 25	1995	06	1974	8 4	4 0	5	1	22	34	52	70	88	1 08	1 30	1 57	1 93	2 52	3 07
Jun	67	56	1 92	1970	10	2 63	1984	00+	1978	4 5	2 2	3	0	00	00	11	21	33	46	62	83	1 11	1 59	2 07
Jul	76	70	1 08	1953	15	2 06	1987	04	2000	6 0	2 3	3	0	10	16	27	38	49	61	75	93	1 17	1 56	1 94
Aug	85	82	1 00	1992	6	1 93	1986	01	1985	6 7	2 9	4	@	11	18	30	42	55	69	85	1 04	1 31	1 75	2 17
Sep	1 19	1 06	1 10	1982	29	4 52	1982	07	1974	6 7	3 6	5	1	16	26	43	60	77	96	1 18	1 46	1 82	2 42	3 00
Oct	1 34	1 11	85	1988	12	3 18	1984	00	1976	7 0	4 1	5	0	22	41	63	82	1 00	1 19	1 40	1 64	1 96	2 47	2 95
Nov	1 10	90	1 05	1996	21	3 07	1983	11	1976	6 9	3 2	5	@	17	26	42	57	73	90	1 10	1 34	1 66	2 18	2 69
Dec	88	93	2 21	1966	6	2 60	1983	00	1976	6 7	3 1	3	0	12	23	38	51	63	76	91	1 08	1 31	1 67	2 01
Ann	12 70	12 89	2 21	Dec 1966	6	4 52	Sep 1982	00+	Jun 1978	89 3	41 9	4 7	2	7 62	8 54	9 76	10 70	11 55	12 39	13 27	14 25	15 47	17 26	18 83

+ Also occurred on an earlier date(s)
# Denotes amounts of a trace
@ Denotes mean number of days greater than 0 but less than 05
** Statistics not computed because less than six years out of thirty had measurable precipitation

(1) From the 1971-2000 Monthly Normals
(2) Derived from station's available digital record 1949-2001
(3) Derived from 1971-2000 serially complete daily data
Complete documentation available from
www ncdc noaa gov/oa/climate/normals/usnormals html

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Climatography of the United States No. 20 1971-2000

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www ncdc noaa gov

Station EPHRAIM SORENSENS FLD, UT **COOP ID 422578**

Chmate Division UT 4 **NWS Call Sign** **Elevation 5,510 Feet** **Lat 39°22N** **Lon 111°35W**

Snow (inches)																								
Snow Totals																Mean Number of Days (1)								
Means/Medians (1)					Extremes (2)											Snow Fall >= Thresholds					Snow Depth >= Thresholds			
Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year	0 1	1 0	3 0	5 0	10 0	1	3	5	10
Jan	3	99 9	0	0	1 0	2000	18	1 0	2000	0	0	0	0	0	99	99	99	99	99	-99	99	99	99
Feb	1 0	99 9	0	0	2 0	1999	10	4 0+	2000	0	0	0	0	0	99	99	99	99	99	99	99	99	99
Mar	8	99 9	0	0	3 0	2000	20	3 0	2000	0	0	0	0	0	99	99	99	99	99	0	0	0	0
Apr	99 9	99 9	0	0	#	1992	1	#	1992	0	0	0	0	0	99	99	-99	99	99	0	0	0	0
May	99 9	99 9	0	0	0	0	0	0	0	0	0	0	0	0	99	99	99	99	99	0	0	0	0
Jun	99 9	-99 9	0	0	0	0	0	0	0	0	0	0	0	0	-99	99	99	99	99	0	0	0	0
Jul	99 9	-99 9	0	0	0	0	0	0	0	0	0	0	0	0	99	99	99	99	99	0	0	0	0
Aug	99 9	99 9	0	0	0	0	0	0	0	0	0	0	0	0	99	99	-99	99	99	0	0	0	0
Sep	99 9	99 9	0	0	0	0	0	0	0	0	0	0	0	0	99	99	99	99	99	0	0	0	0
Oct	99 9	99 9	0	0	0	0	0	0	0	0	0	0	0	0	99	99	99	99	99	0	0	0	0
Nov	1 4	-99 9	0	0	5 0	2000	10	5 5	2000	0	0	0	0	0	-99	-99	99	99	99	0	0	0	0
Dec	2 8	-99 9	#	0	8 0	1998	18	11 0	1998	#	1998	4	#	1998	99	99	99	99	99	99	99	99	99
Ann	99	99	N/A	N/A	8 0	Dec 1998	18	11 0	Dec 1998	#	Dec 1998	4	#	Dec 1998	99	99	99	99	99	99	99	99	99

+ Also occurred on an earlier date(s) #Denotes trace amounts

@ Denotes mean number of days greater than 0 but less than 05

-9/-9 9 represents missing values
Annual statistics for Mean/Median snow depths are not appropriate

(1) Derived from Snow Climatology and 1971-2000 daily data

(2) Derived from 1971-2000 daily data

Complete documentation available from
www ncdc noaa gov/oa/climate/normals/usnormals html

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www ncdc noaa gov

Station EPHRAIM SORENSENS FLD, UT **COOP ID 422578**

Climate Division UT 4 **NWS Call Sign** **Elevation 5,510 Feet** **Lat 39°22N** **Lon 111°35W**

Freeze Data

Spring Freeze Dates (Month/Day)

Temp (F)	Probability of later date in spring (thru Jul 31) than indicated(*)								
	10	20	30	40	50	60	70	80	90
36	6/28	6/22	6/17	6/13	6/09	6/05	6/01	5/28	5/21
32	6/12	6/07	6/03	5/30	5/27	5/24	5/21	5/17	5/11
28	5/24	5/19	5/16	5/13	5/10	5/07	5/04	4/30	4/25
24	5/13	5/06	5/01	4/27	4/23	4/19	4/15	4/09	4/03
20	4/26	4/18	4/12	4/07	4/02	3/28	3/23	3/17	3/09
16	4/07	3/29	3/23	3/17	3/12	3/07	3/01	2/23	2/14

Fall Freeze Dates (Month/Day)

Temp (F)	Probability of earlier date in fall (beginning Aug 1) than indicated(*)								
	10	20	30	40	50	60	70	80	90
36	9/08	9/12	9/15	9/17	9/19	9/21	9/24	9/26	9/30
32	9/13	9/18	9/21	9/23	9/26	9/28	10/01	10/04	10/09
28	9/17	9/22	9/27	9/30	10/04	10/07	10/10	10/15	10/20
24	9/30	10/07	10/12	10/16	10/20	10/23	10/27	11/01	11/08
20	10/14	10/20	10/24	10/28	10/31	11/04	11/07	11/11	11/17
16	10/26	10/31	11/05	11/08	11/12	11/15	11/18	11/23	11/28

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	10	20	30	40	50	60	70	80	90
36	124	117	111	106	101	97	92	86	78
32	141	134	129	125	121	117	113	108	101
28	169	161	155	151	146	141	137	131	123
24	207	198	191	185	179	173	167	160	151
20	242	232	224	217	211	205	199	191	181
16	278	266	258	251	244	237	230	222	210

* Probability of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date

0/00 Indicates that the probability of occurrence of threshold temperature is less than the indicated probability

Derived from 1971-2000 serially complete daily data

Complete documentation available from
www ncdc noaa gov/oa/climate/normals/usnormals html

Depart[redacted]f Co[redacted]
National Oceanic & Atmospheric Administration
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and Information Service

Climatography of the United States No. 20 1971-2000

N[redacted]i Clim[redacted]ata C[redacted]
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www ncdc noaa gov

Station EPHRAIM SORENSENS FLD, UT **COOP ID 422578**

Climate Division UT 4 **NWS Call Sign** **Elevation 5,510 Feet Lat 39°22N Lon 111°35W**

Degree Days to Selected Base Temperatures (°F)

Base	Heating Degree Days (1)												
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1222	945	784	540	294	89	6	7	148	476	854	1182	6547
60	1067	805	629	397	173	35	1	0	65	331	704	1027	5234
57	974	721	536	317	117	17	0	0	35	253	614	934	4518
55	912	665	476	267	86	10	0	0	21	206	554	872	4069
50	757	530	332	161	33	2	0	0	5	110	409	717	3056
32	276	143	27	5	0	0	0	0	0	1	54	232	738

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	77	123	267	455	745	1013	1261	1199	878	550	190	73	6831
55	0	0	2	27	118	333	548	486	210	42	1	0	1767
57	0	0	1	18	87	280	486	424	163	27	0	0	1486
60	0	0	0	8	50	208	394	331	103	12	0	0	1106
65	0	0	0	1	15	112	244	182	36	2	0	0	592
70	0	0	0	0	3	47	116	65	7	0	0	0	238

Growing Degree Units (2)

Base	Growing Degree Units (Monthly)												Growing Degree Units (Accumulated Monthly)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
40	0	16	81	214	468	742	989	938	639	317	61	1	0	16	97	311	779	1521	2510	3448	4087	4404	4465	4466
45	0	1	30	112	322	592	834	783	489	191	16	0	0	1	31	143	465	1057	1891	2674	3163	3354	3370	3370
50	0	0	2	46	194	444	679	628	344	90	0	0	0	0	2	48	242	686	1365	1993	2337	2427	2427	2427
55	0	0	0	15	97	306	524	473	215	32	0	0	0	0	0	15	112	418	942	1415	1630	1662	1662	1662
60	0	0	0	0	31	183	369	319	102	3	0	0	0	0	0	0	31	214	583	902	1004	1007	1007	1007
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	0	22	75	170	322	480	617	591	428	251	65	4	0	22	97	267	589	1069	1686	2277	2705	2956	3021	3025

(1) Derived from the 1971-2000 Monthly Normals
(2) Derived from 1971-2000 serially complete daily data
Note For corn, temperatures below 50 are set to 50, and temperamres above 86 are set to 86

Complete documentation available from
www ncdc noaa gov/oa/climate/normals/usnormals html

Notes

a The monthly means are simple arithmetic averages computed by summing the monthly values for the period 1971-2000 and dividing by thirty Prior to averaging, the data are adjusted if necessary to compensate for data quality issues, station moves or changes in station reporting practices Missmg months are replaced by estimates based on neighboring stations

b The median is defined as the middle value in an ordered set of values The median is being provided for the snow and precipitation elements because the mean can be a misleading value for precipitation normals

c Only observed validated values were used to select the extreme daily values

d Extreme monthly temperature/precipitation means were selected from the monthly normals data
Monthly snow extremes were calculated from daily values quality controlled to be consistent with the Snow Clunatology

e Degree Days were derived usmg the same techniques as the 1971-2000 normals
Compete documentation for the 1971-2000 Normals is available on the internet from
www ncdc noaa.gov/oa/climate/normals/usnormals html

f Mean ' number of days statistics" for temperature and precipitation were calculated from a serially complete daily data set
Documentation of the serially complete data set is available from the link below

g Snowfall and snow depth statistics were derived from the Snow Climatology
Documentation for the Snow Climatology project is available from the link under references

Data Sources for Tables

Several different data sources were used to create the Clim20 climate summaries In some cases the daily extremes appear inconsistent with the monthly extremes and or the mean number of days statistics For example, a high daily extreme value may not be reflected in the highest monthly value or the mean number of days threshold that is less than and equal to the extreme value Some of these difference are caused by different periods of record Daily extremes are derived from the station's entire period of record while the serial data and normals data were are for the 1971-2000 period Therefore extremes observed before 1971 would not be included in the 1971-2000 normals or the 1971-2000 serial daily data set Inconsistencies can also occur when monthly values are adjusted to reflect the current observing conditions or were replaced during the 1971-2000 Monthly Normals processing and are not reconciled with die Summary of the Day data

a Temperature/ Precipitation Tables
1 1971-2000 Monthly Normals
2 Cooperative Summary of the Day
3 National Weather Service station records
4 1971-2000 serially complete daily data

b Degree Day Table
1 Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals
2 Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data

c Snow Tables
1 Snow Climatology
2 Cooperative Summary of the Day

d Freeze Data Table
1971-2000 serially complete daily data

References

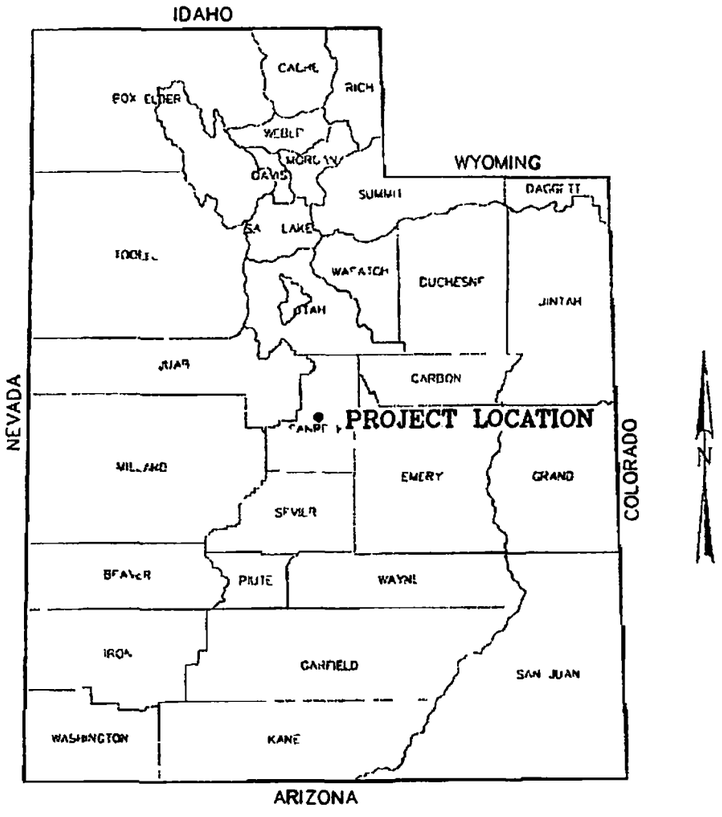
U S Climate Normals 1971-2000, www ncdc noaa gov/nonnals htinl
U S Climate Normals 1971-2000-Products Clim20, www ncdc noaa gov/oa/climatc/nonnals/usnonnalsprods hunl
Snow Climatology Project Descnption, www ncdc noaa gov/oa/climate/monitonne/snowclim/mainpage hunl
Eischeid, J K , P Pastens, H F Diaz, M Plantico, and N Lott, 2000 Creating a serially complete, national daily tune series of temperature and precipitation for the Western United States J Appl Meteorol , 39, 1580-1591,
www1 ncdc noaa gov/pub/data/special/ serialcomplete_jam_0900 pdf

Appendix C

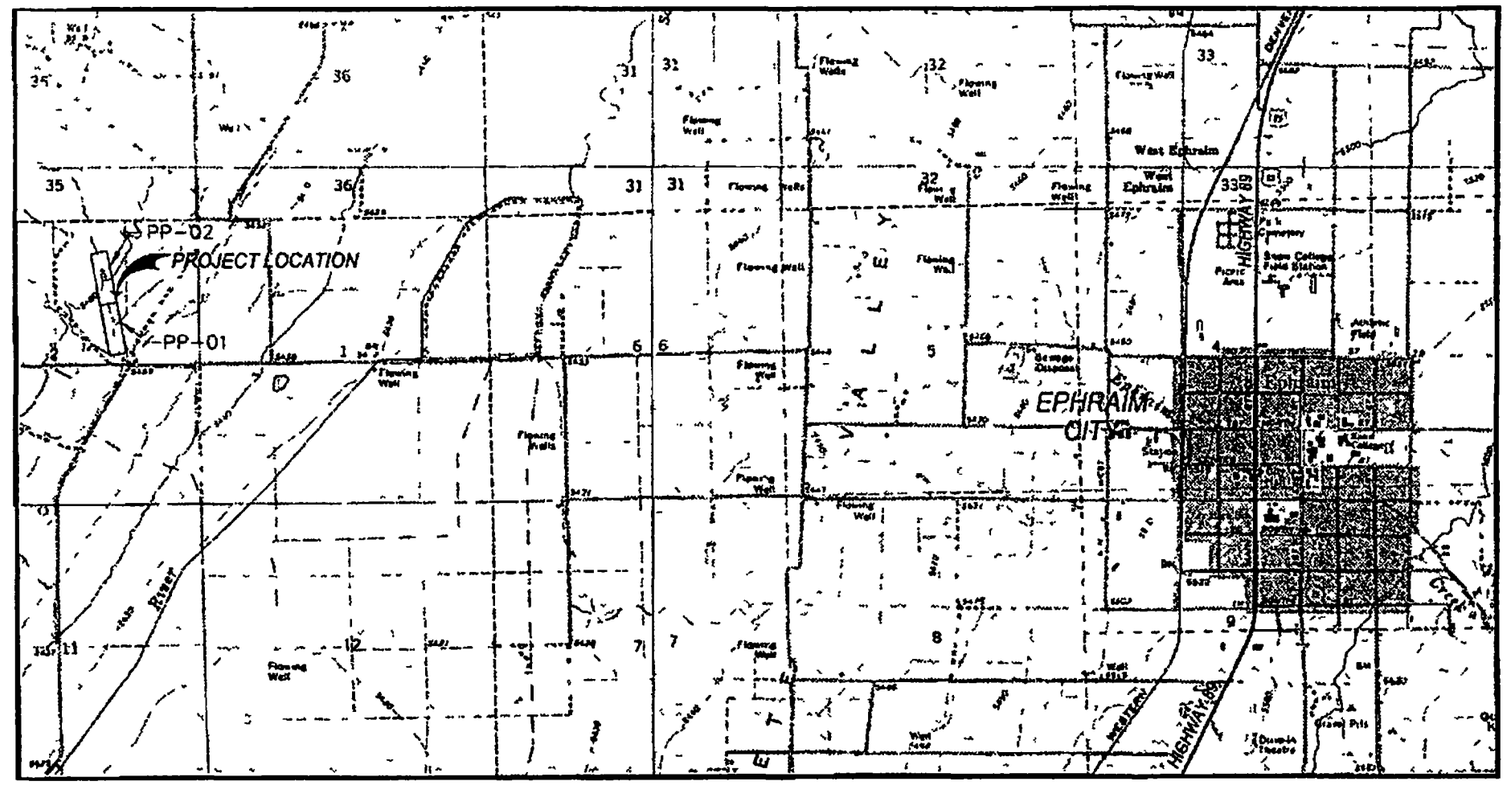
Technical Information

SANPETE COUNTY
BARTON EXCAVATION
LANDFILL IMPROVEMENTS
2010

PROJECT NO	SHEET NO
0812 015	1



LOCATION MAP



VICINITY MAP

SHEET INDEX

SHEET NO	DESCRIPTION
1	TITLE SHEET/INDEX SHEET
1A	LEGEND SHEET
OT-01	DETAIL SHEET
PP-01 TO PP-02	PLAN AND PROFILE SHEETS

APPROVAL

RECOMMENDED FOR APPROVAL

ENGINEER

LICENSED PROFESSIONAL ENGINEER BRIAN R. BARTON No. 2797408 STATE OF UTAH

10/11/2010
DATE

Jones & DeMille Engineering, Inc.
1535 South 100 West – Richfield, Utah 84701
Phone (435) 896-8266
Fax (435) 896-8268
www.jonesanddemille.com

LEGEND

EXISTING SEWER LINE
EXISTING SEWER MANHOLE
EXISTING WATER LINE
EXISTING WATER VALVE
EXISTING POWER LINE
EXISTING TELEPHONE LINE
EXISTING CABLE TV.LINE
EXISTINO NATURAL GAS LINE
EXISTING IRRIGATION LINE
EXISTING STORM DRAIN
EXISTING RIGHT OF WAY LINE
EXISTING FENCE LINE
'EXISTINO CLILVERT
EXISTING SIDEWALK, CLIRB & CLITTER
FLOW.LINE OF DITCH
EXISTING EDGE OF'ASPHALT
EXISTING EDGE OF GRAVEL
EXISTING EDGE OF DIRT
EXISTING EDGE OF CONCRETE
EXISTING FIRE HYDRANT
EXISTING WATER METER
EXISTING BUILDING OR SHED
POWER POLE
POWER POLE WITH GUY WIRE
EXISTING TREE
EXISTING DELINEATOR POST
EXISTING STREET SIGN

PROPOSED SEWER LINE
PROPOSED SEWER MANHOLE
PROPOSED SEWER SERVICE
PROPOSED WATER LINE
PROPOSED WATER VALVE
PROXOSED FENCE LINE
PROPOSED CULVERT
PROPOSED EDGE OF'ASPHALT
PROPOSED EDGE OF CONCRETE
PROPOSED FIRE HYDRANT
PROPOSED WATER METER
PROPOSED DELINEATOR POST
PROPOSED STREET SIGN
PROPOSED CONCRETE
PROPOSED'ASPHALT
DEPRESSED DRIVE REQ'D
W.= WIDTH
TOP OF CUT
TOE OF FILL

SUBDIVISION BOUNDARY LINE
LOT LINES
STREET RIGHT-OF-WAY LINES
SECTION LINE
QUARTER SECTION LINE
(P U E) PUBLIC LITILITY EASEMENT
OEED LINE
PROPERTY LINE
SET YELLOW PLASTIC CAP
STAMPED LS XXXXXX
BRASS CAP
PERMANENT SURVEY MARKER
RIGHT OF WAY MARKER
OBNTROL POINT
BENCH MARK
NORTH'ARROW.

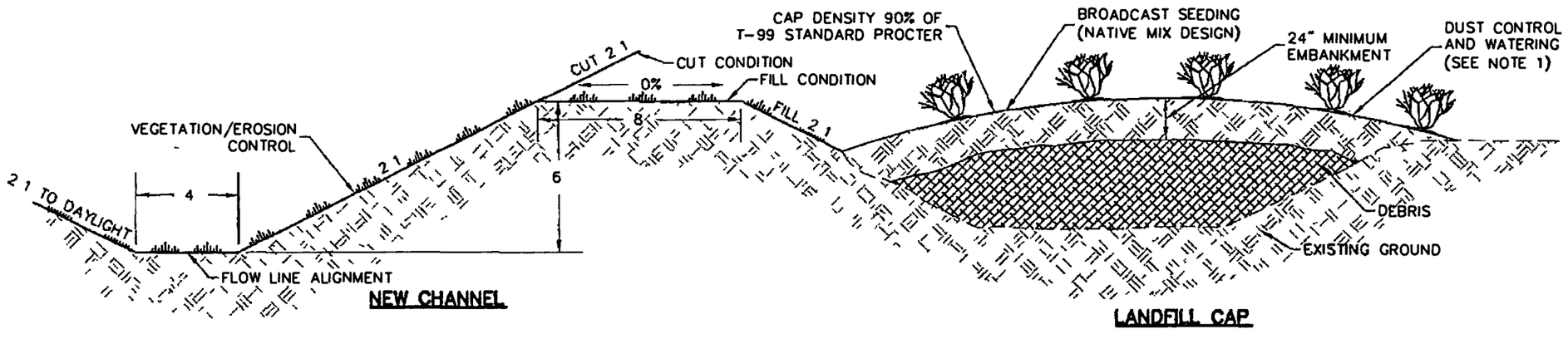
TBC	=	TOP BACK OP CURB
FLG	=	FLOW.LINE OF GUTTER
LOC	=	LIP OF CURB
TBW	=	TOP OF SIDEWALK
TOC	=	TOP OF CONCRETE
EOA	=	EDGE OF'ASPHALT
TOA	=	TOP OE'ASPHALT
TOG	=	TOP OF ORATE
FLC	=	FLOW.LINE OF CULVERT
SW.	=	SIDEWALK
FG	=	FINISHED GROUND

Jones & DeMille Engineering

BARTON EXCAVATION
LANDFILL IMPROVEMENTS
LEGEND
PROJECT NUMBER 0812-015

SANPETE COUNTY
SHEET NO. 1A

SCALE NONE
DWG NAME: 1-1B
Brff SET: ds 3x18
DWG CREATED: 03/11/2009
PEN TBL
LAST UPDATE: 8/20/2010
REVISIONS
REMARKS
REVIEW



NOTES

1 PROVIDE WATER IN ADEQUATE QUANTITIES FOR PRE-WETTING MIXING, OR COMPACTING MATERIALS PROVIDE ADEQUATE WATER SUPPLY FOR OUST CONTROL AT ANY TIME DO NOT WASTE OR OVER SATURATE CONSTRUCTION AREAS

NO	DATE	ISSUE/REV BY	MADE CORR BY	TYPE/ACTS AFFECTED	REQUEST BY	REMARKS
				ORIGINAL SUBMISSION FOR AUTHORIZATION		

REVISIONS

SCALE: NONE

DWG NAME BY SHT SET

DWG CREATED 02/11/2009

PEN TBL

LAST UPDATE 10/7/2010

Jones & DeMille Engineering Inc

REVIEW

DATE:

BY:

CHECK:

DESIGN

DRAWN RLB 03/09

QUANT.

PROJECT ENGINEER

APPROVAL RECOMM

DATE

APPROVED:

DATE

BARTON EXCAVATION

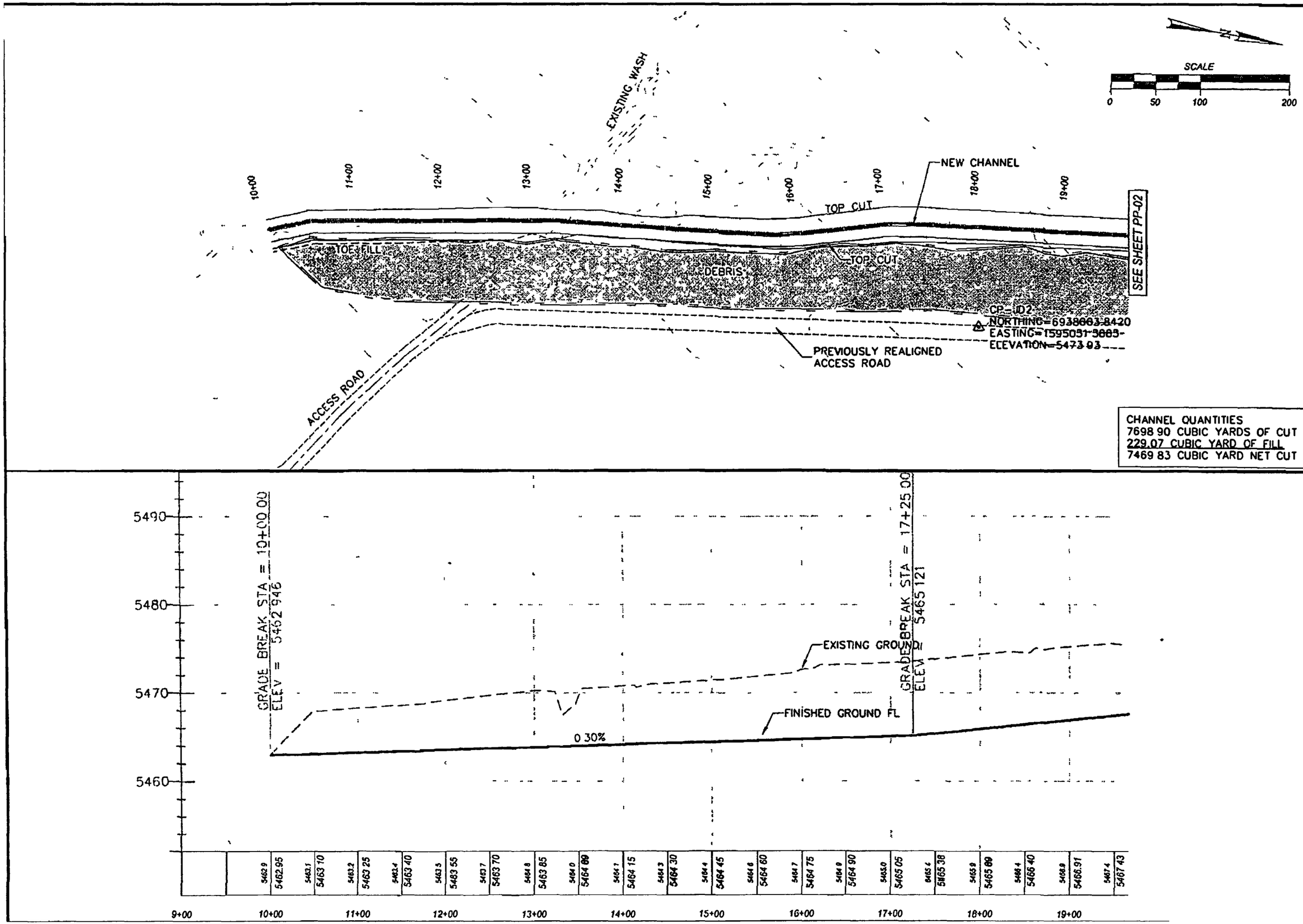
LANDFILL IMPROVEMENTS

DETAIL SHEET

PROJECT NUMBER 0812-015

SANPETE COUNTY

SHEET NO. DT-01



NO.	DATE	DESIGN REV. BY	DWG REV. BY	CHECKED BY	REVISED BY	REMARKS

ORIGINAL SUBMISSION FOR AUTHORIZATION

REVISIONS

SCALE: 1"=100'

DWG NAME: PP

SHT SET: 08/12/10

DWG CREATED: 02/11/2009

PIEN TBL:

LAST UPDATE: 10/7/2010

REVIEW

CHECK:

DATE:

BY:

Jones & DeMille Engineering Inc.
4225 South 700 West Bountiful, Utah 84010
Phone (801) 292-4200 Fax (801) 292-4208
www.jonesanddemille.com

DESIGN:

DRAWN: RLB 03/09

CHECK:

QUANT.:

APPROVAL RECOMM.: DATE

PROJECT ENGINEER

APPROVED: DATE

BARTON EXCAVATION

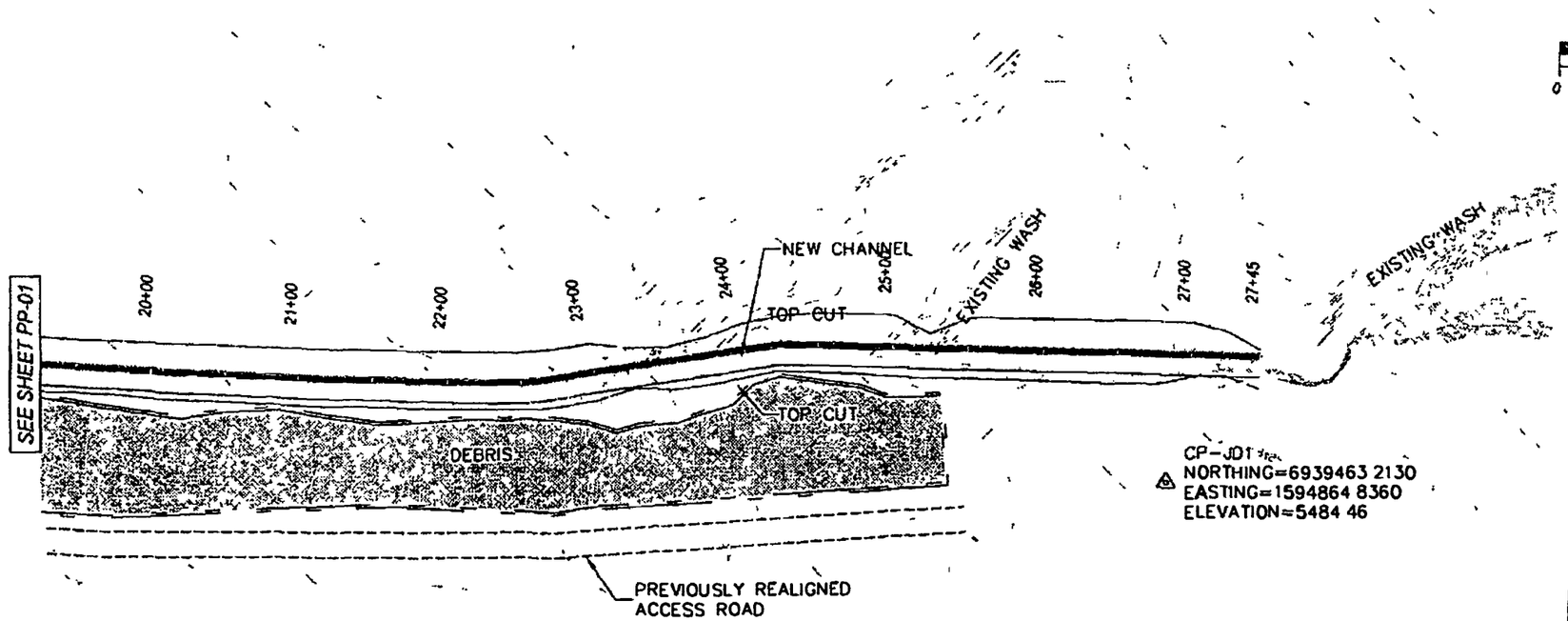
LANDFILL IMPROVEMENTS

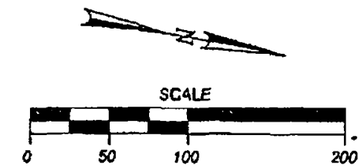
PLAN AND PROFILE SHEET

PROJECT NUMBER: 0812-015

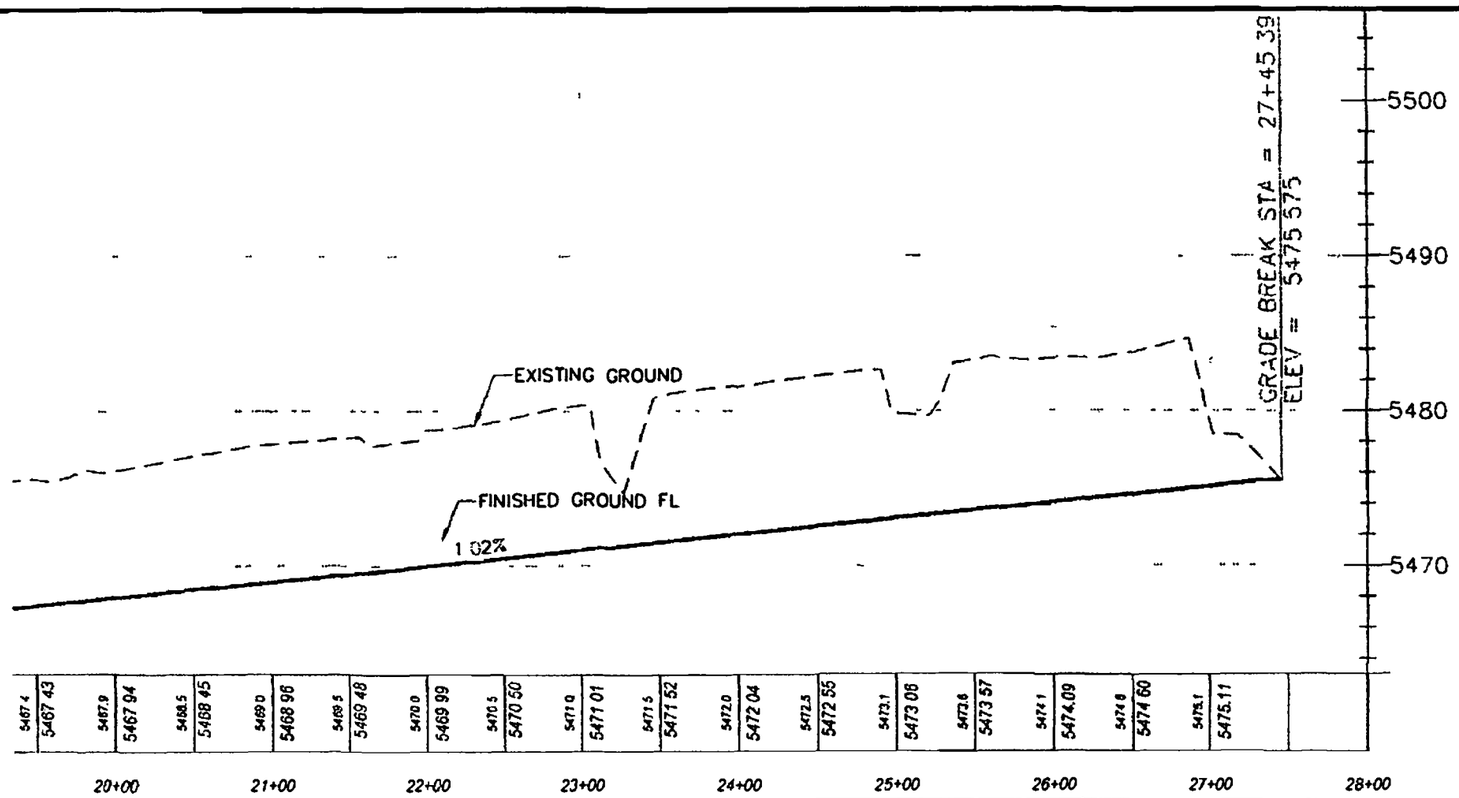
SANPETE COUNTY

SHEET NO. PP-01





CHANNEL QUANTITIES
7698 90 CUBIC YARDS OF CUT
229.07 CUBIC YARD OF FILL
7469 83 CUBIC YARD NET CUT



NO.	DATE	DESIGN	DRAWN	CHECKED	REVISED BY	REMARKS

ORIGINAL SUBMISSION FOR AUTHORIZATION

REVISIONS

SCALE: 1"=100'

DWG NAME: PP

SHT SET: 0812-015

DWG CREATED: 03/11/2009

PEN TBL:

LAST UPDATE: 10/7/2010

REVIEW

DATE:

BY:

CHECK:

CHECK:

CHECK:

Jones & DeMille Engineering Inc.
1571 South 700 West Roosevelt, Utah 84066
Phone (435) 722-5081 Fax (435) 722-5727
www.jonesanddemille.com

DESIGN:

DRAWN: RLB 03/09

CHECK:

PROJECT DESIGN ENGINEER

APPROVAL RECOMM.

DATE

APPROVED

DATE

BARTON EXCAVATION

LANDFILL IMPROVEMENTS

PLAN AND PROFILE SHEET

PROJECT NUMBER 0812-015

SANPETE COUNTY

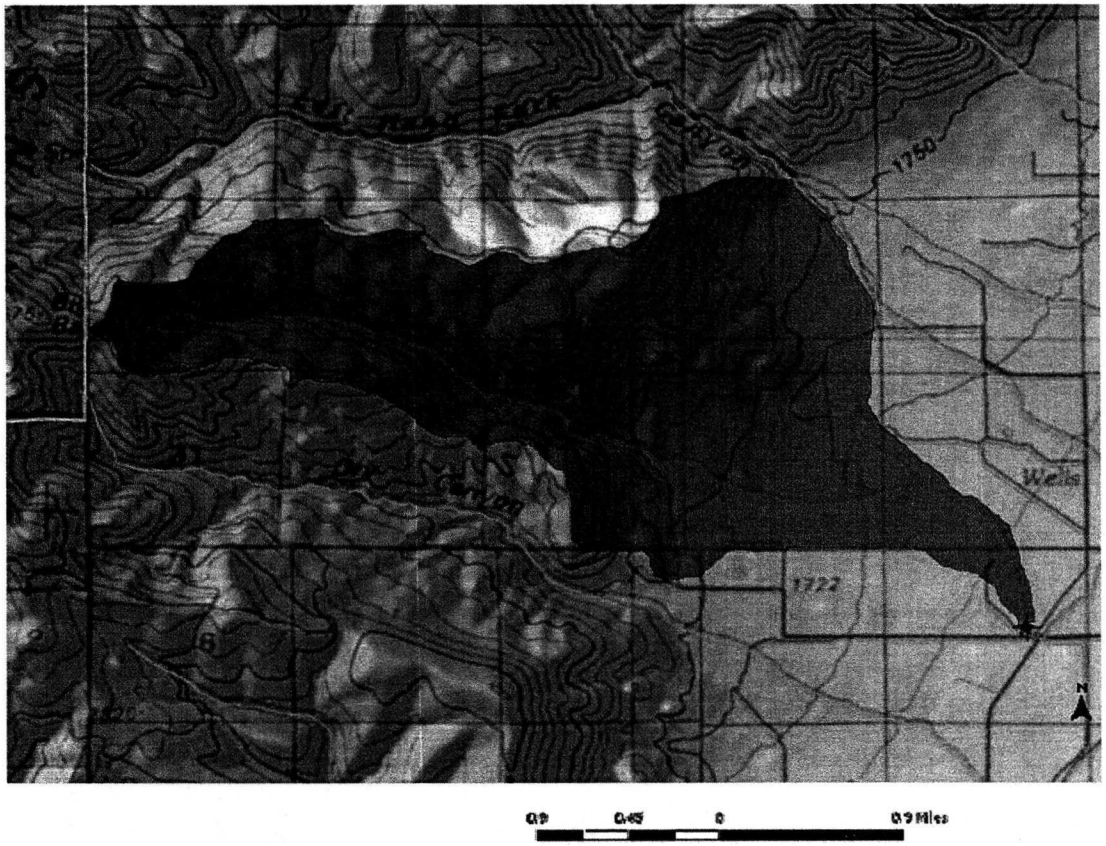
SHEET NO. PP-02

Landfill Cap

Area of Landfill	98425	sq ft
Depth of Cap	2	ft
Fill Factor	1 20	
Fill Required for Cap	8749	cu yd
Earthwork from Channel	9372	cu yd
Total Remaining Fill	623	cu yd

USGS
Utah StreamStats

Landfill Drainage Basin



Legend

- GlobalWatershedPoint
- GlobalWatershed
- Excluded Areas
- nhdgages
- nhddams
- hucpoly
- Dendritic Stream Network

NHD Flowline

- <all other values>
- ArtificialPath
- CanalDitch
- Coastline
- Connector
- Pipeline
- StreamRiver
- Underground Conduit

Stream Gages

- Gaging Station, Continuous Record
- Low Flow, Partial Record
- Peak Flow, Partial Record
- Peak and Low Flow, Partial Record
- Miscellaneous Record
- Unknown

3/25/2009 4:27:33 PM

USGS
Utah StreamStats

Basin Characteristics Report

Date Wed Mar 25 2009 15 55 01
NAD83 Latitude 39 3661 (39 21 58)
NAD83 Longitude 111 6603 (111 39 37)
NAD27 Latitude 39 3662 (39 21 58)
NAD27 Longitude 111 6596 (111 39 34)

Basin has been edited

Parameter	Value
Mean annual precipitation in inches	15 1
Average basin slope in percent	21 5
Area in square miles	5 19
Mean basin elevation in feet	6450
Area Covered by herbaceous upland in percent	18 2

USGS
Utah StreamStats

Streamstats Ungaged Site Report (with edited parameters)

Date Wed Mar 25 2009 16 23 38
NAD83 Latitude 39 3661 (39 21 58)
NAD83 Longitude 111 6603 (111 39 37)
NAD27 Latitude 39 3662 (39 21 58)
NAD27 Longitude 111 6596 (111 39 34)
Drainage Area from delineation 5 19 mi2

Watershed has been ed ted

Peak Flow Basin Characteristics			
100% Region 5 (5 19 mi2)			
Parameter	Value	Regression Equation Valid Range	
		Mm	Max
Drainage Area (square miles)	5 19	0 91	629
Percent Nat Herb Upland from NLCD1992 (percent)	15 6	2 14	15 6

Streamflow Statistics					
Statistic	Flow (ft^3/s)	Prediction Error (percent)	Equivalent years of record	90 Percent Prediction Interval	
				Minimum	Maximum
PK2	49 5	99	1 1		
PK5	99 5	60	3 3		
PK10	137	50	6 1		
PK25	188	49	8 9		
PK50	235	53	9 4		
PK100	285	61	8 8		
PK200	345	71	8		
PK500	440	86	7		

Required vs Actual Channel Characteristics

Required Channel Characteristics		
Bottom Width (b)	4 00	ft
Side Slope (z)	2 00 1	horizontal vertical
Required Depth (h)	4 80	ft
Roughness Coef (n)	0 035	
Cross Section Area (A)	65 26	ft^2
Wetted Perimeter (P)	25 46	ft
Hydraulic Radius (R)	2 56	ft
Channel Slope (s)	0 003	ft/ft
Overtopping Flow (Q)	285	ft^S/sec
Flow Required (Q_req)	285	ft^3/sec

Actual Channel Characteristics		
Bottom Width (b_channel)	4 00	ft
Side Slope (z_channel)	2 00 1	horizontal vertical
Actual Depth (h_channel)	6.00	ft
Roughness Coef (n_channel)	0 035	
Cross Section Area (A_channel)	96 00	ft^2
Wetted Perimeter (P)	30 83	ft
Hydraulic Radius (R)	3 11	ft
Channel Slope (s)	0 003	ft/ft
Overtopping Flow (Q)	477	ft^3/sec

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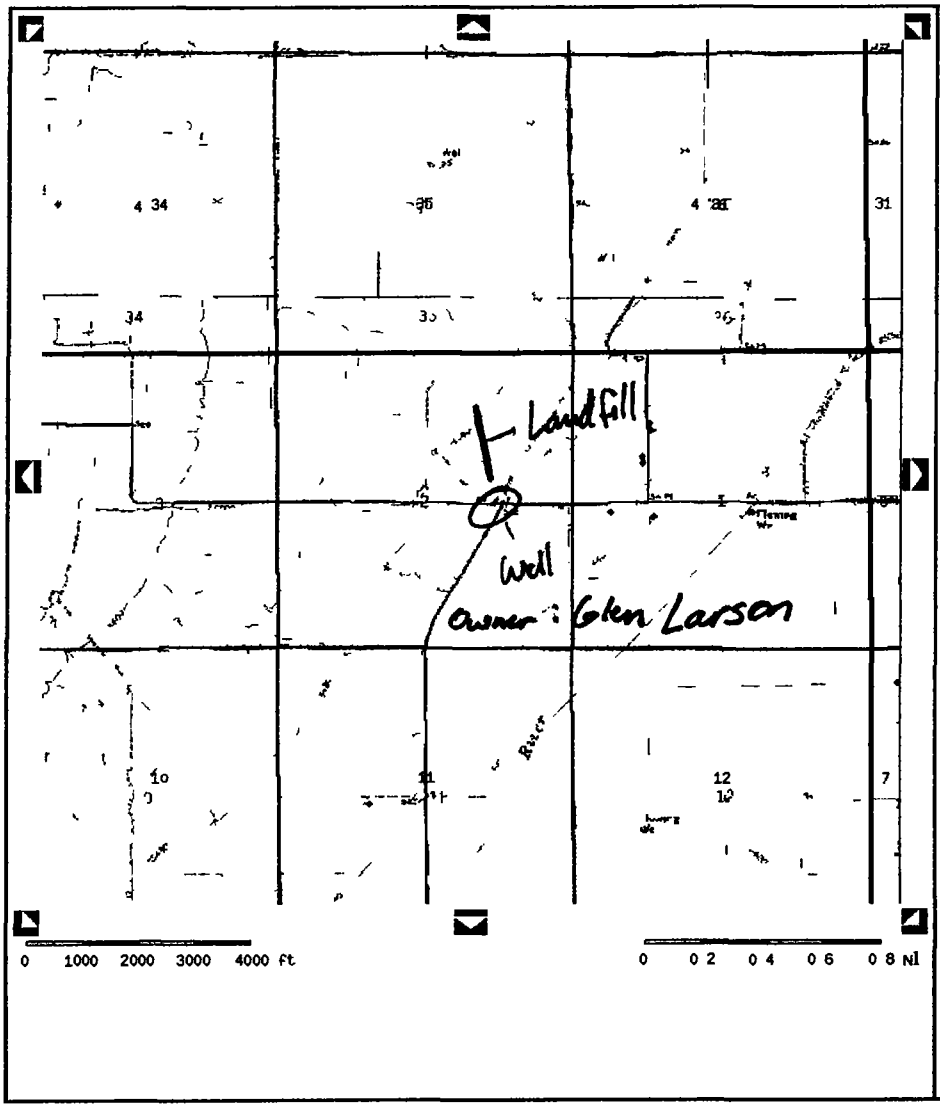
Utah Division of Water Rights

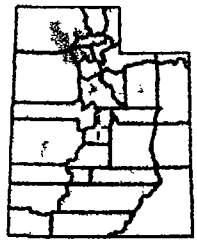


Zoom In Mode | Map Tools

Display	Layer Name
☐	Counties
☑	Public Land Survey
☑	Roads
☐	Rivers and Streams
☐	Water Right Areas
Topographic Maps	Base Map

Legend

- Wells
- Geologic Logs
- Townships
- Sections
- Primary Route
- Secondary
- Rural Roads
- Minor Roads



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Utah Division of Water Rights

WELLPRT Well Log Information Listing

Version 2003 09 18 00 Rundate 10/11/2003 10 32 PM

Utah Division of Water Rights

Water Well Log

LOCATION

S 2640 ft W 1400 ft from NE CORNER of SECTION 2 T 17S R 2E BASE SL Elevation feet

OWNER(S)

OWNER Glen S Larson
ADDRESS 409 S 500 E
CITY Ephraim STATE UT ZIP 84627

DRILLER ACTIVITIES

ACTIVITY # 1 NEW WELL
DRILLER FAIRVIEW DRILLING & PUMP SERVICE LICENSE # 0504
START DATE 02/26/1999 COMPLETION DATE 04/29/1999

BOREHOLE INFORMATION

Depth(ft) From	To	Diameter(in)	Drilling Method	Drilling Fluid
0	280	8	ROTARY	FOAMER

LITHOLOGY

Depth(ft) From	To	Lithologic Description	Color	Rock Type
0	80	CLAY	BROWN	
80	90	WATER-BEARING LOW-PERMEABILITY SAND GRAVEL PEA GRAVEL SOME WATER		
90	100	WATER-BEARING LOW-PERMEABILITY SAND GRAVEL		
100	120	CLAY	GREEN	
120	140	CLAY	GREEN	
140	155	CLAY	GREEN	
155	180	CLAY		
180	200	WATER-BEARING LOW-PERMEABILITY SAND GRAVEL PEA GRAVEL		
200	240	CLAY	GREEN	
240	280	WATER-BEARING LOW-PERMEABILITY SAND GRAVEL PEA GRAVEL		

WATER LEVEL DATA

Date	Time	Water Level (feet)	Status
		/above ground	
04/29/1999		21 00	STATIC

CONSTRUCTION - CASING

Depth(ft) From	To	Material	Gage(in)	Diameter(in)
0	280	8 NEW	250	8 00

CONSTRUCTION - SCREENS/PERFORATIONS

Depth(ft) From	To	Screen(S) or Perforation(P)	Slot/Perf size	Screen Diam/Length Perf(in)	Screen Type/# Perf
91	100	PERFORATION	250	500	#3
180	200	PERFORATION	250	500	#56
240	260	PERFORATION	250	500	#35
260	280	PERFORATION	125	2 00	#380

CONSTRUCTION - FILTER PACK/ANNULAR SEALS

Depth(ft) From	To	Material	Amount	Density(pcf)
0	20	BENTONITE		

WELL TESTS

Date	Test Method	Yield (CFS)	Drawdown (ft)	Time Pumped (hrs)
04/ /1999	SUBMERSIBLE	668		42

GENERAL COMMENTS

CONSTRUCTION INFORMATION
Well Head Configuration no data
Casing Joint Type Welded
Perforator Used Rotary Perforator
Additional data not available

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Utah Division of Water Rights

Details for Non Production Well Application Number 9965003P00

Well Information

Request Date	Authorization Date	Expiration Date	Well Type
//	//	//	

Owner Information

	Name	Address 1	Address 2	Address 3	Phone
(Owner)	Glen S Larson	409 S 500 E	Ephraim UT 84627		

Comments

Date	Entered By	Comments
N/A	N/A	N/A

Location Information

#	WRCHEX	NS Direction	NS Distance	EW Direction	EW Distance	Section Corner	STR	Elevation	Type
1	9965003P00	S	2640	W	1400	NE	SL 17S 2E02	0	U

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Utah Division of Water Rights

Select Related Information

(WARNING Water Rights makes NO claims as to the accuracy of this data) RUN DATE 02/25/2010

WATER RIGHT **65 1517** APPLICAT|ON/CLAIM NO **U19508** CERT NO

OWNERSa1P

NAME Ma t I igat & R erv ir C mp y
ADDR / Pal ad Co p D vid E Ch t en
PO B x 160
Wa t UT 84642

DATES ETC

LAND OWNED BY APPLICANT? COUNTY TAX ID#
FILED 03/23/1940|PRIORITY 00/00/1900|PUB BEGAN |PUB ENDED |NEWSPAPER
P t tEnd |PROTESTED [N]|HEARNG HLD |SE ACTION [||A t onD te |PROOF DUE
EXTENSION |ELEC/PROOF [ ]|ELEC/PROOF |CERT/WUC |LAP ETC |LAPS LETTER
RUSH LETTR |RENOVATE |RECON REQ |TYPE [ ]
PD BOOK [65]|MAP [ ]|PUB DATE
Type of R ght Unde g und Water Cla m Sourc of Inf Und rgrou d W t Claim Statu

LOCATION OF WATER RIGHT (Po nt of D var ion Cl k on Location to acce s PLAT Program) **MAP VIEWER**

FLOW 4 0 f SOURCE M ris n T n 1
COUNTY S np te COMMON DESCRIPTION

POINT OF DIVERSION SURFACE
(1) N 1150 ft E 240 ft fr m SW o , 5 c 36, T 18S, R 2E, SLBM
D v ting W k S u

St e m Alt R qu r d N

USES OF WATER RIGWT ELU Equivaleat Livaatock Uhit (cow horse etc) EDU Equ valent Domestic Unit or 1 Family

SUPPLEMENTAL GROUP NO 428396
65 I517(UGWC)

IRRIGATION Sole Supply UNEVALUATED a r G up T tal 1000 0 Div L m t 0 0 ft PERIOD OF USE 04/01 TO 10/15

###PLACE OF USE	NORTH WEST QUARTER NW	NE	SW	SE	NORTH EAST QUARTER NW	NE	SW	SE	SOUTH WEST QUARTER NW	NE	SW	SE	SOUTH EAST NW	NE
Sec 01 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 02 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 03 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 11 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 13 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 14 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 16 T I7S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 23 T 173 R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Ser 34 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 35 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 36 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 05 T 17S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 06 T 17S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 29 T 17S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 32 T 17S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X

GROUP

SUPPLEMENTAL GROUP NO 429199 Wate R ght Appurtenant t the f llowing u ( )
65 184(CERT) 1517(UGWC) 3180(DEC) 3181(DEC) 3256(DEC)

IRRIGATION Sol Supply UNEVALUATED G up Total 173 24 D V Limit 0 0 ft PERIOD OF USE 04/01 TO 10/31

STOCKWATER Sole Supply UNEVALUATED ELU Gr up Total 130 0000 D v L m t PERIOD OF USE 01/01 TO 12/31

###PLACE OF USE	NORTH WEST QUARTER NW	NE	SW	SE	NORTH EAST QUARTER NW	NE	SW	SE	SOUTH WEST QUARTER NW	NE	SW	SE	SOUTH EAST NW	NE
Sec 10 T 18S R 2E SLBM					3 4400	15 5900	3 0900	34 4100						
Sec 11 T 18S R 2E SLBM	3 7900			34 6800			19 9700		7 7900	14 9800	35 5000			

GROUP

SUPPLEMENTAL GROUP NO 429248 W ter Right Appurt t to th f llow ng u (s)
65 1517(UGWC) 1898(UGWC) 3180(DEC) 3181(DEC) 3256(DEC)

IRRIGATION Sole Supply UNEVALUATED a Group T t 1 5 0 D v L m t 0 0 ft PERIOD OF USE 04/01 TO 10/31

STOCKWATER Sole Supply UNEVALUATED ELU Group Tot 1 200 0000 D V L mit PERIOD OF USE 01/01 TO 12/31

FISH CULTURE F h Cultu e PERIOD OF USE 01/01 TO 12/31
A r F et C t but d by th R ght fo th U Unev luated

###PLACE OF USE	NORTH WEST QUARTER NW	NE	SW	SE	NORTH EAST QUARTER NW	NE	SW	SE	SOUTH WEST QUARTER NW	NE	SW	SE	SOUTH EAST NW	NE
S c 35 T 17S R 2E SLBM								5 0000						

GROUP

SUPPLEMENTAL GROUP NO 429249 Wat r R ght Appurt na t to the f 11 w ng u ( )
65 1517(UGWC) 1899(UGWC) 3180(DEC) 3181(DEC) 3256(DEC)

IRRIGATION S 1 Supply UNEVALUATED a G up T t 1 5 0 Div L m t 0 0 cfc PERIOD OF USE 04/01 TO 10/31

STOCKWATER S 1 Supply UNEVALUATED ELU Gr up T tal 200 0000 D v L mit PERIOD OF USE 01/01 TO 12/31

FISH CULTURE F h Cultu PERIOD OF USE 01/01 TO 12/31
A F t Co t but d by th R ght fo th U e Un valuated

###PLACE OF USE	NORTH WEST QUARTER NW	NE	SW	SE	NORTH EAST QUARTER NW	NE	SW	SE	SOUTH WEST QUARTER NW	NE	SW	SE	SOUTH EAST NW	NE
Se 35 T 17S R 2E SLBM								5 0000						

GROUP

SUPPLEMENTAL GROUP NO 429252 Wat R ght Appu t n t to th f 11 wing ( )
65 1517(UGWC) 1900(UGWC) 3180(DEC) 3181(DEC) 3256(DEC)

IRRIGATION S 1 Supply UNEVALUATED a G up T tal 5 0 Div L m t 0 0 a ft PERIOD OF USE 04/01 TO 10/31

STOCKWATER S 1 Supply UNEVALUATED ELU G up T t 1 200 0000 Div L m t PERIOD OF USE 01/01 TO 12/31

FISH CULTURE F h Culture PERIOD OF USE 01/01 TO 12/31
A F et Cont but d by th R ght f th U U valuat d

###PLACE OF USE	NORTH WEST QUARTER NW	NE	SW	SE	NORTH EAST QUARTER NW	NE	SW	SE	SOUTH WEST QUARTER NW	NE	SW	SE	SOUTH EAST NW	NE
Sec 35 T 17S R 2E SLBM								5 0000						

GROUP

SUPPLEMENTAL GROUP NO 429253 Wat r Right Appurt n nt t th f llow ng u ( )
65 1517(UGWC) 1901(UGWC) 3180(DEC) 3181(DEC) 3256(DEC)

IRRIGATION S I S pply UNEVALUATED a e G up T t 1 18 0 D v L mit 0 0 cft PERIOD OF USE 04/01 TO 10/31

STOCKWATER S I S pply UNEVALUATED ELU G up T tal 200 0000 D v L m t PERIOD OF USE 01/01 TO 12/31

###PLACE OF USE	NORTH WEST QUARTER NW	NE	SW	SE	NORTH EAST QUARTER NW	NE	SW	SE	SOUTH WEST QUARTER NW	NE	SW	SE	SOUTH EAST NW	NE
Se 36 T 17S R 2E SLBM			X	X				X		X				

GROUP

SUPPLEMENTAL GROUP NO 429507 Water Right Appurt na t t th f llow ng u ( )
63 3256(DEC) 65 1517(UGWC) 2197(LAP) 3180(DEC) 3181(DEC)

IRRIGATION Sol Supply UNEVALUATED a r Group Tot 1 0 25 D v L m t 0 0 a ft PERIOD OF USE 04/01 TO 10/31

STOCKWATER S 1 Supply UNEVALUATED ELU G up T t 1 2 0000 D v L mit PERIOD OF USE 01/01 TO 12/31

DOMESTIC Sol Supply UNEVALUATED EDU Gr up Tot 1 1 0000 D v L m t PERIOD OF USE 01/01 TO 12/31

###PLACE OF USE	NORTH WEST QUARTER NW	NE	SW	SE	NORTH EAST QUARTER NH	NE	SW	SE	SOUTH WEST QUARTER NW	NE	SW	SE	SOUTH EAST NW	NE
S 13 T 18S R 2E SLBM	0 2500													

GROUP

SUPPLEMENTAL GROUP NO 430100 Wate R ght Appurtenant to th following u ( )
63 3256(DEC) 65 275(CERT) 296(CERT) 1449(REJ) 1517(UGWC)
3180(DEC) 3181(DEC)

IRRIGATION Sol Supply 0 0 s f the G up Total f 457 88 D v Limit 0 0 a ft PERIOD OF USE 04/01 TO 10/31

###PLACE OF USE	NORTH WEST QUARTER NW	NE	SW	SE	NORTH EAST QUARTER NW	NE	SW	SE	SOUTH WEST QUARTER NW	NE	SW	SE	SOUTH EAST NW	NE	
Se 26 T 17S R 2E SLBM									26 5200	25 1400	38 6000	37 6900	14 8400		32
Sec 27 T 17S R 2E SLBM															
Se 34 T 17S R 2E SLBM						28 3800									
Sec 35 T 17S R 2E SLBM	22 5200	24 5900			20 0000	37 7100		5 4700							
Se 36 T 17S R 2E SLBM										10 2600		8 1800	23 6200		22

GROUP

SUPPLEMENTAL GROUP NO 4306B9 W t Right Appurt na t t th follow ng u ( )
63 3256(DEC) 65 75(CERT) 334(CERT) 1517(UGWC) 3180(DEC)
3181(DEC)

IRRIGATION Sole Supply UNEVALUATED acre G up T t 1 294 7 D v Limit 0 0 a ft PERIOD OF USE 04/01 TO 06/30

###PLACE OF USE	NORTH WEST QUARTER NW	NE	SW	SE	NORTH EAST QUARTER NW	NE	SW	SE	SOUTH WEST QUARTER NW	NE	SW	SE	SOUTH EAST NW	NE	
Sec 01 T 18S R 2E SLBM											5 5000				
Se 02 T 18S R 2E SLBM											4 9000	6 2000			13
S c II T 18S R 2E SLBM	13 9000	35 8000	6 3000	17 9000	35 7000	34 2000	19 5000	20 2000							
S c 12 T 18S R 2E SLBM	35 8000		34 9000												

GROUP

SUPPLEMENTAL GROUP NO 43136S Wat R ght Appu te a t t th f llowing use( )
65 76(CERT) 335(CERT) 1517(UGWC) 3180(DEC) 3181(DEC)
P ri d f f th ght 1 April 1 thr ugh Jun 30

IRRIGATION Sol Supply UNEVALUATED a G oup Tot 1 263 0 Div L m t 0 0 a ft PERIOD OF USE 07/01 TO 10/01

###PLACE OF USE	NORTH WEST QUARTER	NORTH EAST QUARTER	SOUTH WEST QUARTER	SOUTH EAST

	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	
Sec 01 T 18S R 2E SLBM			16 0000	6 0000					34 0000	1 0000	11 0000	3 0000			
Se 02 T 18S R 2E SLBM		26 0000		30 0000	9 0000	19 0000	11 0000	32 0000					9 0000	38 0000	3

GROUP

Th1 R ght (65 1517) ha a valu t d ol upply t t 1 f 1r 1g t1 of 0 0000 a e

Th R ght (65 1517) m mb f 10 upplem tal w t ght g up w th r g ted r age t tal g 2222 0700

E N D D F D A T A

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Search

Utah Division of Water Rights

Select Related Information

(WARNING Water Rights makes NO claims as to the accuracy of this data) RUN DATE 02/25/2010

WATER RIGHT **91 87** APPLICATION/CLAIM NO **A9593** CERT NO

OWNERSHIP

NAME Sa p t C unty W t C van y D tr t
ADDR UT
INTEREST 100% REMARKS

DATES ETC

LAND OWNED BY APPLICANT COUNTY TAX ID#
FILED 08/11/1924 | PRIORITY 08/11/1924 | PUB BEGAN | PUB ENDED | NEWSPAPER
Prot tEnd | PROTESTED [No] | HEARNG HLD | SE ACTION [ ] | Act o Dat 03/11/1939 | PROOF DUE
EXTENSION | ELEC/PROOF [ ] | ELEC/PROOF | CERT/WUC | LAP ETC 11/6/1984 | LAPS LETTER
RUSH LETTR | RENOVATE | RECON REQ | TYPE [ ]
PD BOOK [91 6] | MAP [ ] | PUB DATE
Typ f R ght Applicat n t App p at S u f I fo Appl t n to App p t St tu **Withdrawn**

LOCATION OF WATER RIGHT (Po nts of Diversion Click on Locat on to access PLAT Program) **MAP VIEWER**

FLOW 15000 0 r f t SOURCE Goo ber y Cr k
COUNTY S np t COMMON DESCRIPTION

POINT OF DIVERSION SURFACE
(1) N 106 ft W 106 ft f om SE co , S 24, T 13S, R 5E, SLBM
D v t ng W k S

St am Alt Requ red N

USES OF WATER RIGHT *ELU* Equ valent L vestock Unit (cow horse etc) *EDU* Equ valent Domestic Unit or 1 Family

SUPPLEMENTAL GROUP NO 616116

IRRIGATION S 1 Supply UNEVALUATED Group T t 1 132780 0 D v L m t 0 0 a ft PERIOD OF USE 04/15 TO 10/15

###PLACE OF USE	NORTH WEST QUARTER				NORTH EAST QUARTER				SOUTH WEST QUARTER				SOUTH EAST		
	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	
Sec 01 T 13S R 4E SLBM									X	X	X	X	X	X	X
Sec 02 T 13S R 4E SLBM													X	X	X
Sec 10 T 13S R 4E SLBM									X	X	X	X	X	X	X
Sec 11 T 13S R 4E SLBM					X	X	X	X	X	X	X	X	X	X	X
Sec 12 T 13S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 13 T 13S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 14 T 13S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 15 T 13S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 21 T 13S R 4E SLBM					X	X	X	X					X	X	X
Sec 22 T 13S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 23 T 13S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 24 T 13S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 25 T 13S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 26 T 13S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 27 T 13S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 28 T 13S R 4E SLBM					X	X	X	X					X	X	X
Sec 33 T 13S R 4E SLBM					X	X	X	X	X	X	X	X	X	X	X
Sec 34 T 13S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 35 T 13S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 36 T 13S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 06 T 13S R 5E SLBM			X	X					X	X	X	X			
Sec 07 T 13S R 5E SLBM									X	X	X	X	X	X	X
Sec 18 T 13S R 5E SLBM	X	X	X	X					X	X	X	X			
Sec 19 T 13S R 5E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 30 T 13S R 5E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 31 T 13S R 5E SLBM	X	X	X	X	X	X	X	X	X	X	X	X			
Sec 32 T 13S R 5E SLBM	X	X	X	X											
Sec 17 T 14S R 3E SLBM									X	X	X	X	X	X	X
Sec 18 T 14S R 3E SLBM									X	X	X	X	X	X	X
Sec 19 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 20 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 21 T 14S R 3E SLBM	X	X	X	X					X	X	X	X			
Se 28 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 29 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 30 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 31 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 32 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 33 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 34 T 14S R 3E SLBM	X		X												
Sec 36 T 14S R 3E SLBM													X	X	X
Sec 02 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 03 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 04 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 09 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 10 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 11 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 12 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 13 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

S 14 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 15 T 14S R 4E SLBM					X	X	X	X					X	X	X
S 22 T 14S R 4E SLBM					X	X	X	X	X	X	X	X	X	X	X
S 23 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 24 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 25 T 14S R 4E SLBM					X	X	X	X					X	X	X
S c 26 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 27 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 28 T 14S R 4E SLBM					X	X	X	X	X	X	X	X	X	X	X
Sec 31 T 14S R 4E SLBM									X	X	X	X	X	X	X
S 32 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 33 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 34 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 35 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 36 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 06 T 14S R 5E SLBM	X	X	X	X					X	X	X	X			
Se 07 T 14S R 5E SLBM	X	X	X	X					X	X	X	X			
Se 18 T 14S R 5E SLBM	X	X	X	X					X	X	X	X			
S 19 T 14S R 5E SLBM	X	X	X	X					X	X	X	X			
S 30 T 14S R 5E SLBM	X	X	X	X					X	X	X	X			
Se 31 T 14S R 5E SLBM	X	X	X	X					X	X	X	X			
Se 01 T 15S R 2E SLBM					X	X	X	X					X	X	X
S 12 T 15S R 2E SLBM					X	X	X	X							
Se 01 T 15S R 3E SLBM					X	X	X	X	X	X	X	X	X	X	X
Se 02 T 15S R 3E SLBM									X	X	X	X	X	X	X
Se 03 T 15S R 3E SLBM									X	X	X	X	X	X	X
S c 04 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 05 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 06 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 07 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 08 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 09 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 10 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 11 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 12 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 13 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 14 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 15 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 16 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 17 T 15S R 3E SLBM	X	X	X	X	X	X	X	X					X	X	X
Se 18 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 19 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 20 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 21 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 22 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 23 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 24 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 25 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 26 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 27 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 28 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 29 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 30 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 31 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 32 T 15S R 3E LBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 33 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 34 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 35 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 36 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 01 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 02 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 03 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 04 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 05 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 06 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 07 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 08 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 09 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 10 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 11 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 12 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 13 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 14 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 15 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 16 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 17 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 18 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 19 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 20 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 21 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 22 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 23 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 24 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X			
Se 25 T 15S R 4R SLBM	X	X	X	X	X	X	X	X	X	X	X	X			
S c 27 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 28 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 29 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 30 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 31 T 15S R 4E SLBM					X	X	X	X					X	X	X
Se 32 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 34 T 15S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X			
Se 01 T 16S R 3E SLBM	X	X	X	X					X	X	X	X			
S 02 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 03 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 04 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 05 T 16S R SE SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 06 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 07 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 08 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 09 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Sec 10 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 11 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 14 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 15 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 16 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 17 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 18 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 19 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 20 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 21 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 22 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 23 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 26 T 16S R 3E SLBM	X	X	X	X					X	X	X	X			
Se 27 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 28 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 29 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 30 T 163 R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 31 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 32 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3e 33 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 34 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 03 T 16S R 4E SLBM	X	X	X	X					X	X	X	X			
Se 04 T 16S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 05 T 163 R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 06 T 16S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 07 T 16S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 08 T 16S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 09 T 16S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 16 T 163 R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 17 T 16S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 18 T 16S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 19 T 16S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 20 T 16S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X			
Se 30 T 16S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X			
Se 01 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 02 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 03 T 17S B 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 04 T 17S R 2E SLBM					X	X	X	X					X	X	X
Sec 10 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 11 T 173 R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 12 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 13 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 14 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 15 T 173 R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 16 T 173 R 2E SLBM					X	X	X	X					X	X	X
Sec 21 T 17S R 2E SLBM					X	X	X	X					X	X	X
Sec 22 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 23 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 24 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 25 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 26 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 27 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 28 T 17S R 2E SLBM					X	X	X	X					X	X	X
Se 33 T 17S R E SLBM					X	X	X	X					X	X	X
Se 34 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 35 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 36 T 17S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 03 T 17S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 04 T 17S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 05 T 17S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 06 T 17S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 07 T 173 R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 08 T 17S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 09 T 17S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 10 T 17S R 3E SLBM	X	X	X	X					X	X	X	X			
Se 15 T 17S R 3E SLBM	X	X	X	X					X	X	X	X			
S 16 T 17S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 17 T 17S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 18 T 17S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 19 T 17S R 3B SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 20 T 17S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 21 T 173 R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 22 T 173 R 3E SLBM	X	X	X	X											
Sec 30 T 17S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 31 T 17S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 32 T 17S R 3E SLBM	X	X	X	X					X	X	X	X			

GROUP

DIVERSION & DEPLETION ESTIMATES

	(All valu		f et	G ow ng S	on	d y)		MANUALLY	ACRE FEET	DIVERSION	DEPLETION	GROWING	WATER USE
	IRRIGATION	STOCK	DOMESTIC	MUNICIPAL	MINING	POWER	OTHER	EVALUATED	EXPORTED	DUTY	DUTY	SEASON	REPORTING
DIV								Y					
DEP													

OTHER COMMENTS

Th water w II b t ed n Upp r Go b ry Valley by pla ng a d m
G b rry Cre k at wh t ı know th Narrow Thenc by Tun el d a al
w 11 be condu t d ı a N rth We t rly nd W st rly d t to S t on 12 n
t w h p 13 3 uth Ra g 4 East and will b u d upon th 1 nd fr m th
po t e tendı g We t a far a Section 24 n T wn hıp 13 S uth Ra g 2 E t
nd a fa South S t o 33 T wn h p 17 South Ra ge 2 E t a d S ct n 32
T w h p 17 S uth Rang 3 Ea t
Chag appl at on al600 wa ej t d D c mb r 5 1962
Appl at n ej ted ppeal t ked f m the de ı ıon f St t E g n e July
13 192S St t E g n d c ev d by ourt ord Febr ry 11 1939

E N D O F D A T A

Utah D io f W t R ght | 1594 W t N rth T mple S it 220 P O B 146300 Salt L k City Utah 84114-6300 | 801 538-7240
N tural R sources | Contact | D sclaimer | Pr vacy Policy | A cessibility Policy

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Utah Division of Water Rights

Select Related Information

(WARNING Water Rights makes NO claims as to the accuracy of this data) RUN DATE 02/25/2010

WATER RIGHT **93 1006** APPLICATION/CLAIM NO **A14475** CERT NO

OWNERSNIP

NAME USA Bureau of Reclamation Pr v Area Off ce
ADDR 302 E t 1860 South
Provo UT 84606 7317
INTEREST 100 REMARKS

DATES ETC

LAND OWNED BY APPLICANT COUNTY TAX ID#
FILED 09/06/1941 |PRIORITY 09/06/1941 |PUB BEGAN |PUB ENDED |NEWSPAPER
Prote tEnd |PROTESTED [No] |HEARNG HLD |SE ACTION [ ] |Act onDate |PROOF DUE
EXTENSION |ELEC/PROOF [1 |ELEC/PROOF |CERT/WUC |LAP ETC |LAPS LETTER
RUSH LETTR |RENOVATE |RECON REQ |TYPE [ ]
PD BOOK [93 5] |MAP [ ] |PUB DATE
Type of Right Appl t on to Appropriate Source of Info P oposed Determ nat on Status Unapp oved

LOCATION OF WATER RIGNT (Po nts of Diverelon Click on Location to access PLAT Program) **MAP VIEWER**

FLOW 40 0 cfs OR 10000 0 acr feet SOURCE Trib of North Fork of Huntington Ck
COUNTY Sanpete COMMON DESCRIPTION

POINTS OF DIVERSION SURFACE
(1) N 380 ft E 2010 ft f om SW cor, Sec 10, T 13S, R 6E, SLBM
D verting Work Sou ce
(2) N 2350 ft E 400 ft from SW cor, Sec 15, T 13S, R 6E, SLBM
D verting Wo k Source
(3) N 2750 ft W 1640 ft f om SE cor, Sec 16, T 13S, R 6E, SLBM
Diverting Works Source

St eam Alt Requi d No

POINTS OF REDIVERSION
(1) N 1700 ft E 1500 ft from SW cor, Sec 31, T 13S, R 5E, SLBM
D verting Works Sou ce
(2) N 2000 ft E 2500 ft from SW cor, Sec 31, T 13S, R 5E, SLBM
Diverting Works Source
(3) N 2200 ft E 3000 ft f om SW cor, Sec 31, T 13S, R 5E, SLBM
D verting Works Source
(4) N 2400 ft E 4000 ft from SW co , Sec 31, T 13S, R 5E, SLBM
Dive ting Works Source
(5) S 1500 ft W 2900 ft from NE cor, Sec 01, T 14S, R 4E, SLBM
Diverting Works Source
(6) S 1800 ft W 3100 ft from NE co , Sec 01, T 14S, R 4E, SLBM
Dive ting Work Source
(7) S 3100 ft W 5000 ft f om ME co , Sec 02, T 14S, R 4E, SLBM
Diverting Works Source
(8) S 3400 ft W 300 ft from NE cor, Sec 02, T 14S, R 4E, SLBM
Diverting Works Source
(9) S 2200 ft W 300 ft from NE cor, Sec 15, T 14S, R 4E, SLBM
Diverting Works Source
(10) S 1700 ft E 100 ft from NW c r, Sec 27, T 14S, R 4E, SLBM
Diverting Works Source
(11) N 500 ft W 200 ft from SE cor, Sec 01, T 15S, R 3E, SLBM
Diverting Works Source
(12) S 400 ft E 1500 ft from NW cor, Sec 14, T 15S, R 3E, SLBM
Diverting Works Source
(13) 5 2100 ft W 1000 ft from NE cor, Sec 16, T 15S, R 3E, SLBM
Diverting Works Source
(14) N 1200 ft W 700 ft from SE cor, Sec 32, T 15S, R 3E, SLBM
Diverting Works Source
(15) S 1600 ft W 2800 ft from NE cor, Sec 06, T 155, R 4E, SLBM
Diverting Works Sou ce
(16) S 2700 ft W 1000 ft from NE cor, Sec 05, T 16S, R 3E, SLBM
D ve t ng Wo ks Source

USES OF WATER RIGNT ELU Eqaivalent Liveatock Unit (cov horse etc) EDU Eqaivalent Domestic Unit or 1 Family

SUPPLEMENTAL GROUP NO 616646 Water Rights Appu t nant to the following u e(s)
93 1006(UNAP) 1007(UNAP)

IRRIGATION Sole Supply 30000 0 acres f the Group Total of 30000 0 D v L m t 0 0 acft PERIOD OF USE 04/01 TO 10/31

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Utah Division of Water Rights

Select Related Information

(WARNING Water Rights makes NO claims as to the accuracy of this data) RUN DATE 02/25/2010

WATER RIGHT **93 1007** APPLICATION/CLAIM NO **A14476** CERT NO

OWNERSHIP

NAME USA Bu e u f R lamac P v A Off
ADDR 302 E t 1860 S uth
Pr v UT 84606 7317
INTEREST 100% REMARKS

DATES ETC

LAND OWNED BY APPLICANT? COUNTY TAX ID#
FILED 09/06/1941 |PRIORITY 09/06/1941 |PUB BEGAN |PUB ENDED |NEWSPAPER
P t tEnd |PROTESTED [N]|HEARNG HLD |SE ACTION [ ]|A t onDat |PROOF DUE
EXTENSION |ELEC/PROOF [ ]|ELEC/PROOF |CERT/WUC |LAP ETC |LAPS LETTER
RUSH LETTR |RENOVATE |RECON REQ |TYPE [|
PD BOOK [93 5]|MAP [ ]|PUB DATE
Typ f Right Appli t n t App p t S u of I fo P opo d D term n t Statu Unapp ov d

LOCATION OF WATER RIGHT (Po nts of Diver on Click on Locat on to access PIAT Program) **MRP VIEWER**

FLOW 60 0 f OR 2000 0 f t SOURCE Tw Un m d T b f Bo Ig Cr k
COUNTY S p te COMMON DESCRIPTION

POINTS OF DIVERSION SURFACE
(1) N 1400 ft W 0 ft from SE , S 05, T 14S, R 6E, SLBM
D v rting Work S
(2) N 1650 ft W 3560 ft f m SE , S 05, T 14S, R 6E, SLBM
D vert ng H k S

St am Alt Requ red No

POINTS OF REDIVERSION
(1) N 1700 ft E 1500 ft fr m SW o , Se 31, T 13S, R 5E, SLBM
D v t ng Work S u
(2) N 2000 ft E 2500 ft f om SW , S c 31, T 13S, R 5E, SLBM
D v rt ng Wo ks S u
(3) N 2200 ft E 3000 ft f om SW r, Se 31, T 13S, R 5E, SLBM
D v ting Work 3 u
(4) N 2400 ft E 4000 ft f om SW , S 31, T 13S, R 5E, SLBM
Div ting Wo k S
(5) S 1500 ft W 2900 ft f om NE c , Se 01, T 14S, R 4E, SLBM
D vert ng Wo k S u
(6) S 1000 ft W 3100 ft f m NE cor, S c 01, T 14S, R 4E, SLBM
Diverting Work S u
(7) S 3100 ft W 5000 ft f om NE co , S 01, T 14S, R 4E, SLBM
D verting Work S u
(8) S 3400 ft W 300 ft f om NE o , S 02, T 14S, R 4E, SLBM
D vert ng Work S
(9) S 2200 ft W 300 ft f om NE r, S 15, T 143, R 4E, SLBM
Diverting Work Sou
(10)S 1700 ft E 100 ft f m NH r, Se 27, T 14S, R 4E, SLBM
D vert ng Work S u
(11)N 500 ft M 200 ft fr m SE , Se 01, T 15S, R 3E, SLBM
Diverting Wo k Sou
(12)3 400 ft E 1500 ft fr m NW , Se 14, T 15S, R 3E, SLBM
D verting Wo k Sou e
(13)S 2100 ft W 1000 ft from NE r, S 16, T 15S, R 3E, SLBM
Diverting Work Source
(14)N 1200 ft W 700 ft fr m SE o , S 32, T 15S, R 3E, SLBM
D vert ng Works Sour e
(15)3 1600 ft W 2800 ft from NE , S 06, T 15S, R 4E, SLBM
D vert ng Wo k Sour e
(16)S 2700 ft W 1000 ft fr m NE r, Se 05, T 16S, R 3E, SLBM
D verting Works Sou e

USES OF WATER RIGHT *ELU* Eqaivalent Livestock Uait (cow horae atc) *EDU* Equivalent Domest c Unit or 1 Family

SUPPLEMENTAL GROUP NO 616646 W te R ght Appurt nant to th follow ng u e( )
93 1006(UNAP) 1007(UNAP)

IRRIGATION S 1 Supply 0 0 a r of the Group T tal of 30000 0 D v Lim t 0 0 acft PERIOD OF USE 04/01 TO 10/31

###PLACE OF USE	NORTH WEST QUARTER				NORTH EAST QUARTER				SOUTH WEST QUARTER				SOUTH EAST		
	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	
Sec 35 T 13S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 36 T 13S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 31 T 13S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 23 T 13S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 24 T 13S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 25 T 13S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 26 T I3S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 27 T 13S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 34 T 13S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Se 35 T 13S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 36 T 13S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 30 T 13S R 5E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 31 T 13S R 5E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 01 T 14S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 12 T 14S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 24 T 14S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 30 T 14S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 06 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 07 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 08 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 17 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 18 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 19 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 20 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 21 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 27 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 28 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 29 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 30 T 143 R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 32 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 33 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 34 T 143 R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 36 T 14S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 01 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 02 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 10 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 11 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 12 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 13 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 14 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 15 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 21 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 22 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3 23 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 24 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 25 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 26 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 27 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 26 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 29 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 30 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 31 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 32 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 33 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 34 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 35 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 36 T 14S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 06 T 14S R 5E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 07 T 14S R 5E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 18 T 14S R 5E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 19 T 14S R 5E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 30 T 14S R 5E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 31 T 14S R 5E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 01 T 15S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 25 T 15S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 36 T 15S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 01 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 02 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 03 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 04 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 05 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 08 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 09 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 10 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 11 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 12 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 13 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 14 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 15 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 16 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 20 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 21 T 15S R SE SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 22 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 23 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 24 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 25 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 26 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 27 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 28 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 29 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c S1 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 32 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 33 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 34 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 35 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 36 T 15S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
ALL T 15S R 4E SLBM															
S c 06 T 15S R 5E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 07 T 15S R 5E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 19 T 15S R 5E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 30 T 15S R 5E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 01 T 16S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 02 T 16S R 2E SL8M	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 12 T 16S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 13 T 16S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 24 T 16S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 25 T 16S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 36 T 16S R 2E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 01 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Sec 02 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 03 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 04 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 05 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 06 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 07 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 08 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 10 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 18 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 19 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 30 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 31 T 16S R 3E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 01 T 16S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 02 T 16S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 03 T 16S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 04 T 16S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 05 T 16S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 06 T 16S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 07 T 16S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 08 T 16S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 09 T 16S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S 10 T 16S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Se 16 T 16S R 4E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
															GROUP

Sto g f om 01/01 to 12/31 lu ve n M mm th R rv i w th a max mum ap ty f ac f t lo ated n

H ght of Dam 104	NORTH WEST				NORTH EAST				SOUTH WEST				SOUTH EAST			
Ar a Inu d t d 530 00	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE	NW	NE	SW	SE
Se 06 T 13S R 6E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sec 07 T 13S R 6E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
S c 18 T 13S R 6E SLBM	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Small Dam R qu d N

E N D O F D A T A

Ut h D io f W t R ght | 1594 W st N rth T mpl S t 220 P O B 146500 Salt Lak Cty Utah 84114-6300 | 601-538-7240
Natu l Raso ces | Contact | Disclaimer | Privacy Pol y | Accessibility Policy

Landfill Cap

Area of Landfill	98425	sq ft
Depth of Cap	1 5	ft
Fill Factor	1 25	
Fill Required for Cap	6835	cu yd
Earthwork from Channel	7481	cu yd
Total Remaining Fill	646	cu yd

Appendix D

Closure and Post Closure Costs

Post Closure Care Opinion of Probable Cost

Barton Excavating

Prepared by Jones and DeMille Engineering, Inc

Item #	Item	Unit	2009 Unit Price	Quantity Per Year	Total Per Year
1	Mobilization	Lump	$ 70 00	1	$ 70 00
2	Excavation and Landfill Cap Maintenance (Trackhoe)	Cu Yd	$ 6 00	40	$ 240 00
3	Broadcast Seed	1000 SqFt	$ 15 00	1	$ 15 00
4	Site Inspections and Record Keeping	Hour	$ 100 00	2	$ 200 00
5	Administration Costs	Hour	$ 100 00	2	$ 200 00
				Yearly Sub Total	$ 725 00
				Number of Years	$ 30 00
				Sub Total	$ 21 750 00
				10 % Contingency	$ 2 180 00
				Total Probable Cost	$ 23,930 00

Appendix E

Financial Assurance for Closure and Post Closure Costs

Appendix F

Class IV and VI Landfill Application Form and Checklist

Utah Class IV and VI Landfill Permit Application Checklist

Important Note The following checklist is for the permit application and addresses only the requirements of the Division of Solid and Hazardous Waste Other federal state or local agencies may have requirements that the facility must meet The applicant is responsible to be informed of and meet any applicable requirements Examples of these requirements may include obtaining a conditional use permit a business license or a storm water permit The applicant is reminded that obtaining a permit under the *Solid Waste Permitting* and *Management Rules* does not exempt the facility from these other requirements

An application for a permit to construct and operate a landfill is the documentation that the landfill will be located designed constructed and operated to meet the requirements of Rules R315-305 of the *Utah Solid Waste Permitting* and *Management Rules* and the *Utah Solid* and *Hazardous Waste Act* (UCA 19 6 101 through 123) The application should be written to be understandable by regulatory agencies landfill operators and the general public The application should also be written so that the landfill operator after reading it will be able to operate the landfill according to the requirements with a minimum of additional training

Copies of the *Solid Waste Permitting* and *Management Rules* the *Utah Solid* and *Hazardous Waste Act* along with many other useful guidance documents can be obtained by contacting the Division of Solid and Hazardous Waste at 801-538 6170 Most of these documents are available on the Division s web page at www hazardouswaste utah gov Guidance documents can be found at the solid waste section portion of the web page

When the application is determined to be complete the original complete application and one copy of the complete application are required along with an electronic copy

Part II Application Checklist

I Facility General Information	
Description of Item	Location In Document
Ia General Information - All Facilities	
Completed *Part I* General information form above	Appendix A
General description of the facility (R315-310-3(1)(b))	Page 2/Appendix A
Legal description of property (R315-310-3(1)(c))	Page 2/Appendix A
Proof of ownership lease agreement or other mechanism (R315-310-3(1)(c))	Page 2/Appendix A
If the permit application is for a Class IV landfill a demonstration that the landfill is not a commercial facility	NA
Waste type and anticipated daily volume (R315 310-3(1)(d))	NA
Intended schedule of construction (R315-302-2(2)(a))	Page 2
Ib General Information - New Or Laterally Expanding Facilities	
Documentation that the Historical Survey requirements of R315-302-1(2)(f) have been met (R315-305-4(1)(b)(vi))	NA
Name and address of all property owners within 1000 feet of the facility boundary (R315 310-3(2)(i))	Page 2/Appendix A
Documentation that a notice of intent to apply for a permit has been sent to all property owners listed above (R315-310 3(2)(ii))	Page 2/Appendix A

I Facility General Information	
Description of Item	Location In Document
Name of the local government with jurisdiction over the facility site (R315 310 3(2)(iii))	NA
Ic Location Standards - New Or Laterally Expanding Class IVa Landfills (R315-305-4(1)(a))	
Land use compatibility	Page 3
Maps showing the existing land use topography residences parks monuments recreation areas or wilderness areas within 1000 feet of the site boundary	Page 3/NA
Certifications that no ecologically or scientifically significant areas or endangered species are present in site area	NA
Maps showing the location of dwellings residential areas other structures and historic structures	NA
List of airports within five miles of facility and distance to each	NA
Geology	NA
Geologic maps showing significant geologic features faults and unstable areas	NA
Maps showing site soils	NA
Surface water	Page 3/Appendix B
Magnitude of 24 hour 25 year and 100 year storm events	Page 3/Appendix B
Average annual rainfall	Appendix B
Maximum elevation of flood waters proximate to the facility	Page 3/Appendix C
Maximum elevation of flood water from 100 year flood for waters proximate to the facility	Page 3/Appendix C
Wetlands	NA
Ground water	Page 3/Appendix C
Id Location Standards - New Or Laterally Expanding Class IVb and VI Landfills	NA
Floodplains as specified in R315-302-1(2)(c)(ii) (R315-305-4(1)(b)(i))	NA
Wetlands as specified in R315-302-1(2)(d) (R315 305 4(1)(b)(ii))	NA
The landfill is located so that the lowest level of waste is at least ten feet above the historical high level of ground water (R315-305-4(1)(b)(iii))	NA
Geology as specified in R315-302-1(2)(b)(i) and (iv) (R315-305-4(1)(b)(iv))	NA
Ie Additional Location Standards - New Or Laterally Expanding Class IVb and VI Landfills Or Landfills Requesting That Dead Animals Be Added As A New Waste Stream (R315-305-4(1)(a)(v))	NA
Maps showing the existing land use topography residences parks monuments recreation areas or wilderness areas within 1000 feet of the site boundary	NA

I Facility General Information	
Description of Item	Location In Document
Certifications that no ecologically or scientifically significant areas or endangered species are present in site area	NA
Maps showing the location of dwellings residential areas other structures and historic structures	NA
List of airports within five miles of facility and distance to each	NA
If Plan Of Operations - All Facilities (R315-310-3(1)(e) and R315-302-2(2))	NA
Description of on-site waste handling procedures and an example of the form that will be used to record the weights or volumes of waste received (R315-302-2(2)(b) And R315-310 3(1)(f))	NA
Schedule for conducting inspections and monitoring and examples of the forms that will be used to record the results of the inspections and monitoring (R315 302-2(2)(c) R315-302 2(5)(a) and R315-310-3(1)(g))	NA
Contingency plans in the event of a fire or explosion (R315-302-2(2)(d))	NA
Plan to control fugitive dust generated from roads construction general operations and covering the waste (R315 302-2(2)(g))	NA
Plan for letter control and collection (R315-302-2(2)(h))	NA
Procedures for excluding the receipt of prohibited hazardous or PCB containing waste (R315-302 2(2)(j))	NA
Procedures for controlling disease vectors (R315-302-2(2)(k))	NA
A plan for alternative waste handling (R315-302-2(2)(l))	NA
A general training and safety plan for site operations (R315-302-2(2)(o))	NA
Any recycling programs planned at the facility (R315-303-4(6))	NA
Any other site specific information pertaining to the plan of operation required by the Executive Secretary (R315-302-2(2)(o))	NA
Ig Additional Plan Of Operation Requirements - Class IVa Facilities	NA
Corrective action programs to be initiated if ground water is contaminated (R315-302-2(2)(e))	NA
II **Facility Technical Information**	
*II*a Maps - All Facilities	
Topographic map drawn to the required scale with contours showing the boundaries of the landfill unit ground water monitoring well locations gas monitoring points and the borrow and fill areas (R315-310-4(2)(a)(i))	Page 3&4/Appendix C
Most recent U S Geological Survey topographic map 7-1/2 minute series showing the waste facility boundary the property boundary surface drainage channels any existing utilities and structures within one-fourth mile of the site and the direction of the prevailing winds (R315-310-4(2)(a)(ii))	Page 3&4/Appendix C

I Facility General Information	
Description of Item	Location In Document
IIb Geohydrological Assessment - Class IVa Landfills (R315-310-4(2)(b))	
Local and regional geology and hydrology including faults unstable slopes and subsidence areas on site (R315-310 4(2)(b)(i))	NA
Evaluation of bedrock and soil types and properties including permeability rates (R315-310 4(2)(b)(ii))	NA
Depth to ground water (R315 310 4(2)(b)(iii))	Page 3&4/Appendix C
Quantity location and construction of any private or public wells on site or within 2 000 feet of the facility boundary (R315-310-4(2)(b)(v))	Page 3&4/Appendix C
Tabulation of all water rights for ground water and surface water on-site and within 2 000 feet of the facility boundary (R315-310 4(2)(b)(vi))	Page 3&4/Appendix C
Identification and description of all surface waters on-site and within one mile of the facility boundary (R315 310-4(2)(b)(vii))	NA
For an existing facility identification of impacts upon the ground water and surface water from leachate discharges (R315-310-4(2)(b)(viii))	NA
Calculation of site water balance (R315 310 4(2)(b)(ix))	NA
IIc Engineering Report Plans Specifications, And Calculations - All Facilities	
Unit design to include cover design fill methods and elevation of final cover including plans and drawings signed and sealed by a professional engineer registered in the State of Utah when required (R315 310-3(1)(b) and R315-310-4(2)(c)(iii))	Page 4/Appendix C
Design and location of run on and run-off control systems (R315-310-4(2)(c)(viii))	Page 4/Appendix C
Anticipated facility life and the basis for calculating the facility s life (R315-310-4(2)(c)(ii))	NA
Engineering reports required to meet the location standards of R315-305-4 including documentation of any demonstration or exemption made for any location standard (R315-310-4(2)(c)(i))	Page 4/Appendix C
Identification of borrow sources for final cover (R315-310-4(2)(c)(iv))	Page 4/Appendix C
Run-off collection treatment and disposal and documentation to show that any treatment system is being or has been reviewed by the Division of Water Quality (R315-310-4(2)(c)(v) and R315-310-3(1)(i))	NA
IId Closure Requirements - All Facilities	
CLOSURE PLAN (R315-310-3(1)(h))	Page 4/Appendix C
Closure schedule (R315-310-4(2)(d)(i))	NA
Design of final cover (R315-310 4(2)(c)(iii))	Page 4/Appendix C

I Facility General Information	
Description of Item	Location In Document
Capacity of site in volume and tonnage (R315-310-4(2)(d)(ii))	Page 4/Appendix C
Final inspection by regulatory agencies (R315 310-4(2)(d)(iii))	NA
IIe Post-Closure Requirements- All Facilities	
POST-CLOSURE CARE PLAN (R315 310 3(1)(h))	NA
Changes to record of title land use and zoning restrictions (R315-310 4(2)(e)(ii))	NA
Maintenance activities to maintain cover and run on/run-off control systems (R315-310-4(2)(e)(iii))	Page 5/Appendix C
List the name address and telephone number of the person or office to contact about the facility during the post-closure care period (R315-310-4(2)(e)(vi))	Page 5
IIf Financial Assurance - All Facilities (R315-310-3(1)(j))	
Identification of closure costs including cost calculations (R315 310-4(2)(d)(iv))	Page 5/Appendix D
Identification of post-closure care costs including cost calculations (R315-310 4(2)(e)(iv))	Page 5/Appendix D
Identification of the financial assurance mechanism that meets the requirements of Rule R315-309 and the date that the mechanism will become effective (R315 309-1(1))	Page 5/Appendix E

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