CARSON WATER SUBCONSERVANCY DISTRICT
BOARD OF DIRECTORS

NOTICE OF PUBLIC MEETING

DATE: June 15, 2016
TIME: 6:30 P.M.
LOCATION: Carson Valley Improvement Club **(**CVIC) Hall
1604 Esmeralda Ave., # 100
Minden, NV

The meeting will be preceded by a tour of the Virginia/Rocky river restoration project on the East Fork of the Carson River near the Carson Valley Country Club, Gardnerville, Nevada at 3:30 p.m. and dinner at 5:00 p.m. at the Overland Restaurant & Pub, 1451 U.S. Hwy. 395 N., Gardnerville, Nevada. A quorum of the CWSD Directors may be present at the events preceding the board meeting but no action will be taken.

AGENDA

Please Note: A quorum of the Douglas County Board of Commissioners may be present at this meeting. Those commissioners will be deliberating and taking action only in their role as Directors of the Carson Water Subconservancy District (CWSD). The CWSD Board may 1) take agenda items out of order; 2) combine two or more items for consideration; or 3) remove an item from the agenda or delay discussion related to an item at any time. Reasonable efforts will be made to assist and accommodate individuals with disabilities who wish to attend the meeting. Please contact Toni Leffler at (775)887-7450 (mailto:toni@cwsd.org), at least a week in advance so that arrangements can be made.

1. Call to Order
2. Convene CWSD/Alpine County Joint Powers Board
3. Roll Call
4. Pledge of Allegiance
5. Approval of Agenda (For Possible Action)
6. Approval of the Board Meeting Minutes from May 18, 2016 (For Possible Action)
7. Public Comment (Discussion Only) Action may not be taken on any matter brought up under public comment until scheduled on an agenda for action at a later meeting.

CONSENT AGENDA

Please Note: All matters listed under the consent agenda are considered routine and may be acted upon by the Board of Directors with one action and without an extensive hearing. Any member of the board or any citizen may request that an item be taken from the consent agenda, discussed and acted upon separately during this meeting.

8. Approval of Treasurer's Report for May 2016 (For Possible Action)
9. Payment of Bills for May 2016 (For Possible Action)
10. Discussion for possible action regarding approval of the Agreement #2016-4 with **River Wranglers** for the Carson River Work Days and Vegetation Management Projects
11. Discussion for possible action regarding approval of Agreement #2016-5 with **Alpine Watershed Group** to Help Fund the Upper Carson River Watershed Programs.
12. Discussion for possible action regarding approval of an Addendum to Interlocal Contract #2015-4 with **Carson Valley Conservation District** for Bioengineering and Erosion Control Along the Carson River through Carson Valley.
13. Discussion and possible action regarding approval of a Second Addendum to Interlocal Contract #2014-8 with **Dayton Valley Conservation District** for Middle Carson River Clearing, Snagging, and Maintenance Projects.
14. Discussion and possible action regarding approval of Interlocal Contract #2016-6 with **Dayton Valley Conservation District** for Noxious Weed Control in Storey County.

15. Discussion and possible action regarding approval of Interlocal Contract #2016-7 with **Lahontan Conservation District** for Clearing and Snagging on the Carson River Below the Diversion Dam.
16. Discussion and possible action regarding approval of Interlocal Contract #2016-8 with **Douglas County** to Help Cover Some of the Costs to Construct a New Well in the Sierra Country Estates.
17. Discussion for possible action regarding approval Interlocal Contract #2016-9 with **Carson Valley Conservation District** for Clearing and Snagging and Vegetation Management Along the Carson River through Carson Valley and Carson City.
18. Discussion for possible action regarding approval of Interlocal Contract #2016-10 with **Churchill County** to Assist in the Dixie Valley Water Level Measurement and Precipitation Gage Monitoring Program.
19. Discussion for possible action regarding approval of Interlocal Contract #2016-11 with **Lyon County** to Assist with USGS Maintenance Costs for New River Gauge in Dayton (#10311750).
20. Discussion for possible action regarding approval of an Agreement #2016-12 with **Sierra Nevada Journeys** to Help Fund Four "Family Watershed Nights."
21. Discussion for possible action regarding approval of Interlocal Contract #2016-3 with **Carson City** for the Golden Eagle Lane Erosion Control Project.

END OF CONSENT AGENDA

22. Discussion for possible action regarding a presentation by Rob Anderson of R.O. Anderson Engineering regarding the Stephanie Way Flood Control Project Feasibility Study.
23. Discussion for possible action regarding an update on the June 7-8, 2016, "Get on the Bus" Watershed Tour.
24. Staff Reports - General Manager
    - Legal
    - Correspondence
25. Directors Reports
26. Public Comment (Discussion Only) Action may not be taken on any matter brought up under public comment until scheduled on an agenda for action at a later meeting.
27. Adjournment

Supporting material for this meeting may be requested from Toni Leffler at 775-887-7450 (mailto:toni@cwsd.org) and is available at the CWSD offices at 777 E. William St., #110A, Carson City, NV 89701 and on the CWSD website at www.cwsd.org.

In accordance with NRS 241.020, this notice and agenda has been posted at the following locations :

-Dayton Utilities Complex
34 Lakes Blvd .
Dayton, NV

-Lyon County Administrative Building
27 S. Main St.
Yerington, NV

-Carson City Hall
201 N. Carson St.
Carson City, NV

-Minden Inn Office Complex
1594 Esmeralda Avenue
Minden, NV

-Churchill County Administrative Complex
155 N Taylor St.
Fallon, NV

-Carson Water Subconservancy District Office
777 E. William St., #110A
Carson City, NV

-Alpine County Administrative Building
99 Water St.
Markleeville, CA

AFFIDAVIT OF POSTING

The undersigned affirms that on or before 9:00 A.M. on June 8, 2016, he/she posted a copy of the Notice of Public Meeting and Agenda for the June 15, 2016, regular meeting of the Carson Water Subconservancy District in accordance with NRS 241.020; said agenda was posted at the following location: _____.

_____

SIGNATURE

Name: _____

Title: _____

Date & Time of Posting: _____

AGENDA ITEM #6
MINUTES OF LAST
BOARD MEETING

CARSON WATER SUBCONSERVANCY DISTRICT
BOARD OF DIRECTORS MEETING
May 18, 2016, 6:30 P.M.
DRAFT Minutes

Directors present:
Karen Abowd, Vice Chairman
Brad Bonkowski
Carl Erquiaga
Ray Fierro, Treasurer
Don Jardine
Doug Johnson
Austin Osborne, Storey County representative
Barry Penzel
Chuck Roberts
Fred Stodieck

Directors not present:
Don Frensdorff
Greg Lynn, Chairman
Mary Rawson
Ernie Schank

Staff present:
George Benesch, Legal Counsel
Brenda Hunt, Watershed Program Manager
Edwin James, General Manager
Toni Leffler, Administrative Assistant/Secretary to the Board
Debbie Neddenriep, Environmental Specialist

Also present: none

In Chairman Lynn's absence, Vice Chair Abowd called the meeting to order at 6:30 p.m. in Room #3137 of the Nevada Legislative Building, 401 S. Carson St., Carson City, NV. The CWSD/Alpine County Joint Powers Board was convened. Roll call was taken and a quorum was determined to be present. The Pledge of Allegiance was lead by Director Johnson.

Item #5 - Approval of Agenda. *Director Penzel made the motion to approve the agenda as amended. The motion was seconded by Director Stodieck and unanimously approved by the Board.*

Item #6 - Approval of the Board Meeting Minutes from April 20, 2016. *Director Bonkowski made the motion to approve the Minutes of the Board Meeting on April 20, 2016. The motion was seconded by Director Stodieck and unanimously approved by the Board, with Directors Rawson and Roberts abstaining for not having been present at that meeting..*

Item #7 - Public Comment - None.

CONSENT AGENDA

Item #8 - Approval of Treasurer's Report for April 2016. -

Item #9 - Payment of Bills for April 2016.

Director Fierro made the motion to approve the consent agenda, including items #8-9. The motion was seconded by Director Stodieck and unanimously approved by the Board.

END OF CONSENT AGENDA

Item #10 - PUBLIC HEARING - The Carson Water Subconservancy District will hold a Public Hearing on its FY 2016-17 Tentative Budget. Director Abowd opened the public hearing. There was no public nor board comment, so the Public Hearing was closed.

Item #11 - Discussion for possible action regarding rejection, modification, or adoption of the FY 2016-17 Final Budget. Mr. James explained that there were a few proposal changes to the budget was modified on p. 38 of the Board package. On the interest accounts, the interest was increased because of increasing State Local Government Investment Pool interest rates. Employee Benefits decreased by 7,500 with the decrease in family benefits. Lost Lakes expenses increased $2,500 because of repairs and dam fees. Preliminary Planning was reduced by $11,000 so that we have maintain the 4% of the total budget for the ending balance.

Mr. James noted that the highlighted underlined items represent changes. In the Acquisition/Construction Fund, one of the CDs recently matured, and staff closed the CD and is moving it to the Investment Pool for better interest. Under construction projects, Lyon County asked for $25,000, but they were not able to get Community Development Block (CDB) grant. The Floodplain Management Fund had only changes to interest.

Director Fierro made the motion to accept the FY 2016-17 Final Budget as presented. The motion was seconded by Director Penzel and unanimously approved by the Board.

Item #12 - Discussion for possible action regarding awarding the Virginia/Rocky Stream Bank Stabilization Project Design to Cardno. Mr. James explained about the modified Scope of Work. There were only a few slight changes. On p. 2, the Washoe Tribe asked for hard copies of the data in Task 1.2, on p. 3 task 2.3, the Tribe wanted a limited entry permit, and Douglas County staff wanted to see the breakdown on p. 10 Exhibit D. This is for the design of the Virginia/Rocky Stream Bank Stabilization Project to a 90% design. The Tribe will be taking it to final design and complete the construction project since it's on Tribal property.

Director Bonkowski asked what happens if the Tribe doesn't get the funding to finish the design and construction. Mr. James responded that the Tribe is eligible for more funding than CWSD, and we have helped them locate funding, possibly Q1. Our agreement with NDEP is only for design.

Director Abowd asked who holds the Tribe accountable for getting the job done correctly. Mr. James responded that the project will require permits from NDEP and ACOE, who will have to approve the Tribe's design before it goes forward. We need to make sure it is in line with our Stewardship Plan.

Director Stodieck asked the total proposed for the entire project. Mr. James explained that it is now two projects which could cost between $250,000 - $400,000.

Director Bonkowski made the motion to authorize the General Manager to sign the agreement with Cardno to conduct the design of the Virginia/Rocky Stream Bank Stabilization Project. The motion was seconded by Director Stodieck and unanimously approved by the Board.

Item #13 - Discussion regarding an update on the Environmental Educational Round Table meeting and the proposed communication plan. Brenda Hunt explained about the Watershed Literacy Action Plan. The Environmental Education Round Table was to discuss the next steps from that plan, the change we would like to create through this plan. We are in progress now with those tasks in the draft Communications and Marketing Plan. It follows the survey done last June. The Environmental Education Round Table was to share information and get buy in. We also have a Spanish version of the physical watershed map and an update to on-line interactive map and timeline.

Ms. Hunt shared some key findings from Watershed Literacy Survey including that 67% of population didn't know they lived in watershed. Watershed health was important to people but they didn't think they had any impact on it. The Draft Marketing Plan looks at demographics, key audiences, key messages, evaluation process. There were over 50 environmental educators at Round Table. Mark Duda, the Executive Director of Responsive Management presented findings from survey. Participants at the workshop talked about how to use messages and tag lines, what they are using now, and what they want to use in the future.

The top messages topics included:.

1. Reducing runoff from property can improve water quality.
2. The Carson River and its watershed is the source of drinking water.
3. Inform residents that they live in watershed.
4. Yard and land maintenance affect the Carson River and watershed.
5. Connect residents' health and quality of life to health of their watershed.
6. Educate residents on the importance of reducing polluted runoff.
7. Protect water quality and avoid wasting water.
8. Proper disposal of used oil and hazardous materials

The most needed topic message to improve watershed health was connecting residents' health and quality of life to the health of the river and watershed. The Carson River and watershed is the source of drinking water.

The next step is to create a campaign. Following the round table some of the new partners in attendance are joining the CRC Education Working Group. The draft Spanish translation of the watershed map and timeline is being revised with the hope to have the map printed by the end of June.

Staff will present the online interactive map to the Board when it is all populated and done. RDM Infinity who did our website, has finished working on the platform, so all staff has to do it populate it. Staff now has complete content control.

Director Fierro asked whether we will provide feedback to the telephone survey participants. Ms. Hunt explained that the survey was anonymous survey and we don't have participant phone numbers. Director Fierro asked how many people came to Round Table. Ms. Hunt responded that there were 48 participants.

Director Fierro asked what the plan is to get the Spanish translation of the map out to the Spanish community once it is finished. Ms. Hunt responded that staff will get it out to the United Latino Community and churches. We also have contacts in Douglas County. We will research exactly where the maps will go, but we are developing relationships with the Latino community, as well as in schools.

Director Stodieck suggested that a good platform for informing kids might be the Douglas County Farm Day events are held three or four times a year involving a lot of kids.

Ms. Hunt also mentioned an organization called HECHO (Hispanics Enjoying Camping Hunting in the Outdoors).

No action was required on this item; receive and file.

Item #14 - Staff Reports

General Manager - Mr. James reported: 1) A group of about 35 people recently did a float trip down the upper Carson River . Shane Fryer put together a video which was shown to the Board. Everyone had a good time and this was a good opportunity to network and address river issues. Diverse group including folks from USFS and county Supervisors. 2) Mr. James has been going to all the counties and talking about projects for potential Q1 funding. He will be coming up with a list of projects and bring it back to CWSD Board, which serves as the coordinating committee for the Carson River Watershed. Recommendations will then be made to the State. The State does not have any staff to work on this, we will push to move it forward. The Carson River Corridor has $3.5 million in Q1 funding left. 3) The Board will be starting with summer field trips and staff will be contacting Board members for ideas. 4) Mr. James has been talking with Board members. One suggestion is to have a Water Summit in January or February of 2017 and invite legislators to come before the next session starts.

Ms. Hunt reported: 1) The "Get on the Bus" tour will be on June 6-7, 2016. 2) Staff is also considering a Heenan Lake tour soon if anyone wants to go.

Legal –Mr. Benesch had nothing in particular to report.

Correspondence – As handed out at the meeting.

Item #15 - Directors' Reports

Director Johnson had pictures from the float trip which he showed to the Board.

Director Jardine commented that two Alpine County Supervisors were in Sacramento today lobbying for reduced rates for Lost Lakes. 2) Thanked Mr. James for coming to the last Alpine County Supervisors' meeting to give a water report. 3) The Pony Express ride will be leaving Sacramento on June 15 and going through Hope Valley, Genoa, and Carson City as it makes its way east.

Director Osborne reported that Storey County is getting closer to completion of its Master Plan. 2) Continuing to work on properties to replace parts of the Marlette to Virginia City pipeline. 3) Storey County has been active in coordinating the noxious weed abatement program, for which Storey County has funds budgeted and is looking for other funding.

None of the other directors had anything specific to report.

Item #16 - Public Comment. None

There being no further business to come before the Board, Director Penzel made the motion to adjourn, seconded by Director Stodieck. The meeting was adjourned at 7:10 p.m.

Respectfully submitted,

Toni Leffler
Secretary

AGENDA ITEM #8
TREASURER'S REPORT

CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND
Balance Sheet
As of May 31, 2016

	May 31, 16
ASSETS	
Current Assets	
Checking/Savings	
1010-00 · Cash in Checking - B of A	22,591.51
1011-00 · Petty Cash	100.00
1014-00 · Local Gov't Inv. Pool-Regular	326,953.34
1021-00 · US Bank CD	249,644.99
1028-00 · First Independent Bank of Nevad	247,680.44
1029-00 · Bank of America-Savings	84,123.79
Total Checking/Savings	931,094.07
Other Current Assets	
1055-00 · Payroll Deposit - Carson City	500.00
Total Other Current Assets	500.00
Total Current Assets	931,594.07
TOTAL ASSETS	**931,594.07**
LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Other Current Liabilities	
3307-00 · CC Payroll Due	75,701.96
3360-00 · Accrued Vacation	23,145.17
3362-00 · Accrued sick leave	44,262.23
Total Other Current Liabilities	143,109.36
Total Current Liabilities	143,109.36
Total Liabilities	143,109.36
Equity	
4000-00 · Fund Balance	613,343.57
Net Income	175,141.14
Total Equity	788,484.71
TOTAL LIABILITIES & EQUITY	**931,594.07**

CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND
Profit & Loss YTD Comparison
May 2016

	May 16	Jul '15 - May 16
Ordinary Income/Expense		
Income		
5008-00 · Alpine Co. Joint Powers contrib		9,000.00
5009-00 · Churchill County Ad Valorem		181,808.97
5010-00 · Lyon County Ad Valorem		144,017.66
5011-00 · Douglas County Ad Valorem	8,752.81	477,623.42
5012-00 · Carson City Ad Valorem		358,237.23
5025-00 · Int. Inc.-US Bank CD	102.29	1,039.79
5031-00 · Interest Income-LGIP Reg.	99.17	509.61
5044-00 · Int-1st Independent Bk of NV CD	91.57	991.57
5045-00 · Interest Income-B of A Savings	3.73	52.07
5050-00 · Watershed Coordinator		
5050-01 · NDEP Grant-Watershed Coord		
5050-11 · Watershed Map		10.00
Total 5050-01 · NDEP Grant-Watershed Coord		10.00
5050-07 · CRC donation		4.00
5050-08 · NDEP Watershed Coord 2012-15		
5050-10 · NDEP Watershed Coord. 2015-18	315.01	17,894.77
Total 5050-00 · Watershed Coordinator	315.01	17,908.77
5058-00 · 208 Water Quality Plan		
5058-02 · NDEP-2010 Algae Study Grant		
5058-03 · NDEP 208 LID Grant- 2013-15		5,013.26
Total 5058-00 · 208 Water Quality Plan		5,013.26
5060-00 · Misc. Income		
5060-02 · Watershed Tour	2,685.00	2,685.00
5060-03 · CRC Forum	110.00	755.00
5060-00 · Misc. Income - Other	130.00	180.00
Total 5060-00 · Misc. Income	2,925.00	3,620.00
5063-00 · Environmental Education Program		
5063-03 · NDEP-Env.Ed.Coord. 2012-14		11,187.32
5063-04 · NDEP-Env.Ed.Coord.2015-17	8,332.93	18,772.92
Total 5063-00 · Environmental Education Program	8,332.93	29,960.24
5070-00 · Clear Creek Educ. Program		
5070-02 · Donation for Clear Creek Educ.		4.00
Total 5070-00 · Clear Creek Educ. Program		4.00
5077-00 · CR Conservation Tours		
5077-03 · NDEP Conserv Tour Grant 2012-14		4,530.50
Total 5077-00 · CR Conservation Tours		4,530.50
5082-00 · Alpine Co.-CASGEM Grant		1,013.71
5086-00 · FEMA MAS #3 (Do.Co.)		90,728.81
5087-00 · FEMA MAS #4 (Flood Maps)		53,190.43
5090-00 · NDEP-Watershed Literacy Grant	465.09	4,542.67
5091-00 · Rec.Trails Signage-Motorized		1,827.31
5092-00 · FEMA - MAS #5	6,469.38	131,809.62
5093-00 · FEMA - MAS #6	24,754.27	120,562.15
5094-00 · NDEP-VA/Rocky Bank Stab.Design	507.62	747.68
Total Income	52,818.87	1,638,739.47
Expense		
7015-00 · Salaries & Wages	26,879.46	293,442.47
7020-00 · Employee Benefits	10,676.11	114,457.31
7021-00 · Workers Comp Ins.		500.00
7101-00 · Director's Fees		
7101-01 · Director Benefits	11.60	418.49
7101-00 · Director's Fees - Other	800.00	8,661.61
Total 7101-00 · Director's Fees	811.60	9,080.10
7102-00 · Insurance		6,917.44
7103-00 · Office Supplies	-312.42	2,216.31

CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND
Profit & Loss YTD Comparison
May 2016

	May 16		Jul '15 - May 16	
7104-00 · Postage		94.00		640.80
7105-00 · Rent		2,169.34		23,862.74
7106-00 · Telephone/Internet		229.94		3,827.51
7107-00 · Travel-transport/meals/lodging				
7107-01 · Car Allowance	566.42		5,862.45	
7107-00 · Travel-transport/meals/lodging - Other	235.34		4,376.88	
Total 7107-00 · Travel-transport/meals/lodging		801.76		10,239.33
7108-00 · Dues & Publications		146.84		954.46
7109-00 · Miscellaneous Expense		14.50		1,058.00
7110-00 · Seminars & Education				1,571.25
7111-00 · Office Equipment		899.99		1,644.90
7112-00 · Bank Charges				74.76
7114-00 · Outside Professional Services				5,320.00
7115-00 · Accounting				12,688.50
7116-00 · Legal		3,369.33		33,735.30
7117-00 · Lost Lakes Expenses				8,946.76
7118-00 · Mud Lake O & M				852.94
7120-00 · Integrated Watershed Programs				
7120-07 · Watershed Tour			3.00	
7120-30 · Watershed Coord.Exp. 2015-18	1,579.25		8,685.55	
Total 7120-00 · Integrated Watershed Programs		1,579.25		8,688.55
7121-00 · Misc. Water Right Expenses				81.69
7125-00 · Environmental Ed.Coord.Exp.				
7125-01 · Env.Ed.Coord.Exp.2012-14				
7125-02 · Env.Ed.Coord.Exp. 2015-17	3,059.62		30,413.27	
Total 7125-00 · Environmental Ed.Coord.Exp.		3,059.62		30,413.27
7210-00 · CR Conservation Tours Exp.				
7210-03 · NPS Conser.Tours 2012-15			1,973.11	
7210-00 · CR Conservation Tours Exp. - Other				
Total 7210-00 · CR Conservation Tours Exp.				1,973.11
7214-00 · Rec. Trails Signage-Motorized				40.16
7332-00 · Carson River Work Days				
7332-01 · CR Work Days 2015-16			6,387.97	
7332-00 · Carson River Work Days - Other				
Total 7332-00 · Carson River Work Days				6,387.97
7337-00 · Carson River Restoration				
7337-01 · Upper Carson River Grant.				
7337-15 · CVCD-Bioengr/Erosion Control-CV	2,746.19		31,265.00	
7337-16 · CVCD Flood Control Loan/Grant			30,000.00	
Total 7337-01 · Upper Carson River Grant.	2,746.19		61,265.00	
7337-03 · Dayton Valley Conserv				
7337-31 · DVCD-Restoration Proj.2015-16	15,208.32		44,160.60	
7337-32 · DVCD-Storey Co. Weed Abatement	541.28		541.28	
Total 7337-03 · Dayton Valley Conserv	15,749.60		44,701.88	
7337-04 · Lahontan Conserv.Dist			17,564.86	
Total 7337-00 · Carson River Restoration		18,495.79		123,531.74
7404-00 · Noxious Weeds Control-CR Wtrshd				
7404-01 · Noxious Weed Control-Alpine Co.				
7404-02 · Noxious Weed Control-Douglas Co				
7404-03 · Noxious Weed Control-CarsonCity				
7404-04 · Noxious Weed Control-Lyon Co.	1,936.18		8,910.87	
7404-05 · Noxious Weed Control-Churchill				
Total 7404-00 · Noxious Weeds Control-CR Wtrshd		1,936.18		8,910.87
7406-00 · 208 Water Quality Mgmt. Plan				
7406-01 · 208 Plan-EF Algae Project				
7406-12 · EF Algae Project Supplies			0.24	

CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND
Profit & Loss YTD Comparison
May 2016

	May 16		Jul '15 - May 16	
Total 7406-01 · 208 Plan-EF Algae Project			0.24	
7406-02 · 208 Plan-LID Practices- 2013-14			201.69	
7406-00 · 208 Water Quality Mgmt. Plan - Other			0.48	
Total 7406-00 · 208 Water Quality Mgmt. Plan				202.41
7419-00 · FEMA MAS #3				89,140.40
7420-00 · FEMA MAS #4 (Flood Map)				
7420-01 · Flood Maps-HDR			15,553.58	
7420-02 · Ordinance Review-Still Waters			20,150.00	
7420-00 · FEMA MAS #4 (Flood Map) - Other	0.46		540.89	
Total 7420-00 · FEMA MAS #4 (Flood Map)		0.46		36,244.47
7422-00 · BOR Basin Plan of Study				0.56
7424-00 · NDEP-Watershed Literacy Gr.Exp.				
7424-02 · Watershed Survey-Responsive Mgt				
7424-00 · NDEP-Watershed Literacy Gr.Exp. - Other	4.68		589.97	
Total 7424-00 · NDEP-Watershed Literacy Gr.Exp.		4.68		589.97
7426-00 · FEMA MAS #5-Charter/Map/Model				
7426-01 · Alpine View Est.-Kimley Horn			53,283.95	
7426-02 · Smelter Creek-RO Anderson			5,000.00	
7426-03 · Eagle Valley-Michael Baker			35,752.17	
7426-05 · Inundation Flood Map-HDR/Orion			16,449.30	
7426-06 · Public Flood Awareness			9,824.99	
7426-00 · FEMA MAS #5-Charter/Map/Model - Other	4.21		85.32	
Total 7426-00 · FEMA MAS #5-Charter/Map/Model		4.21		120,395.73
7427-00 · FEMA MAS #6				
7427-01 · Stephanie Ln.(DoCo)-ROA			54,625.00	
7427-02 · Goni Cr(CC)-M.Baker	7,540.87		27,162.37	
7427-03 · Ramsey (LyCo)-Kimley & ROA	3,946.50		40,714.70	
7427-04 · CC Inundation Map-HDR	11,042.00		13,802.50	
7427-00 · FEMA MAS #6 - Other	1.31		38.73	
Total 7427-00 · FEMA MAS #6		22,530.68		136,343.30
7428-00 · NDEP-VA/Rocky Bank Stab. Design		9.28		43.73
7429-00 · NDEP-Wtrshd Lit.Implementation		89.66		15,462.51
7500-00 · USGS Stream Gage Contract				
7500-01 · Stream Gages 2015-17			48,911.50	
Total 7500-00 · USGS Stream Gage Contract				48,911.50
7508-00 · USGS Do.Co.WQ & GW Monitoring				
7508-01 · Do/LyCo WQ/GW Mon. 2015-17			10,794.50	
Total 7508-00 · USGS Do.Co.WQ & GW Monitoring				10,794.50
7524-00 · USGS-GW Lvl & WQ in Ch.Co.				
7524-01 · USGS-GW Lvl & WQ-ChCo 2014-17			5,100.00	
Total 7524-00 · USGS-GW Lvl & WQ in Ch.Co.				5,100.00
7525-00 · USGS-CV Arsenic Study-Ph.1				15,000.00
7600-00 · Alpine County Projects				
7600-05 · Alpine Watershed Programs			17,250.00	
7600-09 · Al.Co.-CASGEM			15.16	
Total 7600-00 · Alpine County Projects				17,265.16
7610-00 · Douglas County Projects				
7610-10 · Do.Co.Reg.Pipeline Debt Service			125,000.00	
7610-17 · Do.Co.-EF Channel Restoration				
Total 7610-00 · Douglas County Projects				125,000.00
7620-00 · Carson City Projects				
7620-11 · CC Reg.Pipeline Debt Service			62,500.00	
7620-15 · Eagle Cr Streambank Restoration				
Total 7620-00 · Carson City Projects				62,500.00

CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND
Profit & Loss YTD Comparison
May 2016

	May 16	Jul '15 - May 16
7630-00 · Lyon County Projects		
7630-10 · LyCo Middle CR Imagery Project		27,615.00
Total 7630-00 · Lyon County Projects		27,615.00
7640-00 · Churchill County Projects		
7640-09 · Lahontan Vly.Wtr.Lvl.Measure.		11,248.25
7640-14 · W/R Dedication Tracking DB		9,682.60
Total 7640-00 · Churchill County Projects		20,930.85
Total Expense	93,490.26	1,443,598.33
Net Ordinary Income	-40,671.39	195,141.14
Other Income/Expense		
Other Expense		
8002-00 · Transfer Out-Acq/Const Fund		20,000.00
8014-00 · Trans. Out-Floodplain Mgmt. Fd.		
Total Other Expense		20,000.00
Net Other Income		-20,000.00
Net Income	**-40,671.39**	**175,141.14**

CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND
Profit & Loss Budget vs. Actual
July 2015 through May 2016

	Jul '15 - May 16	Budget	$ Over Budget	% of Budget
Ordinary Income/Expense				
Income				
5008-00 · Alpine Co. Joint Powers contrib	9,000.00	9,000.00		100.0%
5009-00 · Churchill County Ad Valorem	181,808.97	187,550.00	-5,741.03	96.9%
5010-00 · Lyon County Ad Valorem	144,017.66	147,555.00	-3,537.34	97.6%
5011-00 · Douglas County Ad Valorem	477,623.42	477,500.00	123.42	100.0%
5012-00 · Carson City Ad Valorem	358,237.23	377,150.00	-18,912.77	95.0%
5022-00 · Water Lease - Mud Lake		45,000.00	-45,000.00	
5025-00 · Int. Inc.-US Bank CD	1,039.79	850.00	189.79	122.3%
5031-00 · Interest Income-LGIP Reg.	509.61	80.00	429.61	637.0%
5044-00 · Int-1st Independent Bk of NV CD	991.57	850.00	141.57	116.7%
5045-00 · Interest Income-B of A Savings	52.07	80.00	-27.93	65.1%
5050-00 · Watershed Coordinator				
5050-01 · NDEP Grant-Watershed Coord				
5050-11 · Watershed Map	10.00			
Total 5050-01 · NDEP Grant-Watershed Coord	10.00			
5050-07 · CRC donation	4.00			
5050-08 · NDEP Watershed Coord 2012-15				
5050-10 · NDEP Watershed Coord. 2015-18	17,894.77	64,000.00	-46,105.23	28.0%
Total 5050-00 · Watershed Coordinator	17,908.77	64,000.00	-46,091.23	28.0%
5058-00 · 208 Water Quality Plan				
5058-02 · NDEP-2010 Algae Study Grant				
5058-03 · NDEP 208 LID Grant- 2013-15	5,013.26	4,700.00	313.26	106.7%
Total 5058-00 · 208 Water Quality Plan	5,013.26	4,700.00	313.26	106.7%
5060-00 · Misc. Income				
5060-02 · Watershed Tour	2,685.00	5,900.00	-3,215.00	45.5%
5060-03 · CRC Forum	755.00			
5060-00 · Misc. Income - Other	180.00			
Total 5060-00 · Misc. Income	3,620.00	5,900.00	-2,280.00	61.4%
5063-00 · Environmental Education Program				
5063-03 · NDEP-Env.Ed.Coord. 2012-14	11,187.32			
5063-04 · NDEP-Env.Ed.Coord.2015-17	18,772.92	50,000.00	-31,227.08	37.5%
Total 5063-00 · Environmental Education Program	29,960.24	50,000.00	-20,039.76	59.9%
5070-00 · Clear Creek Educ. Program				
5070-02 · Donation for Clear Creek Educ.	4.00			
Total 5070-00 · Clear Creek Educ. Program	4.00			
5077-00 · CR Conservation Tours				
5077-03 · NDEP Conserv Tour Grant 2012-14	4,530.50			
5077-00 · CR Conservation Tours - Other		2,200.00	-2,200.00	
Total 5077-00 · CR Conservation Tours	4,530.50	2,200.00	2,330.50	205.9%
5082-00 · Alpine Co.-CASGEM Grant	1,013.71	750.00	263.71	135.2%
5086-00 · FEMA MAS #3 (Do.Co.)	90,728.81	59,000.00	31,728.81	153.8%
5087-00 · FEMA MAS #4 (Flood Maps)	53,190.43	250,000.00	-196,809.57	21.3%
5090-00 · NDEP-Watershed Literacy Grant	4,542.67	5,800.00	-1,257.33	78.3%
5091-00 · Rec.Trails Signage-Motorized	1,827.31	3,100.00	-1,272.69	58.9%
5092-00 · FEMA - MAS #5	131,809.62	150,000.00	-18,190.38	87.9%
5093-00 · FEMA - MAS #6	120,562.15			
5094-00 · NDEP-VA/Rocky Bank Stab.Design	747.68			
Total Income	1,638,739.47	1,841,065.00	-202,325.53	89.0%
Expense				
7015-00 · Salaries & Wages	293,442.47	334,400.00	-40,957.53	87.8%
7020-00 · Employee Benefits	114,457.31	136,700.00	-22,242.69	83.7%
7021-00 · Workers Comp Ins.	500.00	1,200.00	-700.00	41.7%
7101-00 · Director's Fees				
7101-01 · Director Benefits	418.49			
7101-00 · Director's Fees - Other	8,661.61	14,000.00	-5,338.39	61.9%
Total 7101-00 · Director's Fees	9,080.10	14,000.00	-4,919.90	64.9%

CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND
Profit & Loss Budget vs. Actual
July 2015 through May 2016

	Jul '15 - May 16	Budget	$ Over Budget	% of Budget
7102-00 · Insurance	6,917.44	10,000.00	-3,082.56	69.2%
7103-00 · Office Supplies	2,216.31	4,000.00	-1,783.69	55.4%
7104-00 · Postage	640.80	1,250.00	-609.20	51.3%
7105-00 · Rent	23,862.74	26,033.00	-2,170.26	91.7%
7106-00 · Telephone/Internet	3,827.51	5,000.00	-1,172.49	76.6%
7107-00 · Travel-transport/meals/lodging				
7107-01 · Car Allowance	5,862.45			
7107-00 · Travel-transport/meals/lodging - Other	4,376.88	17,000.00	-12,623.12	25.7%
Total 7107-00 · Travel-transport/meals/lodging	10,239.33	17,000.00	-6,760.67	60.2%
7108-00 · Dues & Publications	954.46	1,000.00	-45.54	95.4%
7109-00 · Miscellaneous Expense	1,058.00	3,000.00	-1,942.00	35.3%
7110-00 · Seminars & Education	1,571.25	3,000.00	-1,428.75	52.4%
7111-00 · Office Equipment	1,644.90	16,000.00	-14,355.10	10.3%
7112-00 · Bank Charges	74.76	200.00	-125.24	37.4%
7114-00 · Outside Professional Services	5,320.00	20,000.00	-14,680.00	26.6%
7115-00 · Accounting	12,688.50	16,500.00	-3,811.50	76.9%
7116-00 · Legal	33,735.30	40,700.00	-6,964.70	82.9%
7117-00 · Lost Lakes Expenses	8,946.76	7,000.00	1,946.76	127.8%
7118-00 · Mud Lake O & M	852.94	1,000.00	-147.06	85.3%
7120-00 · Integrated Watershed Programs				
7120-07 · Watershed Tour	3.00	5,500.00	-5,497.00	0.1%
7120-08 · Invasive Species Programs		5,000.00	-5,000.00	
7120-30 · Watershed Coord.Exp. 2015-18	8,685.55	4,400.00	4,285.55	197.4%
Total 7120-00 · Integrated Watershed Programs	8,688.55	14,900.00	-6,211.45	58.3%
7121-00 · Misc. Water Right Expenses	81.69			
7122-00 · Water Conservation/BMP Program		5,000.00	-5,000.00	
7125-00 · Environmental Ed.Coord.Exp.				
7125-01 · Env.Ed.Coord.Exp.2012-14				
7125-02 · Env.Ed.Coord.Exp. 2015-17	30,413.27	44,000.00	-13,586.73	69.1%
Total 7125-00 · Environmental Ed.Coord.Exp.	30,413.27	44,000.00	-13,586.73	69.1%
7210-00 · CR Conservation Tours Exp.				
7210-03 · NPS Conser.Tours 2012-15	1,973.11	1,800.00	173.11	109.6%
7210-00 · CR Conservation Tours Exp. - Other				
Total 7210-00 · CR Conservation Tours Exp.	1,973.11	1,800.00	173.11	109.6%
7214-00 · Rec. Trails Signage-Motorized	40.16	900.00	-859.84	4.5%
7215-00 · Sierra NV Journeys-Family Night		3,380.00	-3,380.00	
7332-00 · Carson River Work Days				
7332-01 · CR Work Days 2015-16	6,387.97	26,000.00	-19,612.03	24.6%
7332-00 · Carson River Work Days - Other				
Total 7332-00 · Carson River Work Days	6,387.97	26,000.00	-19,612.03	24.6%
7337-00 · Carson River Restoration				
7337-01 · Upper Carson River Grant.				
7337-15 · CVCD-Bioengr/Erosion Control-CV	31,265.00	60,000.00	-28,735.00	52.1%
7337-16 · CVCD Flood Control Loan/Grant	30,000.00			
Total 7337-01 · Upper Carson River Grant.	61,265.00	60,000.00	1,265.00	102.1%
7337-03 · Dayton Valley Conserv				
7337-31 · DVCD-Restoration Proj.2015-16	44,160.60	124,000.00	-79,839.40	35.6%
7337-32 · DVCD-Storey Co. Weed Abatement	541.28	5,000.00	-4,458.72	10.8%
Total 7337-03 · Dayton Valley Conserv	44,701.88	129,000.00	-84,298.12	34.7%
7337-04 · Lahontan Conserv.Dist	17,564.86	20,000.00	-2,435.14	87.8%
Total 7337-00 · Carson River Restoration	123,531.74	209,000.00	-85,468.26	59.1%
7404-00 · Noxious Weeds Control-CR Wtrshd				
7404-01 · Noxious Weed Control-Alpine Co.		15,000.00	-15,000.00	
7404-02 · Noxious Weed Control-Douglas Co		15,000.00	-15,000.00	
7404-03 · Noxious Weed Control-CarsonCity		15,000.00	-15,000.00	
7404-04 · Noxious Weed Control-Lyon Co.	8,910.87	15,000.00	-6,089.13	59.4%
7404-05 · Noxious Weed Control-Churchill		15,000.00	-15,000.00	

CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND
Profit & Loss Budget vs. Actual
July 2015 through May 2016

	Jul '15 - May 16	Budget	$ Over Budget	% of Budget
Total 7404-00 · Noxious Weeds Control-CR Wtrshd	8,910.87	75,000.00	-66,089.13	11.9%
7406-00 · 208 Water Quality Mgmt. Plan				
7406-01 · 208 Plan-EF Algae Project				
7406-12 · EF Algae Project Supplies	0.24			
Total 7406-01 · 208 Plan-EF Algae Project	0.24			
7406-02 · 208 Plan-LID Practices- 2013-14	201.69			
7406-00 · 208 Water Quality Mgmt. Plan - Other	0.48			
Total 7406-00 · 208 Water Quality Mgmt. Plan	202.41			
7419-00 · FEMA MAS #3	89,140.40	58,000.00	31,140.40	153.7%
7420-00 · FEMA MAS #4 (Flood Map)				
7420-01 · Flood Maps-HDR	15,553.58			
7420-02 · Ordinance Review-Still Waters	20,150.00			
7420-00 · FEMA MAS #4 (Flood Map) - Other	540.89	240,000.00	-239,459.11	0.2%
Total 7420-00 · FEMA MAS #4 (Flood Map)	36,244.47	240,000.00	-203,755.53	15.1%
7422-00 · BOR Basin Plan of Study	0.56			
7424-00 · NDEP-Watershed Literacy Gr.Exp.				
7424-02 · Watershed Survey-Responsive Mgt				
7424-00 · NDEP-Watershed Literacy Gr.Exp. - Other	589.97	4,800.00	-4,210.03	12.3%
Total 7424-00 · NDEP-Watershed Literacy Gr.Exp.	589.97	4,800.00	-4,210.03	12.3%
7426-00 · FEMA MAS #5-Charter/Map/Model				
7426-01 · Alpine View Est.-Kimley Horn	53,283.95			
7426-02 · Smelter Creek-RO Anderson	5,000.00			
7426-03 · Eagle Valley-Michael Baker	35,752.17			
7426-05 · Inundation Flood Map-HDR/Orion	16,449.30			
7426-06 · Public Flood Awareness	9,824.99			
7426-00 · FEMA MAS #5-Charter/Map/Model - Other	85.32	132,000.00	-131,914.68	0.1%
Total 7426-00 · FEMA MAS #5-Charter/Map/Model	120,395.73	132,000.00	-11,604.27	91.2%
7427-00 · FEMA MAS #6				
7427-01 · Stephanie Ln.(DoCo)-ROA	54,625.00			
7427-02 · Goni Cr(CC)-M.Baker	27,162.37			
7427-03 · Ramsey (LyCo)-Kimley & ROA	40,714.70			
7427-04 · CC Inundation Map-HDR	13,802.50			
7427-00 · FEMA MAS #6 - Other	38.73			
Total 7427-00 · FEMA MAS #6	136,343.30			
7428-00 · NDEP-VA/Rocky Bank Stab. Design	43.73			
7429-00 · NDEP-Wtrshd Lit.Implementation	15,462.51			
7500-00 · USGS Stream Gage Contract				
7500-01 · Stream Gages 2015-17	48,911.50	70,232.00	-21,320.50	69.6%
Total 7500-00 · USGS Stream Gage Contract	48,911.50	70,232.00	-21,320.50	69.6%
7508-00 · USGS Do.Co.WQ & GW Monitoring				
7508-01 · Do/LyCo WQ/GW Mon. 2015-17	10,794.50	15,500.00	-4,705.50	69.6%
Total 7508-00 · USGS Do.Co.WQ & GW Monitoring	10,794.50	15,500.00	-4,705.50	69.6%
7524-00 · USGS-GW Lvl & WQ in Ch.Co.				
7524-01 · USGS-GW Lvl & WQ-ChCo 2014-17	5,100.00	10,200.00	-5,100.00	50.0%
Total 7524-00 · USGS-GW Lvl & WQ in Ch.Co.	5,100.00	10,200.00	-5,100.00	50.0%
7525-00 · USGS-CV Arsenic Study-Ph.1	15,000.00	20,000.00	-5,000.00	75.0%
7600-00 · Alpine County Projects				
7600-05 · Alpine Watershed Programs	17,250.00	23,000.00	-5,750.00	75.0%
7600-09 · Al.Co.-CASGEM	15.16	25.00	-9.84	60.6%
Total 7600-00 · Alpine County Projects	17,265.16	23,025.00	-5,759.84	75.0%
7610-00 · Douglas County Projects				
7610-10 · Do.Co.Reg.Pipeline Debt Service	125,000.00	125,000.00		100.0%
7610-17 · Do.Co.-EF Channel Restoration				
7610-18 · DoCo-Sierra Country Estates		24,500.00	-24,500.00	

CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND
Profit & Loss Budget vs. Actual
July 2015 through May 2016

	Jul '15 - May 16	Budget	$ Over Budget	% of Budget
Total 7610-00 · Douglas County Projects	125,000.00	149,500.00	-24,500.00	83.6%
7620-00 · Carson City Projects				
7620-11 · CC Reg.Pipeline Debt Service	62,500.00	125,000.00	-62,500.00	50.0%
7620-15 · Eagle Cr Streambank Restoration				
Total 7620-00 · Carson City Projects	62,500.00	125,000.00	-62,500.00	50.0%
7630-00 · Lyon County Projects				
7630-10 · LyCo Middle CR Imagery Project	27,615.00	27,644.00	-29.00	99.9%
Total 7630-00 · Lyon County Projects	27,615.00	27,644.00	-29.00	99.9%
7640-00 · Churchill County Projects				
7640-09 · Lahontan Vly.Wtr.Lvl.Measure.	11,248.25	19,000.00	-7,751.75	59.2%
7640-14 · W/R Dedication Tracking DB	9,682.60	8,420.00	1,262.60	115.0%
7640-15 · LCD-Sand Bar Removal in ChCo		20,000.00	-20,000.00	
Total 7640-00 · Churchill County Projects	20,930.85	47,420.00	-26,489.15	44.1%
Total Expense	1,443,598.33	1,961,284.00	-517,685.67	73.6%
Net Ordinary Income	195,141.14	-120,219.00	315,360.14	-162.3%
Other Income/Expense				
Other Income				
8005-00 · Beginning Equity		671,421.00	-671,421.00	
Total Other Income		671,421.00	-671,421.00	
Other Expense				
8002-00 · Transfer Out-Acq/Const Fund	20,000.00	20,000.00		100.0%
8008-00 · Preliminary Planning		435,000.00	-435,000.00	
8014-00 · Trans. Out-Floodplain Mgmt. Fd.				
Total Other Expense	20,000.00	455,000.00	-435,000.00	4.4%
Net Other Income	-20,000.00	216,421.00	-236,421.00	-9.2%
Net Income	**175,141.14**	**96,202.00**	**78,939.14**	**182.1%**

06/05/16

CARSON WTR SUBCONSERVANCY DIST - ACQUISITION/CONSTRUCTION

Balance Sheet

As of May 31, 2016

	May 31, 16
ASSETS	
Current Assets	
Checking/Savings	
1013-01 · Local Gov't Inv.Pool-Reserve	684,591.64
1015-01 · Heritage Bk 12-mo. CD	250,912.23
Total Checking/Savings	935,503.87
Total Current Assets	935,503.87
TOTAL ASSETS	**935,503.87**
LIABILITIES & EQUITY	
Equity	
4000-01 · Fund Balance - Capital Project	662,289.91
Net Income	273,213.96
Total Equity	935,503.87
TOTAL LIABILITIES & EQUITY	**935,503.87**

CARSON WTR SUBCONSERVANCY DIST - ACQUISITION/CONSTRUCTION
Profit & Loss YTD Comparison
May 2016

	May 16	Jul '15 - May 16
Ordinary Income/Expense		
Income		
5032-01 · Interest Income - LGIP Res.	189.50	1,267.75
5038-00 · Int. Inc.-Heritage Bk CD	92.77	1,033.98
Total Income	282.27	2,301.73
Net Ordinary Income	282.27	2,301.73
Other Income/Expense		
Other Income		
8001-01 · Transfer In-General Fund	250,912.23	270,912.23
Total Other Income	250,912.23	270,912.23
Net Other Income	250,912.23	270,912.23
Net Income	**251,194.50**	**273,213.96**

CARSON WTR SUBCONSERVANCY DIST - ACQUISITION/CONSTRUCTION
Profit & Loss Budget vs. Actual
July 2015 through May 2016

	Jul '15 - May 16	Budget	$ Over Budget	% of Budget
Ordinary Income/Expense				
Income				
5032-01 · Interest Income - LGIP Res.	1,267.75	400.00	867.75	316.9%
5038-00 · Int. Inc.-Heritage Bk CD	1,033.98	1,000.00	33.98	103.4%
Total Income	2,301.73	1,400.00	901.73	164.4%
Expense				
7325-01 · Acquisition Wtr Rts/Structures		650,000.00	-650,000.00	
Total Expense		650,000.00	-650,000.00	
Net Ordinary Income	2,301.73	-648,600.00	650,901.73	-0.4%
Other Income/Expense				
Other Income				
8000-01 · Beginning Equity		662,168.00	-662,168.00	
8001-01 · Transfer In-General Fund	270,912.23	20,000.00	250,912.23	1,354.6%
Total Other Income	270,912.23	682,168.00	-411,255.77	39.7%
Net Other Income	270,912.23	682,168.00	-411,255.77	39.7%
Net Income	**273,213.96**	**33,568.00**	**239,645.96**	**813.9%**

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06/05/16

Cash Basis

Floodplain Management Fund
Balance Sheet
As of May 31, 2016

	May 31, 16
ASSETS	
Current Assets	
Checking/Savings	
1013-03 · LGIP - Floodplain	280,352.47
1014-03 · Mutual of Omaha Bk CD	150,713.79
Total Checking/Savings	431,066.26
Total Current Assets	431,066.26
TOTAL ASSETS	**431,066.26**
LIABILITIES & EQUITY	
Equity	
32000 · Retained Earnings	429,336.33
Net Income	1,729.93
Total Equity	431,066.26
TOTAL LIABILITIES & EQUITY	**431,066.26**

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06/05/16

Cash Basis

Floodplain Management Fund
Profit & Loss YTD Comparison
May 2016

	May 16	Jul '15 - May 16
Ordinary Income/Expense		
Income		
5032-03 · Int. Inc.-LGIP-Floodplain	122.51	706.08
5033-03 · Int.Inc.-Mutual of Omaha CD	141.15	1,023.85
Total Income	263.66	1,729.93
Net Ordinary Income	263.66	1,729.93
Net Income	**263.66**	**1,729.93**

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06/05/16

Cash Basis

Floodplain Management Fund
Profit & Loss Budget vs. Actual
July 2015 through May 2016

	Jul '15 - May 16	Budget	$ Over Budget	% of Budget
Ordinary Income/Expense				
Income				
5032-03 · Int. Inc.-LGIP-Floodplain	706.08	180.00	526.08	392.3%
5033-03 · Int.Inc.-Mutual of Omaha CD	1,023.85	700.00	323.85	146.3%
Total Income	1,729.93	880.00	849.93	196.6%
Expense				
7203-03 · Reg. Flood Preliminary Planning	0.00	360,000.00	-360,000.00	0.0%
7206-03 · Flood Project Along SR88-Minden	0.00	40,000.00	-40,000.00	0.0%
Total Expense	0.00	400,000.00	-400,000.00	0.0%
Net Ordinary Income	1,729.93	-399,120.00	400,849.93	-0.4%
Other Income/Expense				
Other Income				
8000-03 · Beginning Equity	0.00	429,206.00	-429,206.00	0.0%
Total Other Income	0.00	429,206.00	-429,206.00	0.0%
Net Other Income	0.00	429,206.00	-429,206.00	0.0%
Net Income	**1,729.93**	**30,086.00**	**-28,356.07**	**5.7%**

AGENDA ITEM #9
PAYMENT OF BILLS

CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND
Transaction Detail by Account
May 2016

Type	Date	Num	Name	Memo	Amount	Balance
1010-00 · Cash in Checking - B of A						
Deposit	5/2/2016			Deposit	90.00	90.00
Check	5/3/2016	8342	Euronev, Ltd.	May rent 777 E. William St., #102, #103, #110 & #110A	-2,169.34	-2,079.34
Check	5/3/2016	8343	Odyssey Associates	Cust. #07-1415, inv.#7024665-400, CVCD Bioengineering	-2,746.19	-4,825.53
Check	5/3/2016	8344	Law Office of George N. Benesch	Apr. legal services, inv. #14851	-3,369.33	-8,194.86
Transfer	5/4/2016			Funds Transfer for reinvestment in LGIP	20,000.00	11,805.14
Check	5/4/2016	8345	Local Govt Investment Pool	Transfer to CCWSD for investment	-100,000.00	-88,194.86
Check	5/10/2016	8346	Postmaster	200 x $0.47 stamps	-94.00	-88,288.86
Deposit	5/11/2016			Deposit	9,482.81	-78,806.05
Check	5/13/2016	8347	MyOfficeProducts	Cust. #76531, various invoices	-271.13	-79,077.18
Check	5/13/2016	8348	Nevada Appeal	Acct #1060827, ad #11116-01	-97.76	-79,174.94
Check	5/13/2016	8349	Charter Communications	Acct. #8354 11 001 0917880, 5/13-6/12/16	-229.94	-79,404.88
Check	5/13/2016	8350	Dayton Valley Conservation District	Jan -Mar. 2016 weed treatment	-1,936.18	-81,341.06
Check	5/13/2016	8351	Dayton Valley Conservation District	Jan.-Mar. 2016 restoration projects	-15,208.32	-96,549.38
Check	5/13/2016	8352	Legislative Counsel Bureau	4/20/16 CWSD Board mtg., inv. #9115	-14.50	-96,563.88
Deposit	5/13/2016			Deposit	6,469.38	-90,094.50
Deposit	5/13/2016			Deposit	24,754.27	-65,340.23
Deposit	5/16/2016			Deposit	130.00	-65,210.23
Deposit	5/17/2016			Deposit	251,569.85	186,359.62
Check	5/17/2016	8353	Local Govt Investment Pool	Transfer to CCWSDR for investment	-250,912.23	-64,552.61
Check	5/18/2016	8354	River Wranglers	Inv. #EE 2016-3, Env. Ed. 4/1-30/16	-2,984.57	-67,537.18
Deposit	5/18/2016			Deposit	315.01	-67,222.17
Check	5/19/2016	8355	Edwin James	Reimb. for 5/18/16 Board dinner	-201.80	-67,423.97
Check	5/25/2016	8356	Bank of America	May2016.-acct. #4024 4910 0004 2478	-1,209.43	-68,633.40
Check	5/25/2016	8357	Dayton Valley Conservation District	3/14-17/16 staff & crew-Storey County weeds	-541.28	-69,174.68
Check	5/25/2016	8358	Kimley-Horn & Associates, Inc.	Inv #7763197, Ramsey Canyon Flood Study	-3,946.50	-73,121.18
Check	5/25/2016	8359	Kimley-Horn & Associates, Inc.	Inv. #18976002-0416, Carson Flood Inundation	-11,042.00	-84,163.18
Check	5/25/2016	8360	Michael Baker International, Inc.	Proj. #151453, Goni Cr. Restudy/Remap.	-7,540.87	-91,704.05
Check	5/25/2016	8361	Chuck Roberts	May mileage reimb.	-9.56	-91,713.61
Check	5/25/2016	8362	Fred Stodieck	May travel reimb.	-23.98	-91,737.59
Deposit	5/25/2016			Deposit	8,798.02	-82,939.57
Check	5/26/2016	8363	Nevada Div of Water Resources	Edwin James, WRS License #1134 renewal	-20.00	-82,959.57
Deposit	5/27/2016			Deposit	1,955.00	-81,004.57
Check	5/31/2016	8364	Susan Ketterhagen	Refund of ck.#1119 for 6/7/16 bus tour	-130.00	-81,134.57
Check	5/31/2016	8365	Edwin James	Reimb. for Costco laptop for E.James	-899.99	-82,034.56
Total 1010-00 · Cash in Checking - B of A					-82,034.56	-82,034.56
1014-00 · Local Gov't Inv. Pool-Regular						
Check	5/4/2016	8345	Local Govt Investment Pool	Transfer to CCWSD for investment	100,000.00	100,000.00
Deposit	5/31/2016			Interest	99.17	100,099.17
Total 1014-00 · Local Gov't Inv. Pool-Regular					100,099.17	100,099.17
1021-00 · US Bank CD						
Deposit	5/4/2016			Interest	102.29	102.29
Total 1021-00 · US Bank CD					102.29	102.29
1028-00 · First Independent Bank of Nevad						
Deposit	5/14/2016			Interest	91.57	91.57
Total 1028-00 · First Independent Bank of Nevad					91.57	91.57
1029-00 · Bank of America-Savings						
Transfer	5/4/2016			Funds Transfer for reinvestment in LGIP	-20,000.00	-20,000.00
Deposit	5/31/2016			Interest	3.73	-19,996.27
Total 1029-00 · Bank of America-Savings					-19,996.27	-19,996.27
3307-00 · CC Payroll Due						
Gener...	5/6/2016			5/6 SF,BH,EJ,TL,DN; Apr.-KA,BB,CE,RF,DJa,DJo,GL,WP,ES,FS	-20,102.64	-20,102.64
Gener...	5/20/2016			5/20 SF,BH,EJ,TL,DN	-18,830.95	-38,933.59
Total 3307-00 · CC Payroll Due					-38,933.59	-38,933.59
5011-00 · Douglas County Ad Valorem						
Deposit	5/11/2016	648496	Douglas County	Apr.	-8,752.81	-8,752.81
Total 5011-00 · Douglas County Ad Valorem					-8,752.81	-8,752.81
5025-00 · Int. Inc.-US Bank CD						
Deposit	5/4/2016			Interest	-102.29	-102.29
Total 5025-00 · Int. Inc.-US Bank CD					-102.29	-102.29
5031-00 · Interest Income-LGIP Reg.						
Deposit	5/31/2016			Interest	-99.17	-99.17
Total 5031-00 · Interest Income-LGIP Reg.					-99.17	-99.17
5044-00 · Int-1st Independent Bk of NV CD						
Deposit	5/14/2016			Interest	-91.57	-91.57
Total 5044-00 · Int-1st Independent Bk of NV CD					-91.57	-91.57
5045-00 · Interest Income-B of A Savings						
Deposit	5/31/2016			Interest	-3.73	-3.73
Total 5045-00 · Interest Income-B of A Savings					-3.73	-3.73
5050-00 · Watershed Coordinator						
5050-10 · NDEP Watershed Coord. 2015-18						
Deposit	5/18/2016	9822...	NV Div. of Environmental Protection	5-15014 FY16	-315.01	-315.01
Total 5050-10 · NDEP Watershed Coord. 2015-18					-315.01	-315.01
Total 5050-00 · Watershed Coordinator					-315.01	-315.01
5060-00 · Misc. Income						
5060-02 · Watershed Tour						
Deposit	5/11/2016	13775	Vidler Water Company, Inc.	6/7/16 bus tour sponsor; S.Plemel, L.Mazurowski	-600.00	-600.00

CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND
Transaction Detail by Account
May 2016

Type	Date	Num	Name	Memo	Amount	Balance
Deposit	5/11/2016	1394	Andrea Dean	6/7/16 bus tour-A.Dean	-130.00	-730.00
Deposit	5/16/2016	9820...	NV Div. of Wildlife	6/7/16 bus tour-T.Dutcher	-130.00	-860.00
Deposit	5/17/2016	3096	Christopher Moltz	6/7/16 bus tour-C.Moltz	-130.00	-990.00
Deposit	5/27/2016	4604	Philip Bellman	6/7/16 bus tour-P.Bellman	-130.00	-1,120.00
Deposit	5/27/2016	8962	Stagecoach GID	6/7/16 bus tour-Gartenberg,Schmidt,Seng	-390.00	-1,510.00
Deposit	5/27/2016	252794	Alpine County	6/7/16 bus tour-B.Peters(Day 2 only)	-65.00	-1,575.00
Deposit	5/27/2016	1443...	HDR Engineering, Inc.	6/7/16 bus tour-sponsor	-200.00	-1,775.00
Deposit	5/27/2016	1119	Susan Ketterhagen	6/7/16 bus tour-S.Ketterhagen	-130.00	-1,905.00
Deposit	5/27/2016	2718	Ursula Carlson	6/7/16 bus tour-U.Carlson	-130.00	-2,035.00
Deposit	5/27/2016	2148	Suzanne Wilkins	6/7/16 bus tour-S.Wilkins	-130.00	-2,165.00
Deposit	5/27/2016	1001	Raymond Lopez/USBR	6/7/16 bus tour-D.Blake,G.Ogren,LBatte,J.Polsinelli,J.Voorhees	-650.00	-2,815.00
Check	5/31/2016	8364	Susan Ketterhagen	Refund of ck.#1119 for 6/7/16 bus tour	130.00	-2,685.00
Total 5060-02 · Watershed Tour					-2,685.00	-2,685.00
5060-03 · CRC Forum						
Deposit	5/2/2016	4760	Great Basin Outdoor School	4/26 EERT-H.Pinkston	-15.00	-15.00
Deposit	5/2/2016	4153	Carla Kuhn	4/26 EERT-C.Kuhn	-20.00	-35.00
Deposit	5/2/2016	3349	Sierra Nevada Journeys	4/26 EERT-E.Dunkelberger	-15.00	-50.00
Deposit	5/2/2016	358692	Carson City	4/26 EERT-D.Anderson, R.Wilkinson	-40.00	-90.00
Deposit	5/17/2016	1000...	University of Nevada, Reno	4/26/16 EERT-J.Cobourn	-20.00	-110 00
Total 5060-03 · CRC Forum					-110.00	-110.00
5060-00 · Misc. Income - Other						
Deposit	5/27/2016	1978	Sara Camper	6/7/16 bus tour-S.Camper	-130.00	-130.00
Total 5060-00 · Misc. Income - Other					-130.00	-130.00
Total 5060-00 · Misc. Income					-2,925.00	-2,925.00
5063-00 · Environmental Education Program						
5063-04 · NDEP-Env.Ed.Coord.2015-17						
Deposit	5/25/2016	9826...	NV Div. of Environmental Protection	Inv. #5 15011 FY16(Jan.-Mar. 2016)	-8,332.93	-8,332.93
Total 5063-04 · NDEP-Env.Ed.Coord.2015-17					-8,332.93	-8,332.93
Total 5063-00 · Environmental Education Program					-8,332.93	-8,332.93
5090-00 · NDEP-Watershed Literacy Grant						
Deposit	5/25/2016	9826 ..	NV Div. of Environmental Protection	Inv. #9 14029 FY16(Jan.-Mar. 2016)	-465.09	-465.09
Total 5090-00 · NDEP-Watershed Literacy Grant					-465.09	-465.09
5092-00 · FEMA - MAS #5						
Deposit	5/13/2016		FEMA	Draw #16	-6,469.38	-6,469.38
Total 5092-00 · FEMA - MAS #5					-6,469.38	-6,469.38
5093-00 · FEMA - MAS #6						
Deposit	5/13/2016		FEMA	Draw #5	-24,754.27	-24,754.27
Total 5093-00 · FEMA - MAS #6					-24,754.27	-24,754.27
5094-00 · NDEP-VA/Rocky Bank Stab.Design						
Deposit	5/17/2016	3178...	NV Div. of Environmental Protection	Inv. #2 16016 FY1	-507.62	-507.62
Total 5094-00 · NDEP-VA/Rocky Bank Stab.Design					-507.62	-507.62
7015-00 · Salaries & Wages						
Gener...	5/6/2016			5/6 S.Fryer	2,341.42	2,341.42
Gener...	5/6/2016			5/6 B.Hunt	2,886.21	5,227.63
Gener...	5/6/2016			5/6 E.James	4,807.00	10,034.63
Gener..	5/6/2016			5/6 T.Leffler	2,269.43	12,304.06
Gener...	5/6/2016			5/6 D.Neddenriep	1,334.06	13,638.12
Gener...	5/20/2016			5/20 S.Fryer	2,297.52	15,935.64
Gener...	5/20/2016			5/20 B.Hunt	2,533.36	18,469.00
Gener...	5/20/2016			5/20 E.James	4,807.00	23,276.00
Gener...	5/20/2016			5/20 T.Leffler	2,269.41	25,545.41
Gener...	5/20/2016			5/20 D.Neddenriep	1,334.05	26,879.46
Total 7015-00 · Salaries & Wages					26,879.46	26,879.46
7020-00 · Employee Benefits						
Gener...	5/6/2016			5/6 S.Fryer	373.46	373.46
Gener...	5/6/2016			5/6 B.Hunt	823.81	1,197.27
Gener...	5/6/2016			5/6 E.James	2,152.87	3,350.14
Gener...	5/6/2016			5/6 T.Leffler	1,033.36	4,383.50
Gener...	5/6/2016			5/6 D.Neddenriep	986.21	5,369.71
Gener...	5/20/2016			5/20 S.Fryer	366.45	5,736.16
Gener...	5/20/2016			5/20 B.Hunt	767.53	6,503.69
Gener...	5/20/2016			5/20 E.James	2,152.87	8,656.56
Gener...	5/20/2016			5/20 T.Leffler	1,033.35	9,689.91
Gener...	5/20/2016			5/20 D.Neddenriep	986.20	10,676.11
Total 7020-00 · Employee Benefits					10,676.11	10,676.11
7101-00 · Director's Fees						
7101-01 · Director Benefits						
Gener...	5/6/2016			Apr.- K.Abowd	1.16	1.16
Gener...	5/6/2016			Apr.- B.Bonkowski	1.16	2.32
Gener...	5/6/2016			Apr.- C.Erquiaga	1.16	3.48
Gener...	5/6/2016			Apr.- R.Fierro	1.16	4.64
Gener...	5/6/2016			Apr.- D.Jardine	1.16	5.80
Gener...	5/6/2016			Apr.- D.Johnson	1.16	6.96
Gener...	5/6/2016			Apr.- G.Lynn	1.16	8.12
Gener..	5/6/2016			Apr.- W.Penzel	1.16	9.28
Gener...	5/6/2016			Apr.- E.Schank	1.16	10.44
Gener...	5/6/2016			Apr.- F.Stodieck	1.16	11.60

CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND
Transaction Detail by Account
May 2016

Type	Date	Num	Name	Memo	Amount	Balance
Total 7101-01 · Director Benefits					11.60	11.60
7101-00 · Director's Fees - Other						
Gener...	5/6/2016			Apr.- K.Abowd	80.00	80.00
Gener...	5/6/2016			Apr.- B.Bonkowski	80.00	160.00
Gener...	5/6/2016			Apr.- C.Erquiaga	80.00	240.00
Gener...	5/6/2016			Apr.- R.Fierro	80.00	320.00
Gener...	5/6/2016			Apr.- D.Jardine	80.00	400.00
Gener...	5/6/2016			Apr.- D.Johnson	80.00	480.00
Gener...	5/6/2016			Apr.- G.Lynn	80.00	560.00
Gener...	5/6/2016			Apr.- W.Penzel	80.00	640.00
Gener...	5/6/2016			Apr.- E.Schank	80.00	720.00
Gener...	5/6/2016			Apr.- F.Stodieck	80.00	800.00
Total 7101-00 · Director's Fees - Other					800.00	800.00
Total 7101-00 · Director's Fees					811.60	811.60
7103-00 · Office Supplies						
Check	5/13/2016	8347	MyOfficeProducts	Apr. supplies Inv. #WO-10580747-1 & WO-10567878-1	235.13	235.13
Check	5/25/2016	8356	Bank of America	Trend Micro-antivirus for EJ,DN,TL	71.95	307.08
Check	5/25/2016	8356	Bank of America	Carson Highlands-May storage unit	35.00	342.08
Gener...	5/31/2016			reimb. of May grant copies	-654.50	-312.42
Total 7103-00 · Office Supplies					-312.42	-312.42
7104-00 · Postage						
Check	5/10/2016	8346	Postmaster	200 x $0.47 stamps	94.00	94.00
Total 7104-00 · Postage					94.00	94.00
7105-00 · Rent						
Check	5/3/2016	8342	Euronev, Ltd.	May rent 777 E. Wm. St., #102, #103, #110 & #110A	2,169.34	2,169.34
Total 7105-00 · Rent					2,169.34	2,169.34
7106-00 · Telephone/Internet						
Check	5/13/2016	8349	Charter Communications	May internet & phones	229.94	229.94
Total 7106-00 · Telephone/Internet					229.94	229.94
7107-00 · Travel-transport/meals/lodging						
7107-01 · Car Allowance						
Gener...	5/6/2016			5/6 E.James	283.21	283.21
Gener...	5/20/2016			5/20 E.James	283.21	566.42
Total 7107-01 · Car Allowance					566.42	566.42
7107-00 · Travel-transport/meals/lodging - Other						
Check	5/19/2016	8355	Edwin James	Reimb. for 5/18/16 Board dinner	201.80	201.80
Check	5/25/2016	8361	Chuck Roberts	5/20/16 Bd.mtg.-17.7 mi. (Legis.)	9.56	211.36
Check	5/25/2016	8362	Fred Stodieck	5/20 tour/dinner/Bd.mtg.-44.4 mi. (Legis.)	23.98	235.34
Total 7107-00 · Travel-transport/meals/lodging - Other					235.34	235.34
Total 7107-00 · Travel-transport/meals/lodging					801.76	801.76
7108-00 · Dues & Publications						
Check	5/13/2016	8348	Nevada Appeal	Annual Fiscal Summary	97.76	97.76
Check	5/25/2016	8356	Bank of America	Gazette Journal-May subscr.	29.08	126.84
Check	5/26/2016	8363	Nevada Div. of Water Resources	Edwin James, WRS License #1134 renewal	20.00	146.84
Total 7108-00 · Dues & Publications					146.84	146.84
7109-00 · Miscellaneous Expense						
Check	5/13/2016	8352	Legislative Counsel Bureau	4/20/16 CWSD Bd. mtg.	14.50	14.50
Total 7109-00 · Miscellaneous Expense					14.50	14.50
7111-00 · Office Equipment						
Check	5/31/2016	8365	Edwin James	Reimb. for Costco laptop for E.James	899.99	899.99
Total 7111-00 · Office Equipment					899.99	899.99
7116-00 · Legal						
Check	5/3/2016	8344	Law Office of George N. Benesch	Apr. legal services	3,369.33	3,369.33
Total 7116-00 · Legal					3,369.33	3,369.33
7120-00 · Integrated Watershed Programs						
7120-30 · Watershed Coord.Exp. 2015-18						
Check	5/13/2016	8347	MyOfficeProducts	seals for newsletters	36.00	36.00
Check	5/25/2016	8356	Bank of America	Janway-CRC bags	1,053.40	1,089.40
Check	5/25/2016	8356	Bank of America	Facebook-bus tour ads	20.00	1,109.40
Gener...	5/31/2016			May grant copies	469.85	1,579.25
Total 7120-30 · Watershed Coord.Exp. 2015-18					1,579.25	1,579.25
Total 7120-00 · Integrated Watershed Programs					1,579.25	1,579.25
7125-00 · Environmental Ed.Coord.Exp.						
7125-02 · Env.Ed.Coord.Exp. 2015-17						
Check	5/18/2016	8354	River Wranglers	Env. Ed. 4/1-30/16	2,984.57	2,984.57
Gener...	5/31/2016			May grant copies	75.05	3,059.62
Total 7125-02 · Env.Ed.Coord.Exp. 2015-17					3,059.62	3,059.62
Total 7125-00 · Environmental Ed Coord.Exp.					3,059.62	3,059.62
7337-00 · Carson River Restoration						
7337-01 · Upper Carson River Grant.						
7337-15 · CVCD-Bioengr/Erosion Control-CV						
Check	5/3/2016	8343	Odyssey Associates	Payroll thru 5/1/16/16	2,746.19	2,746.19

CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND
Transaction Detail by Account
May 2016

Type	Date	Num	Name	Memo	Amount	Balance
Total 7337-15 · CVCD-Bioengr/Erosion Control-CV					2,746.19	2,746.19
Total 7337-01 · Upper Carson River Grant.					2,746.19	2,746.19
7337-03 · Dayton Valley Conserv						
7337-31 · DVCD-Restoration Proj.2015-16						
Check	5/13/2016	8351	Dayton Valley Conservation District	Jan.-Mar. 2016 restoration projects	15,208.32	15,208.32
Total 7337-31 · DVCD-Restoration Proj.2015-16					15,208.32	15,208.32
7337-32 · DVCD-Storey Co. Weed Abatement						
Check	5/25/2016	8357	Dayton Valley Conservation District	3/14-17/16 staff & crew-Storey County weeds	541.28	541.28
Total 7337-32 · DVCD-Storey Co. Weed Abatement					541.28	541.28
Total 7337-03 · Dayton Valley Conserv					15,749.60	15,749.60
Total 7337-00 · Carson River Restoration					18,495.79	18,495.79
7404-00 · Noxious Weeds Control-CR Wtrshd						
7404-04 · Noxious Weed Control-Lyon Co.						
Check	5/13/2016	8350	Dayton Valley Conservation District	Jan.-Mar. 2016 weed treatment	1,936.18	1,936.18
Total 7404-04 · Noxious Weed Control-Lyon Co.					1,936.18	1,936.18
Total 7404-00 · Noxious Weeds Control-CR Wtrshd					1,936.18	1,936.18
7420-00 · FEMA MAS #4 (Flood Map)						
Gener...	5/31/2016			May grant copies	0.46	0.46
Total 7420-00 · FEMA MAS #4 (Flood Map)					0.46	0.46
7424-00 · NDEP-Watershed Literacy Gr.Exp.						
Gener...	5/31/2016			May grant copies	4.68	4.68
Total 7424-00 · NDEP-Watershed Literacy Gr.Exp.					4.68	4.68
7426-00 · FEMA MAS #5-Charter/Map/Model						
Gener...	5/31/2016			May grant copies	4.21	4.21
Total 7426-00 · FEMA MAS #5-Charter/Map/Model					4.21	4.21
7427-00 · FEMA MAS #6						
7427-02 · Goni Cr(CC)-M.Baker						
Check	5/25/2016	8360	Michael Baker International, Inc.	Services through 5/1/16	7,540.87	7,540.87
Total 7427-02 · Goni Cr(CC)-M.Baker					7,540.87	7,540.87
7427-03 · Ramsey (LyCo)-Kimley & ROA						
Check	5/25/2016	8358	Kimley-Horn & Associates, Inc.	Ramsey Cyn. thru 4/30/16	3,946.50	3,946.50
Total 7427-03 · Ramsey (LyCo)-Kimley & ROA					3,946.50	3,946.50
7427-04 · CC Inundation Map-HDR						
Check	5/25/2016	8359	Kimley-Horn & Associates, Inc.	Carson Flood Inundation thru 4/30/16	11,042.00	11,042.00
Total 7427-04 · CC Inundation Map-HDR					11,042.00	11,042.00
7427-00 · FEMA MAS #6 - Other						
Gener...	5/31/2016			May grant copies	1.31	1.31
Total 7427-00 · FEMA MAS #6 - Other					1.31	1.31
Total 7427-00 · FEMA MAS #6					22,530.68	22,530.68
7428-00 · NDEP-VA/Rocky Bank Stab. Design						
Gener...	5/31/2016			May grant copies	9.28	9.28
Total 7428-00 · NDEP-VA/Rocky Bank Stab. Design					9.28	9.28
7429-00 · NDEP-Wtrshd Lit.Implementation						
Gener...	5/31/2016			May grant copies	89.66	89.66
Total 7429-00 · NDEP-Wtrshd Lit.Implementation					89.66	89.66
8002-00 · Transfer Out-Acq/Const Fund						
Deposit	5/17/2016	62020	Heritage Bank of Nevada	matured Heritage Bk.CD	-250,912.23	-250,912.23
Check	5/17/2016	8353	Local Govt Investment Pool	proceeds of closed Heritage Bank CD	250,912.23	
Total 8002-00 · Transfer Out-Acq/Const Fund						
TOTAL						

Law Office of
GEORGE N. BENESCH
190 W. Huffaker Lane, Suite 408
Reno, NV 89511

Telephone
[775) 827-3100

Fax
(775) 827-3020

Tax I.D. #88-0329442

Invoice submitted to:

Carson Water Subconservancy District
777 E. William, Suite 110A
Carson City, NV 89701

May 02, 2016

In Reference To: General

Invoice # 14851

	Hours	Amount
For professional services rendered	0.00	$3,333.33
Additional Charges :		
April 2016		
4/20/2016 Mileage charge for trip to Carson City.		36.00
SUBTOTAL:		[36.00]
Total additional charges		$36.00
Total amount of this bill		$3,369.33

For Legal Services Rendered

Previous balance	$3,369.33
Accounts receivable transactions	
4/18/2016 Payment - thank you. Check No. 8312	($3,369.33)
Total payments and adjustments	($3,369.33)
Balance due	$3,369.33

pd. 5/3/16
ck. #8344

ok to pay
Edwin James
5-3-16

#7116.00 Legal

AGENDA ITEM #10

CARSON WATER SUBCONSERVANCY DISTRICT

TO: BOARD OF DIRECTORS

FROM: EDWIN D. JAMES

DATE: JUNE 15, 2016

SUBJECT: Agenda Item #10 - Discussion for possible action regarding approval of the Agreement #2016-4 with **River Wranglers** for the Carson River Work Days and Vegetation Management Projects

DISCUSSION: Agreement #2016-4 with River Wranglers is to continue the Carson River Work Days and Vegetation Management Projects. The total agreement amount is $26,000 which was approved in the FY 2016-17 budget (see attached draft Agreement).

STAFF RECOMMENDATION: Approve Agreement #2016-4 with River Wranglers for Carson River Work Days and Vegetation Management Projects.

AGREEMENT #2016-4

AGREEMENT

Addressing Funding From Carson Water Subconservancy District to River Wranglers to Perform Work on Carson River Workdays and Carson River Vegetation Management

THIS AGREEMENT dated this ____ day of _____, 2016, is entered into by and between River Wranglers, a non-profit association (hereinafter "RW") and the CARSON WATER SUBCONSERVANCY DISTRICT, a political subdivision of the State of Nevada (hereinafter "CWSD").

WITNESSETH:

WHEREAS, RW is a 501(C)(3) non-profit organization; and

WHEREAS, RW has organized a program for the Carson River Workday Projects and Carson River Channel and Vegetation Maintenance, in which members of the respective communities within the district participate in river conservation and maintenance; and

WHEREAS, CWSD is a water subconservancy district created and organized under the provisions of Chapter 541 of NRS; and

WHEREAS, CWSD and RW each possess common objectives and responsibilities with regard to the Carson River; and

WHEREAS, RW has requested funding to perform work during fiscal year 2016-17 on the Carson River Workday Projects and Carson River Vegetation Management; and

WHEREAS, CWSD has agreed to set aside $26,000.00 for the fiscal year beginning July 1, 2016, and to grant RW said amount in order to assist with the projects set forth in Exhibit "A."

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NOW THEREFORE, in consideration of the premises and of the mutual covenants herein contained, it is mutually agreed by and between the parties as follow:

1. CWSD hereby grants to RW up to $26,000.00 for the costs to conduct Carson River Water Days and Carson River Vegetation, as described in Exhibit "A."
2. CWSD shall have no responsibility for costs exceeding $26,000.00.
3. This Agreement shall terminate June 30, 2017, at which time RW shall have one (1) month thereafter to submit its final invoice for payment related to work performed under this Agreement.
4. The parties will not waive and intend to assert available NRS Chapter 41 liability limitations in all cases. Contract liability of both parties shall not be subject to punitive damages. To the extent applicable, actual contract damages for any breach shall be limited by NRS 353.260 and NRS 354.626.
5. a. Consistent with paragraph 4 of this Contract, each party shall indemnify, hold harmless and defend, not excluding the others right to participate, the other party from and against all liability, claims, actions, damages, losses, and expenses, including, but not limited to, reasonable attorneys fees and costs, arising out of any alleged negligent or willful acts or omissions of the indemnifying party, its officers, employees and agents. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this paragraph.

   b. The indemnification obligation under this paragraph is conditioned upon receipt of written notice by the indemnifying party within thirty (30) days of

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the indemnified party's accrual notice of any actual or pending claim or cause of action. The indemnifying party shall not be liable to hold harmless any attorneys' fees and costs for the indemnified party's chosen right to participate with legal counsel.

6. For invoicing and notice purposes, the address of each party is as follows:

River Wranglers	CWSD
Attn.: Linda Conlin	Attn.: Edwin James
Director	General Manager
1355 E. Badger St.	777 E. William, Ste. 110A
Silver Springs, NV 89429	Carson City, NV 89701
(775) 230-0633	(775) 887-7456

7. This Agreement shall be by and between the parties hereto and shall not be assignable or transferable.

8. Any dispute regarding this Agreement shall be decided according to the laws of the State of Nevada. If any part of this Agreement is declared to be unlawful, any remaining obligations shall be deemed terminated.

9. This Agreement may only be amended by consent of both parties. Any amendments must be written and executed with the same formality as this Agreement.

10. This Agreement constitutes the entire understanding between the parties and there are no representations, conditions, warranties or collateral agreements (expressed or implied), statutory or otherwise, with respect to the subject of this Agreement.

11. This Agreement becomes effective when ratified by appropriate official action of the governing body of each party, and shall be deemed dated as of the later date of said official action.

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12. The parties hereto represent and warrant that the person executing this Agreement on behalf of each party has full power and authority to enter into this Agreement and that the parties are authorized by law to engage in cooperative action set forth herein.

13. This Agreement shall be entered into with duplicate originals, realizing that each entity, by necessity, must approve and execute the subject document at different dates, times and places.

IN WITNESS WHEREOF, the parties have executed this Agreement on the day and year first written above.

DATED: _____	DATED: _____
RIVER WRANGLERS	CARSON WATER SUBCONSERVANCY DISTRICT
_____	_____
Dan Kaffer, President	Greg Lynn, Chairman
ATTEST:	ATTEST:
_____	_____
Eric Johnson, Secretary	Toni M. Leffler, Secretary to the Board

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Exhibit "A"

River Wranglers
Conserve Carson River Work Days & Vegetation Management

River Wranglers plans to continue Conserve Carson River Work Days and vegetation management projects in the Carson River watershed. As part of the grant goals, River Wranglers will attempt to allocate approximately $6,000 per county. The $6,000 will be used to help fund the Conserve Carson River Workdays and Vegetation Management Projects. The Conserve Carson River Workdays provides students hands-on experience doing projects on the river. The Vegetation Management Projects provide the various conservation districts opportunities to utilize local labor crews and conservation crews to cut and plant willows for workdays and restoration, rodent control, and reduce potential flood hazards in the river and tributaries. The funding also assists the conservation districts with outreach and education.

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AGENDA ITEM #11

CARSON WATER SUBCONSERVANCY DISTRICT

TO: BOARD OF DIRECTORS

FROM: EDWIN D. JAMES

DATE: JUNE 15, 2016

SUBJECT: Agenda Item #11 - Discussion for possible action regarding approval of Agreement #2016-5 with **Alpine Watershed Group** to Help Fund the Upper Carson River Watershed Programs.

DISCUSSION: Agreement #2016-5with the Alpine Watershed Group is to provide funding for various projects in the upper Carson River Watershed. The total agreement amount is $22,000 which was approved in the FY 2016-17 budget (see attached draft Agreement).

STAFF RECOMMENDATION: Approve Agreement #2016-5 with Alpine Watershed Group to Help Fund the Upper Carson River Watershed Programs.

AGREEMENT

Addressing Funding from Carson Water Subconservancy District to Alpine Watershed Group to Help Fund the Upper Carson River Watershed Programs

THIS AGREEMENT is entered into this ___ day of _____, 2016, and between ALPINE WATERSHED GROUP, a non-profit association (hereinafter "AWG"), and the CARSON WATER SUBCONSERVANCY DISTRICT, a political subdivision organized under Nevada Revised Statutes Chapter 541 (hereinafter “CWSD”).

WITNESSETH:

WHEREAS, AWG is a 501(C)(3) non-profit organization; and

WHEREAS, CWSD is a water subconservancy district created and organized under the provisions of Chapter 541 of NRS; and

WHEREAS, AWG desires to conduct several projects in the Upper Carson River watershed; and

WHEREAS, CWSD has agreed to set aside $22,000.00 for the fiscal year 2016-17 beginning July 1, 2016, and to grant to AWG said amount in order to provide matching funds for the Upper Carson River watershed programs as set forth in Exhibit “A”,

NOW, THEREFORE, in consideration of the premises and of the mutual covenants herein contained, it is mutually agreed by and between the parties as follows:

1. CWSD hereby grants to AWG up to $22,000.00 for the fiscal year 2016-17 beginning July 1, 2016, for the costs to fund part of the Upper Carson River watershed programs and otherwise pay for items and activities required to complete the projects identified and described in Exhibit “A”.
2. AWG will submit requests for funding periodically over the fiscal year. The request for funding shall be accompanied by a description of what the funds were used for and shall reference this Agreement.

3. CWSD commits to pay the approved amount of the request to AWG within four (4) weeks of said request.

4. CWSD shall have no responsibility for costs exceeding $22,000.00.

5. This Contract shall terminate June 30, 2017, at which time AWG shall have one (1) month thereafter to submit its final invoice for payment related to work performed under this Contract.

6. Notwithstanding any other provision of this Agreement, any obligation of CWSD hereunder is conditioned upon CWSD's funding resources. If for whatever reason the CWSD's funding resources are reduced or eliminated, CWSD reserves the right to terminate this Agreement immediately in writing. CWSD will reimburse AWG for all costs that occurred under this Agreement up to the date the Agreement is terminated.

7. The parties will not waive and intend to assert available liability limitations in all cases. Contract liability of both parties shall not be subject to punitive damages. To the extent applicable, actual contract damages for any breach shall be limited by NRS 353.260 and NRS 354.626.

8. a. Consistent with paragraph 7 of this Contract, each party shall indemnify, hold harmless and defend, not excluding the others right to participate, the other party from and against all liability, claims, actions, damages, losses, and expenses, including, but not limited to, reasonable attorneys' fees and costs, arising out of any alleged negligent or willful acts or omissions of the indemnifying party, its officers, employees and agents. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this paragraph.

   b. The indemnification obligation under this paragraph is conditioned upon receipt of written notice by the indemnifying party within thirty (30) days of the indemnified party's accrual notice of any actual or pending claim or cause of action. The

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indemnifying party shall not be liable to hold harmless any attorneys' fees and costs for the indemnified party's chosen right to participate with legal counsel.

9. For notice purposes, the address of each party is as follows:

ALPINE WATERSHED GROUP	CWSD
Attn: Sarah Green	Attn: Edwin D. James
Executive Director	General Manager
P.O. Box 296	777 E. Williams, Suite 110A
Markleeville, CA 96120	Carson City, NV 89701
(530) 694-2327	(775) 887-7456

10. Any dispute regarding this Agreement shall be decided according to the laws of the State of Nevada. If any part of this Agreement is declared to be unlawful, the remaining sections shall remain in effect.

11. This Agreement may only be amended by consent of both parties. Any amendments must be in writing and executed with the same formality as this Agreement.

12. This Agreement constitutes the entire Agreement between the parties and there are no representations, conditions, warranties or collateral agreements (expressed or implied), statutory or otherwise, with respect to this Agreement other than contained herein.

13. The parties hereto represent and warrant that the person executing this Agreement on behalf of each party has full power and authority to enter into this Agreement and that the parties are authorized by law to engage in the cooperative action set forth herein.

14. This Agreement becomes effective when approved by both parties.

DATED: _____

ALPINE WATERSHED GROUP

_____
Sarah Green, Executive Director

ATTEST:

_____
Zach Wood, Secretary

DATED: _____

CARSON WATER
SUBCONSERVANCY DISTRICT

_____
Greg Lynn, Chair

ATTEST:

_____
Toni M. Leffler, Secretary to the Board

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Exhibit "A"

Alpine Watershed Group

Specific activities for AWG's Upper Carson River watershed program include the following:

- Partnered with Friends of Hope Valley and American Rivers, recruit and train volunteer "Meadow Stewards" to restore the full range of ecosystem services that this highly-visible and well-known meadow has the potential to provide including: natural water storage, flood attenuation, cooling and filtering of water, aquatic and riparian habitat, and recreational values.
- Assess and monitor the watershed systems with a team of trained volunteer monitors.
- Identify, design, and complete watershed restoration projects which reduce erosion and enhance wildlife habitat.
- Ensure diverse watershed stakeholder participation and enhance community watershed awareness and commitment to watershed protection.
- Coordinate with local and regional watershed-related organizations to share resources and avoid duplication of effort including such groups as the Carson River Coalition, Central Sierra Resource Conservation and Development, Friends of Hope Valley, and Sierra Nevada Alliance.
- Participate in regional watershed monitoring and community education events such as Snapshot Day, Carson River Watershed Forum, and Markleeville Creek Day.
- Coordinate the Alpine Aspen Festival.
- Build long-term capacity for watershed programs in the Upper Carson River watershed.

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AGENDA ITEM #12

CARSON WATER SUBCONSERVANCY DISTRICT

TO: BOARD OF DIRECTORS

FROM: EDWIN D. JAMES

DATE: JUNE 15, 2016

SUBJECT: Agenda Item #12 - Discussion for possible action regarding approval of an Addendum to Interlocal Contract #2015-4 with **Carson Valley Conservation District** for Bioengineering and Erosion Control Along the Carson River through Carson Valley.

DISCUSSION: Interlocal Contract #2015-4 with Carson Valley Conservation District (CVCD) is for bioengineering and erosion control along the Carson River through Carson Valley. The Addendum is to extend the contract an additional year and set aside an additional $37,500 which was approved in the FY 2016-17 budget (see attached draft Contract).

STAFF RECOMMENDATION: Approve an Addendum to Interlocal Contract #2015-4 with Carson Valley Conservation District for Bioengineering and Erosion Control Along the Carson River through Carson Valley.

2016 ADDENDUM TO INTERLOCAL CONTRACT #2015-4
Addressing Funding From Subconservancy District
to Carson Valley Conservation District to Perform Work
for Bioengineering and Erosion Control
Along the Carson River in Carson Valley

WHEREAS, on July 7, 2015, the CARSON WATER SUBCONSERVANCY DISTRICT (hereinafter referred to "CWSD") and CARSON VALLEY CONSERVATION DISTRICT (hereinafter referred to as "DISTRICT") entered into an Interlocal Contract (hereinafter "Interlocal Contract #2015-4") addressing funding from CWSD to DISTRICT ('the Project"); and

WHEREAS, it has been determined that Interlocal Contract #2015-4 needs to be extended for an additional year; through fiscal year 2016-17, with a carryover of funds from fiscal year 2015-16.

WHEREAS, CWSD has agreed to set aside an additional $37,500.00 for the fiscal year beginning July 1, 2016, and to grant DISTRICT said amount in order to assist with the projects set forth in Exhibit "A".

NOW, THEREFORE IT IS AGREED:

1. Interlocal Contract #2015-4 shall be extended one year and shall terminate June 30, 2017, with a carryover of unused funds from fiscal year 2015-16.

2. CWSD hereby grants to DISTRICT up to an additional $37,500.00 for the costs to perform bioengineering and erosion control along the East Fork, West Fork, and main stem of the Carson River in Carson Valley.

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3. All other terms of Interlocal Contract #2015-4 shall remain in full force and effect.

IN WITNESS WHEREOF, the parties have executed this Addendum on the day and year written below.

DATE_____	DATE_____
CARSON VALLEY CONSERVATION DISTRICT	CARSON WATER SUBCONSERVANCY DISTRICT
_____	_____
James Settlemeyer, Chairman	Greg Lynn, Chairman
ATTEST:	ATTEST:
_____	_____
J.B. Lekumberry, Secretary	Toni M. Leffler, Secretary to the Board

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AGENDA ITEM #13

CARSON WATER SUBCONSERVANCY DISTRICT

TO: BOARD OF DIRECTORS

FROM: EDWIN D. JAMES

DATE: JUNE 15, 2016

SUBJECT: Agenda Item #13 - Discussion for possible action regarding approval of a Second Addendum to Interlocal Contract #2014-8 with **Dayton Valley Conservation District** for a Middle Carson River Clearing, Snagging, and Maintenance Projects.

DISCUSSION: Due to various delays, Dayton Valley Conservation District (DVCD) was not able to complete all their planned FY 2014-15 projects (see attached letter). They have therefore requested a second extension of time and carryover of unused funds on Interlocal Contract #2014-8 for DVCD to carry out clearing, snagging, and maintenance activities, as well an additional $75,000 for FY 2016-17. The $75,000 was approved in the FY 2016-17 budget (see attached draft Agreement).

STAFF RECOMMENDATION: Approve a Second Addendum to Interlocal Contract #2014-8 with Dayton Valley Conservation District for a Middle Carson River Clearing, Snagging, and Maintenance Projects.

SECOND ADDENDUM TO REVISED INTERLOCAL CONTRACT #2014-8
Addressing Funding From
Carson Water Subconservancy District
to Dayton Valley Conservation District
to Perform Work on
the Middle Carson River Restoration Projects

WHEREAS, on July 29, 2014, the CARSON WATER SUBCONSERVANCY DISTRICT (hereinafter referred to "CWSD") and DAYTON VALLEY CONSERVATION DISTRICT (hereinafter referred to as "DISTRICT") entered into an Interlocal Contract (hereinafter "Interlocal Contract #2014-8") addressing funding from CWSD to DISTRICT ('the Project"); and

WHEREAS, on June 30, 2015, Interlocal Contract #2014-8 was extended through fiscal year 2015-16, with a carryover of unused funds from fiscal year 2014-15; and

WHEREAS, it has been determined that Interlocal Contract #2014-8 needs to be extended for an additional year; through fiscal year 2016-17, with a carryover of unused funds from fiscal year 2015-16; and

WHEREAS, the District has requested an additional $75,000.00 to be added to the carryover funds.

NOW, THEREFORE IT IS AGREED:

1. Interlocal Contract #2014-8 shall be extended one year and shall terminate June 30, 2017, with a carryover of unused funds from fiscal year 2015-16.
2. An additional $75,000.00 will be provided to the District for fiscal year 2016-17.

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3. All other terms of Interlocal Contract #2014-8 shall remain in full force and effect.

IN WITNESS WHEREOF, the parties have executed this Addendum on the day and year written below.

DATE_____	DATE_____
DAYTON VALLEY CONSERVATION DISTRICT	CARSON WATER SUBCONSERVANCY DISTRICT
_____	_____
Chuck Roberts, Chairperson	Greg Lynn, Chairperson
ATTEST:	ATTEST:
_____	_____
Joe Ricci, Secretary/Treasurer	Toni M. Leffler, Secretary to the Board

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AGENDA ITEM #14

CARSON WATER SUBCONSERVANCY DISTRICT

TO: BOARD OF DIRECTORS

FROM: EDWIN D. JAMES

DATE: JUNE 15, 2016

SUBJECT: Agenda Item #14 - Discussion for possible action regarding approval of Interlocal Contract #2016-6 with **Dayton Valley Conservation District** for Noxious Weed Control in Storey County.

DISCUSSION: Interlocal Contract #2016-6 with Dayton Valley Conservation District (DVCD) is to help Storey County control noxious weeds to decrease the weed seed load coming into Lyon County. The total agreement amount is $2,500 which was approved in the FY 2016-17 budget (see attached draft Agreement).

STAFF RECOMMENDATION: Approve Interlocal Contract #2016-6 with Dayton Valley Conservation District for Noxious Weed Control in Storey County.

CONTRACT #2016-6

INTERLOCAL CONTRACT

Addressing Funding From Carson Water Subconservancy District to Dayton Valley Conservation District to Perform Work on Noxious Weeds Abatement in Storey County

THIS CONTRACT dated this ____ day of _____, 2016, is entered into by and between DAYTON VALLEY CONSERVATION DISTRICT, a political subdivision of the State of Nevada (hereinafter "DISTRICT") and the CARSON WATER SUBCONSERVANCY DISTRICT, a political subdivision of the State of Nevada (hereinafter "CWSD").

WITNESSETH:

WHEREAS, DISTRICT is a governmental subdivision of the State of Nevada a public body corporate and politic, organized in accordance with the provisions of Chapter 548 of the Nevada Revised Statutes (NRS); and

WHEREAS, CWSD is a water subconservancy district created and organized under the provisions of Chapter 541 of NRS; and

WHEREAS, this Contract is entered into under the provisions of NRS 277.180 and accordingly must be ratified by appropriate official action of the governing body of each party as a condition precedent to its entry into force; and

WHEREAS, CWSD and DISTRICT each possess common objectives and responsibilities with regard to the Carson River; and

WHEREAS, DISTRICT has requested $2,500.00 funding to assist Storey County with noxious weed abatement in the Carson River drainage for during fiscal year 2016-17 as described in Exhibit "A."

NOW THEREFORE, in consideration of the premises and of the mutual covenants herein contained, it is mutually agreed by and between the parties as follow:

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1. CWSD hereby grants to DISTRICT $2,500.00 for the costs to assist Storey County with noxious weed abatement in the Carson River drainage and otherwise pay for items and activities identified and described in Exhibit "A".
2. DISTRICT will submit requests for funding periodically over the fiscal year. The request for funding shall be accompanied by a description of what the funds will be used for and shall reference this Contract.
3. CWSD commits to pay the approved amount of the request to DISTRICT within four (4) weeks of said request.
4. CWSD shall have no responsibility for costs exceeding $2,500.00.
5. This Contract shall terminate June 30, 2017, at which time DISTRICT shall have one (1) month thereafter to submit its final invoice for payment related to work performed under this Contract.
6. Notwithstanding any other provision of this Agreement, any obligation of CWSD hereunder is conditioned upon CWSD's funding resources. If for whatever reason the CWSD's funding resources are reduced or eliminated, CWSD reserves the right to terminate this Agreement immediately in writing. CWSD will reimburse DISTRICT for all costs that occurred under this Agreement up to the date the Agreement is terminated.
7. The parties will not waive and intend to assert available NRS chapter 41 liability limitations in all cases. Contract liability of both parties shall not be subject to punitive damages. To the extent applicable, actual contract damages for any breach shall be limited by NRS 353.260 and NRS 354.626.
8. a. Consistent with paragraph 7 of this Contract, each party shall indemnify, hold harmless and defend, not excluding the others right to participate, the other party from and against all liability, claims, actions, damages, losses, and expenses, including, but not limited to, reasonable attorneys' fees and

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costs, arising out of any alleged negligent or willful acts or omissions of the indemnifying party, its officers, employees and agents. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this paragraph.

b. The indemnification obligation under this paragraph is conditioned upon receipt of written notice by the indemnifying party within thirty (30) days of the indemnified party's accrual notice of any actual or pending claim or cause of action. The indemnifying party shall not be liable to hold harmless any attorneys' fees and costs for the indemnified party's chosen right to participate with legal counsel.

9. For invoicing and notice purposes, the address of each party is as follows:

DISTRICT	CWSD
Attn.: Robert Holley	Attn.: Edwin James
District Manager	General Manager
P.O. Box 1807	777 E. William St., #110A
Dayton, NV 89403	Carson City, NV 89701
(775) 246-1999	(775) 887-7456

10. This Contract shall be by and between the parties hereto and shall not be assignable or transferable.

11. Any dispute regarding this Contract shall be decided according to the laws of the State of Nevada. If any part of this Contract is declared to be unlawful, any remaining obligations shall be deemed terminated.

12. This Contract may only be amended by consent of both parties. Any amendments must be written and executed with the same formality as this Contract.

13. This Contract constitutes the entire understanding between the parties and

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there are no representations, conditions, warranties or collateral agreements (expressed or implied), statutory or otherwise, with respect to the subject of this Contract.

14. Notwithstanding this Contract is initially executed by the District Manager of the DISTRICT and General Manager of CWSD, this Contract becomes effective when ratified by appropriate official action of the governing body of each party, and shall be deemed dated as of the later date of said official action.

15. The parties hereto represent and warrant that the person executing this Contract on behalf of each party has full power and authority to enter into this Contract and that the parties are authorized by law to engage in

16. This Contract shall be entered into with duplicate originals, realizing that each entity, by necessity, must approve and execute the subject document at different dates, times and places.

IN WITNESS WHEREOF, the parties have executed this Contract on the day and year first written above.

DATED: _____	DATED: _____
DAYTON VALLEY CONSERVATION DISTRICT	CARSON WATER SUBCONSERVANCY DISTRICT
_____	_____
Chuck Roberts, Chairperson	GregLynn, Chairperson
ATTEST:	ATTEST:

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_____	_____
Joe Ricci, Secretary/Treasurer	Toni M. Leffler, Secretary to the Board

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Exhibit "A"

Dayton Valley Conservation District
Noxious Weed Abatement Program in Storey County

The DVCD will treat noxious weeds in the portion of Storey County located in the Carson River watershed. The treatment areas include Gold Canyon and American Flats/Ravine along with 6 and 7-Mile Canyons. The goal and benefit of the project is to reduce the noxious weed seed load that flows out of Storey County down into Lyon County and the lower Carson River Watershed. The project will reduce the amount of money that will be expended for noxious weed treatment in Lyon County by removing the seed source in Storey County.

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AGENDA ITEM #15

CARSON WATER SUBCONSERVANCY DISTRICT

TO: BOARD OF DIRECTORS

FROM: EDWIN D. JAMES

DATE: JUNE 15, 2016

SUBJECT: Agenda Item #15 - Discussion for possible action regarding approval of Interlocal Contract #2016-7 with **Lahontan Conservation District** for Clearing and Snagging on the Carson River Below the Diversion Dam.

DISCUSSION: Agreement #2016-7 with Lahontan Conservation District (LCD) is to help fund LCD's ongoing effort to monitor the lower Carson River, remove dead vegetation and debris restricting channel capacity, and beaver and beaver dam removal to improve water flow in the channel below the Diversion Dam. The total agreement amount is $15,000 which was approved in the FY 2016-17 budget (see attached draft Contract).

STAFF RECOMMENDATION: Approve Interlocal Contract #2015-6 with Lahontan Conservation District for Clearing and Snagging on the Carson River Below the Diversion Dam.

CONTRACT #2016-7

INTERLOCAL CONTRACT

Addressing Funding From Subconservancy District
to Lahontan Conservation District to Perform Work
on Clearing and Snagging
On the Carson River Below the Diversion Dam

THIS CONTRACT dated this ____ day of _____, 2016, is entered into by and between LAHONTAN CONSERVATION DISTRICT, a political subdivision of the State of Nevada (hereinafter "LCD") and the CARSON WATER SUBCONSERVANCY DISTRICT, a political subdivision of the State of Nevada (hereinafter "CWSD").

WITNESSETH:

WHEREAS, LCD is a governmental subdivision of the State of Nevada a public body corporate and politic, organized in accordance with the provisions of Chapter 548 of the Nevada Revised Statutes (NRS); and

WHEREAS, CWSD is a water subconservancy district created and organized under the provisions of Chapter 541 of NRS; and

WHEREAS, this Contract is entered into under the provisions of NRS 277.180 and accordingly must be ratified by appropriate official action of the governing body of each party as a condition precedent to its entry into force; and

WHEREAS, CWSD and LCD each possess common objectives and responsibilities with regard to the Carson River; and

WHEREAS, LCD has requested funding to perform work during fiscal year 2016-17 on projects identified and described in Exhibit "A", attached hereto and incorporated herein by reference; and

WHEREAS, CWSD has agreed to set aside $15,000.00 for the fiscal year beginning July 1, 2016, and to grant LCD said amount in order to assist with the projects set forth in Exhibit "A".

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NOW THEREFORE, in consideration of the premises and of the mutual covenants herein contained, it is mutually agreed by and between the parties as follow:

1. CWSD hereby grants to LCD up to $15,000.00 for the costs to conduct clearing and snagging on the Carson River below the Diversion Dam and otherwise pay for items and activities required to complete the projects identified and described in Exhibit "A".
2. LCD will submit requests for funding periodically over the fiscal year. The request for funding shall be accompanied by a description of what the funds will be used for and shall reference this Contract.
3. CWSD commits to pay the approved amount of the request to LCD within four (4) weeks of said request.
4. CWSD shall have no responsibility for costs exceeding $15,000.00.
5. This Contract shall terminate June 30, 2017, at which time LCD shall have one (1) month thereafter to submit its final invoice for payment related to work performed under this Contract.
6. Notwithstanding any other provision of this Agreement, any obligation of CWSD hereunder is conditioned upon CWSD's funding resources. If for whatever reason the CWSD's funding resources are reduced or eliminated, CWSD reserves the right to terminate this Agreement immediately in writing. CWSD will reimburse LCD for all costs that occurred under this Agreement up to the date the Agreement is terminated.
7. The parties will not waive and intend to assert available NRS chapter 41 liability limitations in all cases. Contract liability of both parties shall not be subject to punitive damages. To the extent applicable, actual contract damages for any breach shall be limited by NRS 353.260 and NRS 354.626.

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8. a. Consistent with paragraph 7 of this Contract, each party shall indemnify, hold harmless and defend, not excluding the others right to participate, the other party from and against all liability, claims, actions, damages, losses, and expenses, including, but not limited to, reasonable attorneys' fees and costs, arising out of any alleged negligent or willful acts or omissions of the indemnifying party, its officers, employees and agents. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this paragraph.

b. The indemnification obligation under this paragraph is conditioned upon receipt of written notice by the indemnifying party within thirty (30) days of the indemnified party's accrual notice of any actual or pending claim or cause of action. The indemnifying party shall not be liable to hold harmless any attorneys' fees and costs for the indemnified party's chosen right to participate with legal counsel.

9. For invoicing and notice purposes, the address of each party is as follows:

LCD Attn.: Jackie Bogdanowicz Conservation Specialist 111 Sheckler Rd. Fallon, NV 89406 (775) 423-5124	CWSD Attn.: Edwin James General Manager 777 E. William St., #110 Carson City, NV 89701 (775) 887-7456

10. This Contract shall be by and between the parties hereto and shall not be assignable or transferable.

11. Any dispute regarding this Contract shall be decided according to the laws of the State of Nevada. If any part of this Contract is declared to be unlawful, any remaining obligations shall be deemed terminated.

12. This Contract may only be amended by consent of both parties. Any amendments must be written and executed with the same formality as this Contract.

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13. This Contract constitutes the entire understanding between the parties and there are no representations, conditions, warranties or collateral agreements (expressed or implied), statutory or otherwise, with respect to the subject of this Contract.

14. The parties hereto represent and warrant that the person executing this Contract on behalf of each party has full power and authority to enter into this Contract and that the parties are authorized by law to engage in cooperative action set forth herein.

15. This Contract shall be entered into with duplicate originals, realizing that each entity, by necessity, must approve and execute the subject document at different dates, times and places.

IN WITNESS WHEREOF, the parties have executed this Contract on the day and year first written above.

DATED: _____	DATED: _____
LAHONTAN CONSERVATION DISTRICT	CARSON WATER SUBCONSERVANCY DISTRICT
_____ Bill Washburn, Chair	_____ Greg Lynn, Chair
ATTEST:	ATTEST:
_____ Morena Heser, Secretary/Treasurer	_____ Toni M. Leffler, Secretary to the Board

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Exhibit "A"

Lahontan Conservation District
Clearing and Snagging on the
Carson River Below the Diversion Dam

The project is designed to:

- Continue with a long-term monitoring program on the lower Carson River.
- Remove dead vegetation and debris restricting channel capacity.
- Remove beavers and beaver dams to improve water flow in the channel.

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AGENDA ITEM #16

CARSON WATER SUBCONSERVANCY DISTRICT

TO: BOARD OF DIRECTORS

FROM: EDWIN D. JAMES

DATE: JUNE 15, 2016

SUBJECT: Agenda Item #16 - Discussion and possible action regarding approval of Interlocal Contract #2016-8 with **Douglas County** to Help Cover Some of the Costs to Construct a New Well in the Sierra Country Estates.

DISCUSSION: Douglas County has determined that connecting the Sierra County Estates Water System to the Foothill Water System is not their best option for solving community water issues. Therefore, they have requested that the $24,500 granted by CWSD Interlocal Contract #2015-9 with Douglas County be used to help construct a new well in the Sierra Country Estates instead of to connect with the Foothill Water System. This well will help provide water to the regional pipeline located on the west side of Carson Valley. This project was approved in the FY 2016-17 budget (see attached draft Interlocal Contract).

STAFF RECOMMENDATION: Approve Interlocal Contract 2016-8 with Douglas County to Help Cover Some of the Costs to Construct a New Well in the Sierra Country Estates.

CONTRACT #2016-8

INTERLOCAL CONTRACT

Addressing Funding From Carson Water Subconservancy District
to Douglas County to Help Cover Some of the Costs
to Construct a New Well in the Sierra Country Estates

THIS CONTRACT dated this ____ day of _____, 2016, is entered into by and between DOUGLAS COUNTY, a political subdivision of the State of Nevada and the CARSON WATER SUBCONSERVANCY DISTRICT, a political subdivision of the State of Nevada (hereinafter "CWSD").

WITNESSETH:

WHEREAS, DOUGLAS COUNTY is a governmental subdivision of the State of Nevada and therefore a public agency under NRS 277.100; and

WHEREAS, CWSD is a water subconservancy district created and organized under the provisions of Chapter 541 of NRS; and

WHEREAS, this Contract is entered into under the provisions of NRS 277.180 and accordingly must be ratified by appropriate official action of the governing body of each party as a condition precedent to its entry into force; and

WHEREAS, DOUGLAS COUNTY has taken over management of the Sierra Country Estates water system and is working on a plan to bring the water system into compliance; and

WHEREAS, on July 16, 2015, CWSD and DOUGLAS COUNTY entered into Contract #2015-9 for $24,500.00 from CWSD to help cover some of the costs for an intertie between the Sierra Country Estates and Foothill water systems; and

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WHEREAS, a change in circumstances in the Sierra Country Estates and Foothill water systems has created the need for DOUGLAS COUNTY to construct a new well in Sierra Country Estates in place of a pipeline from Job's Peak; and

WHEREAS, the new well will be able to provide water to a regional pipeline located on the west side of Carson Valley; and

WHEREAS, CWSD has agreed to a change of use for the $24,500.00 grant funding to DOUGLAS COUNTY to help pay to construct a new well in Sierra Country Estates.

NOW THEREFORE, in consideration of the premises and of the mutual covenants herein contained, it is mutually agreed by and between the parties as follow:

1. CWSD hereby agrees to a change of use for the $24,500.00 grant from Contract #2015-9 to help DOUGLAS COUNTY pay to construct a new well in Sierra Country Estates.
2. CWSD commits to pay the approved amount of the requests to DOUGLAS COUNTY within four (4) weeks of the approval of the request.
3. CWSD shall have no responsibility for costs incurred in DOUGLAS COUNTY'S construction of a new well in Sierra Country Estates that exceeds $24,500.00.
4. This Contract shall terminate upon completion of the project and payment by CWSD or on June 30, 2017, whichever event occurs first.
5. The parties will not waive and intend to assert available NRS Chapter 41 liability limitations in all cases. Contract liability of both parties shall not be subject to punitive damages. To the extent applicable, actual contract damages for any breach shall be limited by NRS 353.260 and NRS 354.626.

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6. a. Consistent with paragraph 5 of this Contract, each party shall indemnify, hold harmless and defend, not excluding the others right to participate, the other party from and against all liability, claims, actions, damages, losses, and expenses, including, but not limited to, reasonable attorneys fees and costs, arising out of any alleged negligent or willful acts or omissions of the indemnifying party, its officers, employees and agents. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this paragraph.

b. The indemnification obligation under this paragraph is conditioned upon receipt of written notice by the indemnifying party within thirty (30) days of the indemnified party's accrual notice of any actual or pending claim or cause of action. The indemnifying party shall not be liable to hold harmless any attorneys' fees and costs for the indemnified party's chosen right to participate with legal counsel.

7. For invoicing and notice purposes, the address of each party is as follows:

DOUGLAS COUNTY	CWSD
Attn.: Carl Ruschmeyer	Attn.: Edwin James
Public Works Director	General Manager
P. O. Box 218	777 E. William St., #110
1120 Airport Rd., Bldg. F-2	Carson City, NV 89701
Minden, NV 89423	
(775) 782-6227	(775) 887-7456

8. This Contract shall be by and between the parties hereto and shall not be assignable or transferable.

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9. Any dispute regarding this Contract shall be decided according to the laws of the State of Nevada. If any part of this Contract is declared to be unlawful, any remaining obligations shall be deemed terminated.

10. This Contract may only be amended by consent of both parties. Any amendments must be written and executed with the same formality as this Contract.

11. This Contract constitutes the entire understanding between the parties and there are no representations, conditions, warranties or collateral agreements (expressed or implied), statutory or otherwise, with respect to the subject of this Contract.

12. This Contract becomes effective when ratified by appropriate official action of the governing body of each party, and shall be deemed dated as of the later date of said official action.

13. The parties hereto represent and warrant that the person executing this Contract on behalf of each party has full power and authority to enter into this Contract and that the parties are authorized by law to engage in cooperative action set forth herein.

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14. This Contract shall be entered into with duplicate originals, realizing that each entity, by necessity, must approve and execute the subject document at different dates, times and places.

IN WITNESS WHEREOF, the parties have executed this Contract on the day and year first written above.

DATED: _____	DATED: _____
DOUGLAS COUNTY	CARSON WATER SUBCONSERVANCY DISTRICT
_____	_____
Doug N. Johnson, Chairman	Greg Lynn, Chairman
ATTEST:	ATTEST:
_____	_____
Kathy Lewis, Clerk/Treasurer	Toni M. Leffler, Secretary to the Board

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AGENDA ITEM #17

CARSON WATER SUBCONSERVANCY DISTRICT

TO: BOARD OF DIRECTORS

FROM: EDWIN D. JAMES

DATE: JUNE 15, 2016

SUBJECT: Agenda Item #17 - Discussion for possible action regarding approval Interlocal Contract #2016-9 with **Carson Valley Conservation District** for Clearing and Snagging and Vegetation Management Along the Carson River through Carson Valley and Carson City.

DISCUSSION: Agreement #2016-9 with Carson Valley Conservation District (CVCD) is to help fund CVCD's effort to remove dead vegetation and debris restricting channel capacity and beaver and beaver dam removal to improve water flow in the channel through Carson City and Carson Valley. The total agreement amount is $50,000 which was approved in the FY 2016-17 budget (see attached draft Contract).

STAFF RECOMMENDATION: Approve Interlocal Contract #2016-9 with Carson Valley Conservation District for Clearing and Snagging on the Carson River through Carson Valley and Carson City.

CONTRACT #2016-9

INTERLOCAL CONTRACT

Addressing Funding From Subconservancy District To Carson Valley Conservation District for Clearing and Snagging and Vegetation Management Along the Carson River in Carson Valley and Carson City

THIS CONTRACT dated this ____ day of _____, 2016, is entered into by and between CARSON VALLEY CONSERVATION DISTRICT, a political subdivision of the State of Nevada (hereinafter "DISTRICT") and the CARSON WATER SUBCONSERVANCY DISTRICT, a political subdivision of the State of Nevada (hereinafter "CWSD").

WITNESSETH:

WHEREAS, DISTRICT is a governmental subdivision of the State of Nevada a public body corporate and politic, organized in accordance with the provisions of Chapter 548 of the Nevada Revised Statutes (NRS); and

WHEREAS, CWSD is a water subconservancy district created and organized under the provisions of Chapter 541 of NRS; and

WHEREAS, this Contract is entered into under the provisions of NRS 277.180 and accordingly must be ratified by appropriate official action of the governing body of each party as a condition precedent to its entry into force; and

WHEREAS, CWSD and DISTRICT each possess common objectives and responsibilities with regard to the Carson River; and

WHEREAS, DISTRICT has requested $50,000.00 funding for clearing and snagging of undesirable vegetation and debris and vegetation management along the Carson River in Carson Valley and Carson City, as identified and described in Exhibit "A"; and

NOW THEREFORE, in consideration of the premises and of the mutual covenants herein contained, it is mutually agreed by and between the parties as follow:

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1. CWSD hereby grants to DISTRICT $50,000.00 for clearing and snagging of undesirable vegetation and debris and vegetation management along the Carson River in Carson Valley and Carson City, as identified and described in Exhibit "A."
2. DISTRICT will submit requests for funding periodically over fiscal year 2016-17. The request for funding shall be accompanied by a description of what the funds will be used for and shall reference this Contract.
3. CWSD commits to pay the approved amount of the request to DISTRICT within four (4) weeks of said request.
4. CWSD shall not be responsible for costs exceeding $50,000.00.
5. This Contract shall terminate June 30, 2017, at which time DISTRICT shall have one (1) month thereafter to submit its final invoice for payment related to work performed under this Contract.
6. Notwithstanding any other provision of this Agreement, any obligation of CWSD hereunder is conditioned upon CWSD's funding resources. If for whatever reason the CWSD's funding resources are reduced or eliminated, CWSD reserves the right to terminate this Agreement immediately in writing. CWSD will reimburse DISTRICT for all costs that occurred under this Agreement up to the date the Agreement is terminated.
7. The parties will not waive and intend to assert available NRS chapter 41 liability limitations in all cases. Contract liability of both parties shall not be subject to punitive damages. To the extent applicable, actual contract damages for any breach shall be limited by NRS 353.260 and NRS 354.626.
8. a. Consistent with paragraph 7 of this Contract, each party shall indemnify, hold harmless and defend, not excluding the others right to participate, the other party from and against all liability, claims, actions, damages, losses,

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and expenses, including, but not limited to, reasonable attorneys' fees and costs, arising out of any alleged negligent or willful acts or omissions of the indemnifying party, its officers, employees and agents. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this paragraph.

b. The indemnification obligation under this paragraph is conditioned upon receipt of written notice by the indemnifying party within thirty (30) days of the indemnified party's accrual notice of any actual or pending claim or cause of action. The indemnifying party shall not be liable to hold harmless any attorneys' fees and costs for the indemnified party's chosen right to participate with legal counsel.

9. For invoicing and notice purposes, the address of each party is as follows:

DISTRICT	CWSD
Attn.: Craig Burnside	Attn.: Edwin James
River Coordinator	General Manager
1702 County Rd., # A	777 E. William St., #110
Minden, NV 89423	Carson City, NV 89701
(775) 782-3661 x 112	(775) 887-7456

10. This Contract shall be by and between the parties hereto and shall not be assignable or transferable.

11. Any dispute regarding this Contract shall be decided according to the laws of the State of Nevada. If any part of this Contract is declared to be unlawful, any remaining obligations shall be deemed terminated.

12. This Contract may only be amended by consent of both parties. Any amendments must be written and executed with the same formality as this Contract.

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13. This Contract constitutes the entire understanding between the parties and there are no representations, conditions, warranties or collateral agreements (expressed or implied), statutory or otherwise, with respect to the subject of this Contract.

14. The parties hereto represent and warrant that the person executing this Contract on behalf of each party has full power and authority to enter into this Contract and that the parties are authorized by law to engage in cooperative action set forth herein.

15. This Contract shall be entered into with duplicate originals, realizing that each entity, by necessity, must approve and execute the subject document at different dates, times and places.

IN WITNESS WHEREOF, the parties have executed this Contract on the day and year first written above.

DATED: _____	DATED: _____
CARSON VALLEY CONSERVATION DISTRICT	CARSON WATER SUBCONSERVANCY DISTRICT
_____ James Settelmeyer, Chairperson	_____ Greg Lynn, Chairperson
ATTEST:	ATTEST:
_____ J.B. Lekumberry, Secretary	_____ Toni M. Leffler, Secretary to the Board

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Exhibit "A"

Carson Valley Conservation District
for Clearing and Snagging and Vegetation Management
Along the Carson River in Carson Valley

The low flows associated with the past few years of drought have led to copious amounts of vegetation growing in the river channel. Not only does this undesirable vegetation itself lead to decreased capacity, it traps debris and sediment, which further leads to an even great loss of capacity. This funding request is to get into the channel at key, problematic spots to remove vegetation and debris to help restore channel capacity. There are various project locations on the East fork of the Carson River from the Rocky-Virginia Diversion to Highway 88, in accordance with the areas identified as part of the Carson River Flood Event Planning Project Report.

Recent beaver activity and its resultant damage, has been unusually high. Carson City's Open Space Manager has requested that the Conservation District obtain funding for vegetation management for Carson City and DISTRICT has requested funding for the Carson Valley portion of the watershed.

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AGENDA ITEM #18

CARSON WATER SUBCONSERVANCY DISTRICT

TO: BOARD OF DIRECTORS

FROM: EDWIN D. JAMES

DATE: JUNE 15, 2016

SUBJECT: Agenda Item #18 - Discussion for possible action regarding approval of Interlocal Contract #2016-10 with **Churchill County** to Assist in the Dixie Valley Water Level Measurement and Precipitation Gage Monitoring Program.

DISCUSSION: Agreement #2016-10 with Churchill County is to assist in the three year process for the Dixie Valley Water Level Measurement and Precipitation Gage Monitoring Program. The total agreement amount is $70,000 which will be disbursed over fiscal years 2016-17, 2017-18, and 2018-19 (see attached draft Contract).

STAFF RECOMMENDATION: Approve Interlocal Contract #2016-10 with Churchill County to Assist in the Dixie Valley Water Level Measurement and Precipitation Gage Monitoring Program.

CONTRACT #2016-10

INTERLOCAL CONTRACT

Addressing Reimbursement From Carson Water Subconservancy District to Churchill County to Assist in the Dixie Valley Water Level Measurement and Precipitation Gage Monitoring Program

THIS CONTRACT dated this ____ day of _____, 2016, is entered into by and between CHURCHILL COUNTY, a political subdivision of the State of Nevada and the CARSON WATER SUBCONSERVANCY DISTRICT, a political subdivision of the State of Nevada (hereinafter "CWSD").

WITNESSETH:

WHEREAS, CHURCHILL COUNTY is a governmental subdivision of the State of Nevada and therefore a public agency under NRS 277.100; and

WHEREAS, CWSD is a water subconservancy district created and organized under the provisions of Chapter 541 of NRS; and

WHEREAS, this Contract is entered into under the provisions of NRS 277.180 and accordingly must be ratified by appropriate official action of the governing body of each party as a condition precedent to its entry into force; and

WHEREAS CWSD has agreed to set aside a total amount of $70,000.00 for the fiscal years 2016-17, 2017-18, and 2018-19, commencing July 1, 2016; and to grant CHURCHILL COUNTY said amount in order to assist with the three-year process for the Dixie Valley Water Level Measurement and Precipitation Gage Monitoring Program.

NOW THEREFORE, in consideration of the premises and of the mutual covenants herein contained, it is mutually agreed by and between the parties as follows:

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1. CWSD hereby grants to CHURCHILL COUNTY up to $70,000.00 for the costs to assist in the Dixie Valley Water Level Measurement and Precipitation Gage Monitoring Program, as described in Exhibit "A."
2. CHURCHILL COUNTY will submit a request for approximately $24,000.00 over the fiscal year 2016-17, $21,000.00 over the fiscal year 2017-18, and $25,000.00 over the fiscal year 2018-19, for reimbursement of CHURCHILL COUNTY'S expenditures toward the three-year Dixie Valley Water Level Measurement and Precipitation Gage Monitoring Program. The request for reimbursement shall be accompanied by a description of what has actually been expended and shall reference this Contract.
3. CWSD commits to pay the approved amount of the request to CHURCHILL COUNTY within four (4) weeks of said request.
4. CWSD shall have no responsibility for costs exceeding $70,000.00.
5. This Contract shall terminate June 30, 2019, at which time CHURCHILL COUNTY shall have one (1) month thereafter to submit all final invoices for payment related to work performed under this Contract.
6. Notwithstanding any other provision of this Agreement, any obligation of CWSD hereunder is conditioned upon CWSD's funding resources. If for whatever reason the CWSD's funding resources are reduced or eliminated, CWSD reserves the right to terminate this Agreement immediately in writing. CWSD will reimburse CHURCHILL COUNTY for all costs that occurred under this Agreement up to the date the Agreement is terminated.

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7. The parties will not waive and intend to assert available NRS Chapter 41 liability limitations in all cases. Contract liability of both parties hereunder shall not be subject to punitive damages and, to the extent applicable, contract damages for any breach shall be limited by NRS 353.260 and NRS 354.626.

8. a. Consistent with paragraph 7 of this Contract, each party shall indemnify, hold harmless and defend (not excluding the other's right to participate) the other party from and against all liability, claims, actions, damages, losses, and expenses, including, but not limited to, reasonable attorneys fees and costs, arising out of any alleged negligent or willful acts or omissions of the indemnifying party, its officers, employees and agents. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this paragraph.

   b. The indemnification obligation under this paragraph is conditioned upon receipt of written notice by the indemnifying party within thirty (30) days of the indemnified party's notice of any actual or pending claim or cause of action. The indemnifying party shall not be liable for attorneys' fees and costs for the indemnified party's exercise of its right hereunder to participate with legal counsel.

9. For invoicing and notice purposes, the address of each party is as follows:

CHURCHILL COUNTY	CWSD
Attn.: Eleanor Lockwood	Attn.: Edwin James
County Manager	General Manager
155 N. Taylor St., Ste. 153	777 E. William St., #110
Fallon, NV 89406-2748	Carson City, NV 89706
(775) 775/423-5136	(775) 887-7456

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10. This Contract shall be by and between the parties hereto and shall not be assignable or transferable.

11. Any dispute regarding this Contract shall be decided according to the laws of the State of Nevada. If any part of this Contract is declared to be unlawful, any remaining obligations shall be deemed terminated.

12. This Contract may only be amended by consent of both parties. Any amendments must be written and executed with the same formality as this Contract.

13. This Contract constitutes the entire understanding between the parties and there are no representations, conditions, warranties or collateral agreements (expressed or implied), statutory or otherwise, with respect to the subject of this Contract.

14. The parties hereto represent and warrant that the person executing this Contract on behalf of each party has full power and authority to enter into this Contract and that the parties are authorized by law to engage in cooperative action set forth herein.

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15. This Contract shall be entered into with duplicate originals, realizing that each entity, by necessity, must approve and execute the subject document at different dates, times and places.

IN WITNESS WHEREOF, the parties have executed this Contract on the day and year first written above.

DATED: _____	DATED: _____
CHURCHILL COUNTY	CARSON WATER SUBCONSERVANCY DISTRICT
_____	_____
Pete Olsen, Chairman	Greg Lynn, Chairman
ATTEST:	ATTEST:
_____	_____
Pamela D. Moore, Deputy Clerk	Toni M. Leffler, Secretary to the Board

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Exhibit A

Introduction: Churchill County's Water Resource Plans have identified Dixie Valley as a potential long term underground supply for Quasi-municipal purposes in the Lahontan Valley. This would involve a groundwater importation project which would represent the only supply to Lahontan Valley totally independent of the highly litigated and contested waters of the Truckee and Carson River watersheds and associated underground aquifers. Churchill County currently has the senior most priority pending applications before the State Engineer dating from the mid-1980's to appropriate all remaining underground waters in Dixie Valley for export to the Lahontan Valley.

The natural recharge in to the Carson Desert Hydrographic basin #101 has been estimated by the USGS at 1,300 afa from precipitation and 1,200 afa inflow from other basins for a total estimate of natural recharge of 2,500 afa. The committed underground water rights and domestic well use exceeds 21,000 afa, therefore the basin is over-appropriated without considering recharge from the Newlands Irrigation project. For this reason the State Engineer issued Order# 1116 in 1995 limiting any new underground appropriations to 4,000 gallons per day (4.48 afa) or less. There are significant losses from unlined canals/laterals and on-farm losses to deep percolation which recharge the shallow aquifer. The shallow aquifer recharges the intermediate aquifer in the western portion of the basin which is hydraulically connected to the Basalt aquifer in the central portion of the valley. Due to the drought and reduced Newlands Project allocations, many of the 5,000+ shallow aquifer domestic wells have gone dry or experiencing water level declines demonstrating the reliance of the valley on recharge from Newlands Project deliveries. CWSD and Churchill County are currently funding water level monitoring projects with the USGS and Churchill County to monitor water levels in the Shallow, Intermediate and Basalt Aquifers.

Recognizing the competing interests for Truckee and Carson River waters and potential for an independent supply, legislation was enacted and funds allocated under Public Law 110-161 (Sec. 208) to conduct a study to update and quantify the perennial yield or groundwater discharge from the Dixie Valley Flow System (DVFS) shown in Figure 1. This study is a component of the Bureau of Reclamation's (BOR) Desert Terminal Lakes Program, which is authorized by Public Law 107-171 (Sec. 2507). A copy of this Dixie Valley Export Study dated May, 2009 is attached to this application for reference which explains the study in detail. The detailed study was initiated in 2008 and is nearing completion in Spring, 2016. The study team consisted of an interdisciplinary team of experts from the BOR, USGS, Churchill County, State Engineer, DRI and several private consultants.

The study has identified a potential range of groundwater available for appropriation between 11,200 – 15,600 afa, which assumes a median estimate of groundwater discharge from the DVFS and a range of potentially committed existing underground water rights. Additional water could be available if existing water rights were acquired from unused rights or marginally economical agricultural operations currently pumping groundwater with diesel motors. A calibrated groundwater flow model has been constructed using data collected during the study. This model is also being used to test various pumping scenarios where rates and locations for withdrawal are being analyzed.

Project Description /Benefits: The Dixie Valley study included a significant amount of instrumentation and site specific data collection throughout the DVFS which is described in detail in the attached BOR plan of study. As part of this study (13) high altitude precipitation storage type gages were installed in watersheds surrounding the DVFS as shown in Figure 2. These gages were installed in 2008 and are monitored semi-annually to determine summer, winter and total water year precipitation volumes. It was always envisioned that maintenance and data collection from these gages would continue beyond the study period several decades to develop a long term period of record. Additionally a well inventory was conducted for the study and quarterly water level data collection is ongoing in approximately (25) wells shown in Figure 3. The water level data is important to continue to develop baseline data prior to a possible export project and to identify any current trends from anthropogenic stresses or natural climatic conditions. There were approximately 20 temporary stream gages installed during the study to quantify ephemeral and perennial streamflow at the mountain fronts and run-on to the playa. Two of these sites are still maintained to continue to develop baseline data from perennial mountain front streams. A complete weather station to collect meteorological data within Dixie Valley was installed and continues to be maintained. The primary purpose of this project and funding request is to maintain the ongoing semi-annual precipitation gage data collection and maintenance and quarterly water level data collection. Secondary benefits which do not add significant cost to the project are continued maintenance of the weather station and the perennial stream gages.

Following are some of the regional and flow system benefits for maintaining the ongoing data collection and equipment maintenance. Precipitation models such as PRISM, developed at Oregon State University were used extensively on many components of this study provide predicted long-term average annual precipitation over the Great Basin and in Dixie Valley. The models have limited actual measurements sites to constrain and calibrate to, especially in central Nevada. If the Dixie Valley precipitation network can be maintained over the long-term (several decades) it will provide valuable information for refinement of long-term precipitation models in a geographic region with sparse data. High altitude precipitation measurements are even sparser in the Great Basin - almost all long-term precipitation stations are situated on low altitude valley floors. The majority of precipitation that becomes available to streams, springs and groundwater recharge to the Great Basin aquifers is actually derived from high altitude precipitation, not low-altitude (valley floor) precipitation. Maintaining the high altitude precipitation network in Dixie Valley provides valuable information where data are limited, and active data collection is even more limited. The lack of long-term high altitude precipitation data collection in the Great Basin is even more concerning given the acknowledged change in climate.

There is considerable geographic and temporal variability in precipitation in the Great Basin. Having basin-specific precipitation and complimentary hydrologic data (water level and stream/spring discharge) will provide needed data from which to define natural hydrologic responses to water resources. In Dixie Valley, a robust back-ground hydrologic baseline dataset will provide valuable information for long-term water resources management, and to identify current or future pumping effects, from potential fresh water development for export to Lahontan Valley and/or continued or expanded geothermal development within the basin. Use

of long-term precipitation data from outside the near proximity of a basin, or from low altitudes within a basin, always presents complications and lowers confidence when trying to differentiate natural climate responses from other potential causes to hydrologic changes such as pumping.

Such data collection will allow refinements to the groundwater flow model and other methods in this study used to estimate recharge and discharge. Annual precipitation measurements are needed to compare to annual precipitation products such as PRISM, DAYMET, NLDAS and other gridded climate products. These products (including PRISM) are not just long-term average, they are daily, monthly, and annual. Because of this we can easily compare measured monthly and annual totals with the product totals. This data can be used in the future to develop bias corrections if needed. The data can integrate with the PRISM process developed and maintained by Oregon State University which was done with all the USGS and State high elevation gauges, and now PRISM is using them. Currently we don't have any independent data to compare PRISM except this potential network, and all of Wynn Ross' network in Northern Washoe County.

We will work with Dr. Justin Huntington/DRI who is also affiliated with the Western Regional Climate Center (WRCC) to host the data so it is made publically available. Hosting the data is not that expensive, however efforts will need to be taken to set up the database, make all the linkages, and integrate the data within the mapping environment. This cost is included within the first year of the project. Dr. Huntington will also investigate other possible grant sources that could possibly be leveraged to help assist with funding.

This project is technically and environmentally sound and will assist the water users, managers, hydrologists and general public in understanding climate, water issues and the status of their aquifers. It will help identify potential areas where discharge exceeds recharge and aquifer storage change. The project has regional benefits to the Carson River watershed in that it is supporting data collection efforts for an importation project, which if constructed, would lessen the demand on the over allocated and contested waters of the Truckee and Carson River watersheds. There also exists the possibility of resource trading in the Carson watershed if the importation project were implemented, however this would require additional consideration of feasibility and investigation of possible legal/physical constraints that would need to be overcome. The project also has a larger regional benefit for the west-central portion of Nevada in helping define high altitude precipitation distributions with site specific data where virtually none exists now and reliance is currently on models such as PRISM.

This funding request is for an three year term, however it is anticipated for this program to be successful as a long term data collection and management tool, it be continued as an ongoing effort.

AGENDA ITEM #19

CARSON WATER SUBCONSERVANCY DISTRICT

TO: BOARD OF DIRECTORS

FROM: EDWIN D. JAMES

DATE: JUNE 15, 2016

SUBJECT: Agenda Item #19 - Discussion for possible action regarding approval of Interlocal Contract #2016-11 with **Lyon County** to Assist with USGS Maintenance Costs for New River Gauge in Dayton.

DISCUSSION: Interlocal Contract #2016-11 with Lyon County is to help fund a new USGS stream flow gage downstream of Dayton. The funding for this gage will come from USGS, Lyon County, and CWSD. The total contract amount is $5,375 which was approved in the FY 2016-17 budget (see attached draft Contract).

STAFF RECOMMENDATION: Approve Interlocal Contract #2016-11 with **Lyon County** to Assist with USGS Maintenance Costs for New River Gauge in Dayton.

CONTRACT #2016-11

INTERLOCAL CONTRACT

Addressing Funding From Subconservancy District
to Lyon County to Assist with the Cost of
USGS Maintenance of New River Gauge in Dayton (#10311750)

THIS CONTRACT dated this ____ day of _____, 2016, is entered into by and between LYON COUNTY, a political subdivision of the State of Nevada and the CARSON WATER SUBCONSERVANCY DISTRICT, a political subdivision of the State of Nevada (hereinafter "CWSD").

WITNESSETH:

WHEREAS, LYON COUNTY is a governmental subdivision of the State of Nevada and therefore a public agency under NRS 277.100; and

WHEREAS, CWSD is a water subconservancy district created and organized under the provisions of Chapter 541 of NRS; and

WHEREAS, this Contract is entered into under the provisions of the NRS 277.180 and accordingly must be ratified by appropriate official action of the governing body of each party as a condition precedent to its entry into force; and

WHEREAS, in 2015, LYON COUNTY worked collaboratively with Vidler Water and USGS to identify an appropriate location and install a water gauge near the Rolling A Induction Well 20, more particularly described in Exhibit "A", attached hereto and incorporated herein by reference; and

WHEREAS, LYON COUNTY has requested $5,375.00 in assistance from CWSD to cover USGS maintenance costs for the new river gauge (#10311750) in Dayton.

WHEREAS, CWSD has agreed to provide $5,375.00 in FY 2016-17 toward the USGS maintenance costs of the river gauge in Dayton described in Exhibit "A."

NOW THEREFORE, in consideration of the premises and of the mutual covenants herein contained, it is mutually agreed by and between the parties as follow:

1. CWSD hereby agrees to reimburse LYON COUNTY up to $5,375.00 for the costs associated with USGS maintenance costs for the new river gauge (#10311750) in Dayton, which is described in Exhibit "A ".
2. LYON COUNTY agrees to periodically submit reimbursement requests during the duration of this contract. The request for funding shall be accompanied by a description of what the funds were used for and shall reference this Contract.
3. CWSD further agrees to pay the approved amount of the request to LYON COUNTY within four (4) weeks of said request.
4. CWSD shall have no responsibility for costs exceeding $5,375.00.
5. LYON COUNTY further agrees to be responsible for all costs exceeding $5,375.00.
6. This Contract shall terminate June 30, 2017, at which time LYON COUNTY shall have one (1) month thereafter to submit its invoice to CWSD for payment related to work performed under this Contract.
7. The parties will not waive and intend to assert available NRS Chapter 41 liability limitations in all cases. Contract liability of both parties shall not be subject to punitive damages. To the extent applicable, actual contract

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damages for any breach shall be limited by NRS 353.260 and NRS 354.626.

8. a. Consistent with paragraph 7 of this Contract, each party shall indemnify, hold harmless and defend, not excluding the others right to participate, the other party from and against all liability, claims, actions, damages, losses, and expenses, including, but not limited to, reasonable attorneys fees and costs, arising out of any alleged negligent or willful acts or omissions of the indemnifying party, its officers, employees and agents. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this paragraph.

b. The indemnification obligation under this provision is conditioned upon receipt of written notice by the indemnifying party within thirty (30) days of the indemnified party's accrual notice of any actual or pending claim or cause of action. The indemnifying party shall not be liable to hold harmless any attorneys' fees and costs for the indemnified party's chosen right to participate with legal counsel.

9. For invoicing and notice purposes, the address of each party is as follows:

LYON COUNTY	CWSD
Mike Workman	Edwin James
Utilities Director	General Manager
PO Box 1699	777 E. William St., #110
Dayton, NV 89403	Carson City, NV 89701
(775) 246-6220 x-3	(775) 887-7456

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10. This Contract shall be by and between the parties hereto and shall not be assignable or transferable.

11. Any dispute regarding this Contract shall be decided according to the laws of the State of Nevada, with venue for any dispute being Carson City District Court. If any part of this Contract is declared to be unlawful, any remaining obligations shall be deemed terminated.

12. This Contract may only be amended by consent of both parties. Any amendments must be written and executed with the same formality as this Contract.

13. This Contract constitutes the entire understanding between the parties and there are no representations, conditions, warranties or collateral agreements (expressed or implied), statutory or otherwise, with respect to the subject of this Contract.

14. The parties hereto represent and warrant that the person executing this Contract on behalf of each party has full power and authority to enter into this Contract and that the parties are authorized by law to engage in cooperative action set forth herein.

/ / / / /

/ / / / /

/ / / / /

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15. This Contract shall be entered into with duplicate originals, realizing that each entity, by necessity, must approve and execute the subject document at different dates, times and places.

DATED: _____

LYON COUNTY

_____
Jeff Page, County Manager

ATTEST:

_____
Nikki Bryan, Clerk/Treasurer

DATED: _____

CARSON WATER
SUBCONSERVANCY DISTRICT

_____
Greg Lynn, Chairman

ATTEST:

_____
Toni M. Leffler, Secretary to the Board

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Exhibit "A"

Lyon County
Assist with the Cost of USGS Maintenance of a New River Gauge in Dayton (#10311750)

In 2015, Lyon County Utilities Department (LCUD) staff worked collaboratively with Vidler Water and the USGS to identify an appropriate location for a gauging station in the Dayton area. A site near the LCUD Rolling A Induction Well 20 was found. LCUD worked with USGS in an effort to get the gage installed before the spring season runoff. The gauge (#10311750) has been installed and is reporting as of January 30, 2016. It is currently in the calibration phase of the state up process. The gauge location/ address is Dayton - Carson River Segment 7B - above Six Mile Canyon Creek - below LCUD's Induction Well 20.

This new gauge is in a location that will not be effected by irrigation diversions or any other activity. The new gauge is designed to measure not only higher flows but also medium to low flows. This will be beneficial for the refinement of the operation of LCUD's seasonal Conjunctive Use Plan. Having accurate medium to low flow measurements will allow LCUD to better manage seasonal municipal surface water rights pumping and will also benefit the Federal Water Master and Nevada Division of Water Resources staff in their efforts to manage their respective programs.

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AGENDA ITEM #20

CARSON WATER SUBCONSERVANCY DISTRICT

TO: BOARD OF DIRECTORS

FROM: EDWIN D. JAMES

DATE: JUNE 15, 2016

SUBJECT: Agenda Item #20 - Discussion for possible action regarding approval of an Agreement #2016-12 with **Sierra Nevada Journeys** to Help Fund Four "Family Watershed Nights."

DISCUSSION: Agreement #2016-12 with Sierra Nevada Journeys will help fund Four "Family Watershed Nights" education programs. The total agreement amount is $3,000 which was approved in the FY 2016-17 budget (see attached draft Agreement).

STAFF RECOMMENDATION: Approve Agreement #2016-12 with **Sierra Nevada Journeys** to Help Fund Four "Family Watershed Nights."

AGREEMENT #2016-12

AGREEMENT

Addressing Funding From Carson Water Subconservancy District to Sierra Nevada Journeys to Conduct "Family Watershed Nights" for Carson River Watershed Communities

THIS AGREEMENT dated this ____ day of _____, 2016, is entered into by and between Sierra Nevada Journeys, a non-profit association (hereinafter "SNJ") and the CARSON WATER SUBCONSERVANCY DISTRICT, a political subdivision of the State of Nevada (hereinafter "CWSD").

WITNESSETH:

WHEREAS, SNJ is a 501(C)(3) non-profit organization; and

WHEREAS, SNJ has organized a program of three community-building and educational events called "Family Watershed Nights" for Carson River Watershed communities, which is described in Exhibit "A" attached hereto and incorporated herein by reference; and

WHEREAS, CWSD is a water subconservancy district created and organized under the provisions of Chapter 541 of NRS; and

WHEREAS, this Agreement must be ratified by appropriate official action of the governing body of each party as a condition precedent to its entry into force; and

WHEREAS, CWSD and SNJ each possess common objectives and responsibilities with regard to the Carson River; and

WHEREAS, SNJ has requested funding to conduct four "Family Watershed Nights" for Carson River Watershed communities during fiscal year 2016-17; and

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WHEREAS, CWSD has agreed to help cover the costs of this program in an amount not to exceed $3,000.00.

NOW THEREFORE, in consideration of the premises and of the mutual covenants herein contained, it is mutually agreed by and between the parties as follow:

1. CWSD shall reimburse SNJ for the costs to conduct four "Family Watershed Nights" for Carson River Watershed communities as described in Exhibit "A."
2. The maximum amount of funds available under this agreement will not exceed $3,000.00.
3. This Agreement shall terminate June 30, 2017, at which time SNJ shall have one (1) month thereafter to submit its final invoice for payment related to work performed under this Agreement. If all funds are expended earlier, this Agreement may be terminated sooner by written notice from the grantor, CWSD.
4. The parties will not waive and intend to assert available NRS Chapter 41 liability limitations in all cases. Contract liability of both parties shall not be subject to punitive damages. To the extent applicable, actual contract damages for any breach shall be limited by NRS 353.260 and NRS 354.626.
5. a. Consistent with paragraph 4 of this Contract, each party shall indemnify, hold harmless and defend, not excluding the others right to participate, the other party from and against all liability, claims, actions, damages, losses, and expenses, including, but not limited to, reasonable attorneys fees and costs, arising out of any alleged negligent or willful acts or omissions of the indemnifying party, its officers, employees and agents. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or

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obligation of indemnity which would otherwise exist as to any party or person described in this paragraph.

b. The indemnification obligation under this paragraph is conditioned upon receipt of written notice by the indemnifying party within thirty (30) days of the indemnified party's accrual notice of any actual or pending claim or cause of action. The indemnifying party shall not be liable to hold harmless any attorneys' fees and costs for the indemnified party's chosen right to participate with legal counsel.

6. For invoicing and notice purposes, the address of each party is as follows:

Sierra Nevada Journeys	CWSD
Attn.: Fayth Ross	Attn.: Edwin James
Associate Director of Development	General Manager
190 E. Liberty St.	777 E. William St., Ste. 110A
Reno, NV 89501	Carson City, NV 89701
(775) 355-1688	(775) 887-7456

7. This Agreement shall be by and between the parties hereto and shall not be assignable or transferable.

8. Any dispute regarding this Agreement shall be decided according to the laws of the State of Nevada. If any part of this Agreement is declared to be unlawful, any remaining obligations shall be deemed terminated.

9. This Agreement may only be amended by consent of both parties. Any amendments must be written and executed with the same formality as this Agreement.

10. This Agreement, including Exhibit "A", constitutes the entire understanding between the parties and there are no representations, conditions, warranties or collateral agreements (expressed or implied), statutory or otherwise, with respect to the subject of this Agreement.

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11. This Agreement becomes effective when ratified by appropriate official action of the governing body of each party, and shall be deemed dated as of the later date of said official action.

12. The parties hereto represent and warrant that the person executing this Agreement on behalf of each party has full power and authority to enter into this Agreement and that the parties are authorized by law to engage in cooperative action set forth herein.

13. This Agreement shall be entered into with duplicate originals, realizing that each entity, by necessity, must approve and execute the subject document at different dates, times and places.

IN WITNESS WHEREOF, the parties have executed this Agreement on the day and year first written above.

DATED: _____	DATED: _____
SIERRA NEVADA JOURNEYS	CARSON WATER SUBCONSERVANCY DISTRICT
_____	_____
Eaton Dunkelberger, CEO	Greg Lynn, Chairman
ATTEST:	ATTEST:
_____	_____
Marilynn Cebe, Secretary	Toni M. Leffler, Secretary to the Board

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EXHIBIT "A"

Sierra Nevada Journeys
"Family Watershed Nights"
for Carson River Watershed Communities

The program will serve over 400 children and their parents in communities within the Carson River Watershed with four community-building and educational events called "Family Watershed Nights." Family Watershed Nights invite K-6 students, their parents, and siblings to attend a fun, family-friendly evening which provides watershed education at the family level and reinforces STEM concepts learned in the classroom. Through hands-on activities, participants will gain a sense of ownership and stewardship for the health of their community watershed.

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AGENDA ITEM #21

CARSON WATER SUBCONSERVANCY DISTRICT

TO: BOARD OF DIRECTORS

FROM: EDWIN D. JAMES

DATE: JUNE 15, 2016

SUBJECT: Agenda Item #21 - Discussion for possible action regarding approval of Interlocal Contract #2016-3 with **Carson City** for the Golden Eagle Lane Erosion Control Project.

DISCUSSION: Interlocal Contract #2016-03 with Carson City is to help fund the erosion control project on the southeast side of the Prison Hill Recreation Area near Golden Eagle Lane. The total contract amount is $75,000.00 which was approved in the FY 2016-17 budget (see attached draft Contract).

STAFF RECOMMENDATION: Approve Interlocal Contract #2016-03 with **Carson City** for the Golden Eagle Lane Erosion Control Project.

CONTRACT #2016-3

INTERLOCAL CONTRACT

Addressing Funding from Subconservancy District to Carson City for Golden Eagle Lane Erosion Control Project

THIS CONTRACT dated this ____ day of _____, 2016, is entered into by and between CARSON CITY, a political subdivision of the State of Nevada and the CARSON WATER SUBCONSERVANCY DISTRICT, a political subdivision of the State of Nevada (hereinafter "CWSD").

WITNESSETH:

WHEREAS, CARSON CITY is a governmental subdivision of the State of Nevada and therefore a public agency under NRS 277.100; and

WHEREAS, CWSD is a water subconservancy district created and organized under the provisions of Chapter 541 of NRS; and

WHEREAS, this Contract is entered into under the provisions of NRS 277.180 and accordingly must be ratified by appropriate official action of the governing body of each party as a condition precedent to its entry into force; and

WHEREAS, CARSON CITY is proposing to proactively manage natural resource issues on the southeast side of the Prison Hill Recreation Area near Golden Eagle Lane in order to stop erosion and protect the Carson River, as described in Exhibit "A", attached hereto and incorporated herein by reference; and

WHEREAS, CWSD has agreed to set aside $75,000.00 for fiscal year 2016-17 beginning July 1, 2016, to grant CARSON CITY said amount in order to assist with the project.

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NOW THEREFORE, in consideration of the premises and of the mutual covenants herein contained, it is mutually agreed by and between the parties as follow:

1. CWSD hereby grants to CARSON CITY up to $75,000.00 for fiscal year 2016-17 beginning July 1, 2016, to assist with the Golden Eagle Lane erosion control project.
2. CARSON CITY will submit requests for funding periodically over the next fiscal year. The request for funding shall be accompanied by a description of what the funds were used for and shall reference this Contract.
3. CWSD commits to pay the approved amount of the request to CARSON CITY within four (4) weeks of said request.
4. CWSD shall have no responsibility for costs exceeding $75,000.00.
5. This Contract shall terminate June 30, 2017, at which time CARSON CITY shall have one (1) month thereafter to submit its final invoice for payment related to work performed under this Contract.
6. The parties will not waive and intend to assert available NRS chapter 41 liability limitations in all cases. Contract liability of both parties shall not be subject to punitive damages. To the extent applicable, actual contract damages for any breach shall be limited by NRS 353.260 and NRS 354.626.
7. a. Consistent with paragraph 6 of this Contract, each party shall indemnify, hold harmless and defend, not excluding the others right to participate, the other party from and against all liability, claims, actions, damages, losses, and expenses, including, but not limited to, reasonable attorneys fees and costs, arising out of any alleged negligent or willful acts or omissions of the

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indemnifying party, its officers, employees and agents. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this paragraph.

b. The indemnification obligation under this paragraph is conditioned upon receipt of written notice by the indemnifying party within thirty (30) days of the indemnified party's accrual notice of any actual or pending claim or cause of action. The indemnifying party shall not be liable to hold harmless any attorneys' fees and costs for the indemnified party's chosen right to participate with legal counsel.

8. For invoicing and notice purposes, the address of each party is as follows:

CARSON CITY Attn.: Richard Wilkinson Senior Natural Resource Specialist Parks, Recreation & Open Space Dept. 3303 Butti Way, Bldg. #9 Carson City, NV 89701 (775) 283-7341	CWSD Attn.: Edwin James General Manager 777 E. William St., #110 Carson City, NV 89706 (775) 887-7456

9. This Contract shall be by and between the parties hereto and shall not be assignable or transferable.

10. Any dispute regarding this Contract shall be decided according to the laws of the State of Nevada. If any part of this Contract is declared to be unlawful, any remaining obligations shall be deemed terminated.

11. This Contract may only be amended by consent of both parties. Any amendments must be written and executed with the same formality as this Contract.

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12. This Contract constitutes the entire understanding between the parties and there are no representations, conditions, warranties or collateral agreements (expressed or implied), statutory or otherwise, with respect to the subject of this Contract.

13. This Contract becomes effective when it is ratified by the appropriate official action of the governing body of each party.

14. The parties hereto represent and warrant that the person executing this Contract on behalf of each party has full power and authority to enter into this Contract and that the parties are authorized by law to engage in cooperative action set forth herein.

15. This Contract shall be entered into with duplicate originals, realizing that each entity, by necessity, must approve and execute the subject document at different dates, times and places.

IN WITNESS WHEREOF, the parties have executed this Contract on the day and year first written above.

DATED: _____	DATED: _____
CARSON CITY	CARSON WATER SUBCONSERVANCY DISTRICT
_____	_____
Robert L. Crowell, Mayor	Greg Lynn, Chairman
ATTEST:	ATTEST:
_____	_____
Susan Merriwether, Clerk-Recorder	Toni M. Leffler, Secretary to the Board

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EXHIBIT "A"

Carson City's Golden Eagle Lane Erosion Control Project

Gold Eagle Lane, Prison Hill Recreation Area, and the Carson River have been impacted by a series of flash flooding events, drought, and OHV use. These events have caused severe erosion and water quality impacts to the Carson River and the Golden Eagle Lane access for residents. These erosion problems have impacted Open Space property by damaging the trail access area identified in the Unified Pathways Master Plan. These erosion events have left an incised channel which will continue to impact the Prison Hill Recreation Area, Golden Eagle Lane, and the Carson River Watershed.

This project will capture and hold sediment from the eroding channel and drainage. The proposed work will minimize future erosion to a designed trail access and a portion of the Prison Hill trail system. It will also minimize erosion and improve the drainage system, keeping the road from eroding into the river channel. All of the proposed changes will benefit both private land owners, Carson City Open Space, and the Carson River Watershed from further damage.

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AGENDA ITEM #22

CARSON WATER SUBCONSERVANCY DISTRICT

TO: BOARD OF DIRECTORS

FROM: EDWIN D. JAMES

DATE: JUNE 15, 2016

SUBJECT: Agenda Item #22 - Discussion for possible action regarding a presentation by Rob Anderson of R.O. Anderson Engineering regarding the Stephanie Way Flood Control Project Feasibility Study

DISCUSSION: Included in the MAS #6 with FEMA was funding to conduct a Stephanie Way Flood Control Project Feasibility Study. The engineering firm R.O. Anderson was hired to conduct this study. Attached is the final draft copy of their report, excluding the appendices. The appendices are available at CWSD office or on request. Rob Anderson with R.O. Anderson will give a presentation on the study and provide some recommendations.

STAFF RECOMMENDATION: Received and file.

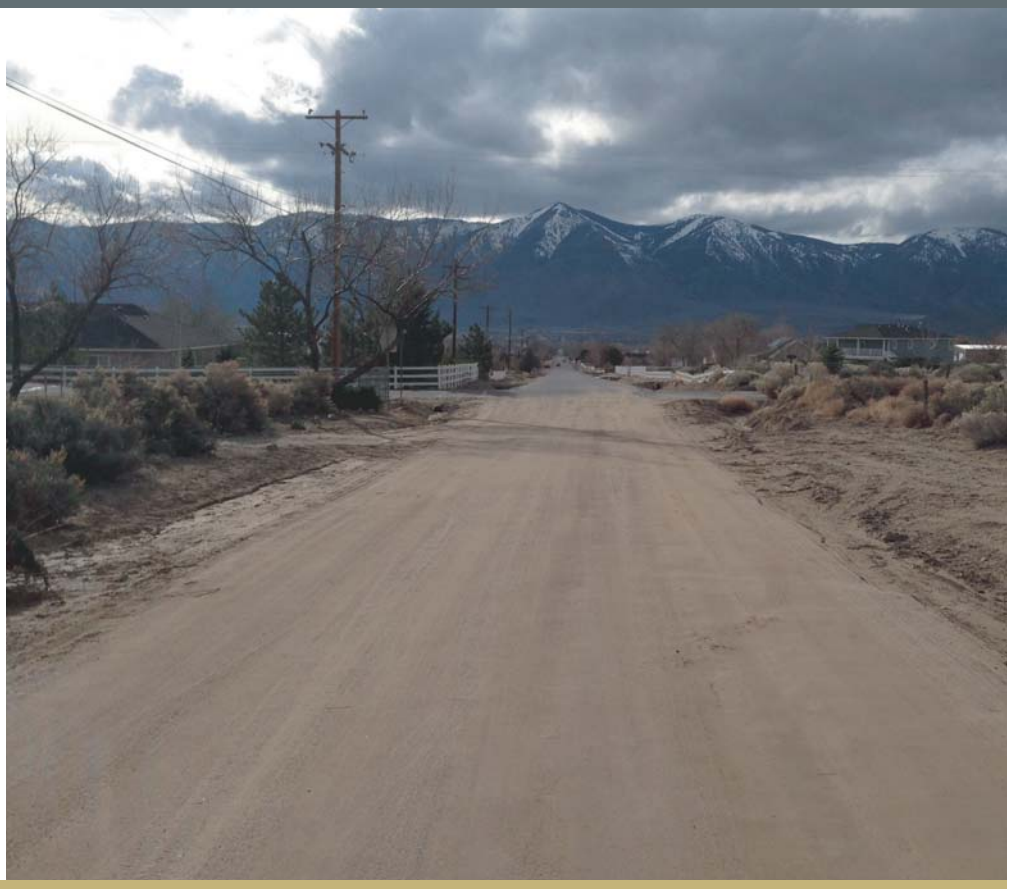
R|O|Anderson

Report

Stephanie Way Flood Control Project
Douglas County, Nevada

Feasibility Engineering Study
for
CARSON WATER SUBCONSERVANCY DISTRICT

Final Report
May 27, 2016



MAILING ADDRESS
P.O. Box 2229
Minden, NV 89423

www.ROAnderson.com

OFFICES
- Minden, Nevada
- Reno, Nevada
- South Lake Tahoe, California

Stephanie Way Flood Control Project
Douglas County, Nevada

Feasibility Engineering Study

Final Report

May 27, 2016

Prepared For:

CARSON WATER SUBCONSERVANCY DISTRICT
777 East William Street
Carson City, Nevada 89701
Phone: (775) 887-7450

Prepared By:

R.O. ANDERSON ENGINEERING, INC.
1603 Esmeralda Avenue
Minden, Nevada 89423
Phone: (775) 782-2322

PROFESSIONAL ENGINEER - STATE OF NEVADA
NAGASEKHAR R. GORLA
Exp: 6/30/17
CIVIL
No. 18557

May 27, 2016

Shaker Gorla, P.E., CFM

Reviewed By:
Robert O. Anderson, P.E., CFM, WRS

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1 Background and Introduction

The project area is a relatively small, unmapped watershed located immediately easterly of the east end of Stephanie Way, Douglas County, NV, inclusive of the power substation in this area (Figure 1 – Project Location Map). The contributing watershed of this project area is about 0.65 square miles situated between the Buckbrush Wash and Johnson Lane Wash watersheds

The effective Flood Insurance Rate Maps (FIRMs) issued by the Federal Emergency Management Agency (FEMA), dated January 20, 2010, designate portions of the project area as generally being within shaded Zone 'X' (0.2-percent annual chance flood) and unshaded Zone 'X' (area of minimal flood hazard). Figure 2 – Effective FEMA FIRM depicts the extent of the floodplain boundaries covering the project area and downstream areas. FEMA recently published a revised FIRM for this area having a future date of June 15, 2016. This relationship of the proposed floodplain boundaries and the project site are shown on Figure 3 – Preliminary FEMA FIRM.

These designations suggest that the flooding potential of these areas is expected to be low to moderate. However, this neighborhood has experienced repetitive flooding including heavy sediment deposition in the past. Flood events in 2014 and 2015 resulted in considerable damage to the residential properties and public infrastructure in this area, which has been attributed to this watershed. Douglas County incurred more than $2.3[1] million in cleanup costs resulting from flood-related damages from 2015 flash floods in Johnson Lane and Stephanie Way areas alone.

Consequently, Douglas County partnered with the Carson Water Subconservancy District (CWSD) to explore the feasibility of constructing a flood control facility on BLM property east of Romero Drive to alleviate flood-induced recurring damages in this neighborhood. The following specific tasks were included in the scope of services:

- Collect available topographic data for the study area from U.S. Geological Survey (USGS) National Map; Perform field surveys if needed and construct a work map;

[1] Personal communication from Erik Nilssen, P.E., Douglas County Engineer.

- Delineate contributing watershed boundary for the Stephanie Lane Wash and perform hydrologic modeling to estimate runoff characteristics for the 50-, 10-, 4-, 1-, 0.2-percent annual chance precipitation, and ½ PMP events;
- Locate appropriate location for the proposed flood control reservoir that has minimum impacts on the existing infrastructure;
- Size the flood control reservoir and associated outlet works to detain and attenuate flood flows resulting from the above-mentioned precipitation events, and limit outflow from the reservoir during the occurrence of 1-percent annual chance flood to that of existing 10-percent annual chance peak flow at a minimum;
- Estimate required channel section downstream of the proposed reservoir to safely carry expected outflow from the reservoir;
- Perform earthwork calculations, develop engineer's estimate of probable costs to design, permit and ultimately construct the embankment structure, outlet works and other necessary appurtenances;
- Perform Benefit-Cost Analysis (BCA) conforming to FEMA standards;
- Prepare a draft report with supporting exhibits for CWSD's, and other public agencies' (stakeholders) review and comment;
- Participate in and present the results of this study at the Carson River Coalition River Corridor Working Group Meeting and one general public meeting; and
- Address comments and feedback received from stakeholders and the public and finalize the report.

Section 2 of this report describes criteria used to develop hydrologic model, and also presents the results of hydrologic modeling. Section 3 of the report includes results of hydraulic calculations performed. Section 4 of the report includes a detailed discussion of the basis of design, along with the presentation of the engineer's estimate of probable construction costs for this flood control facility. Section 5 of the report contains the findings and conclusions of this study.

Figure 1 – Project Location Map

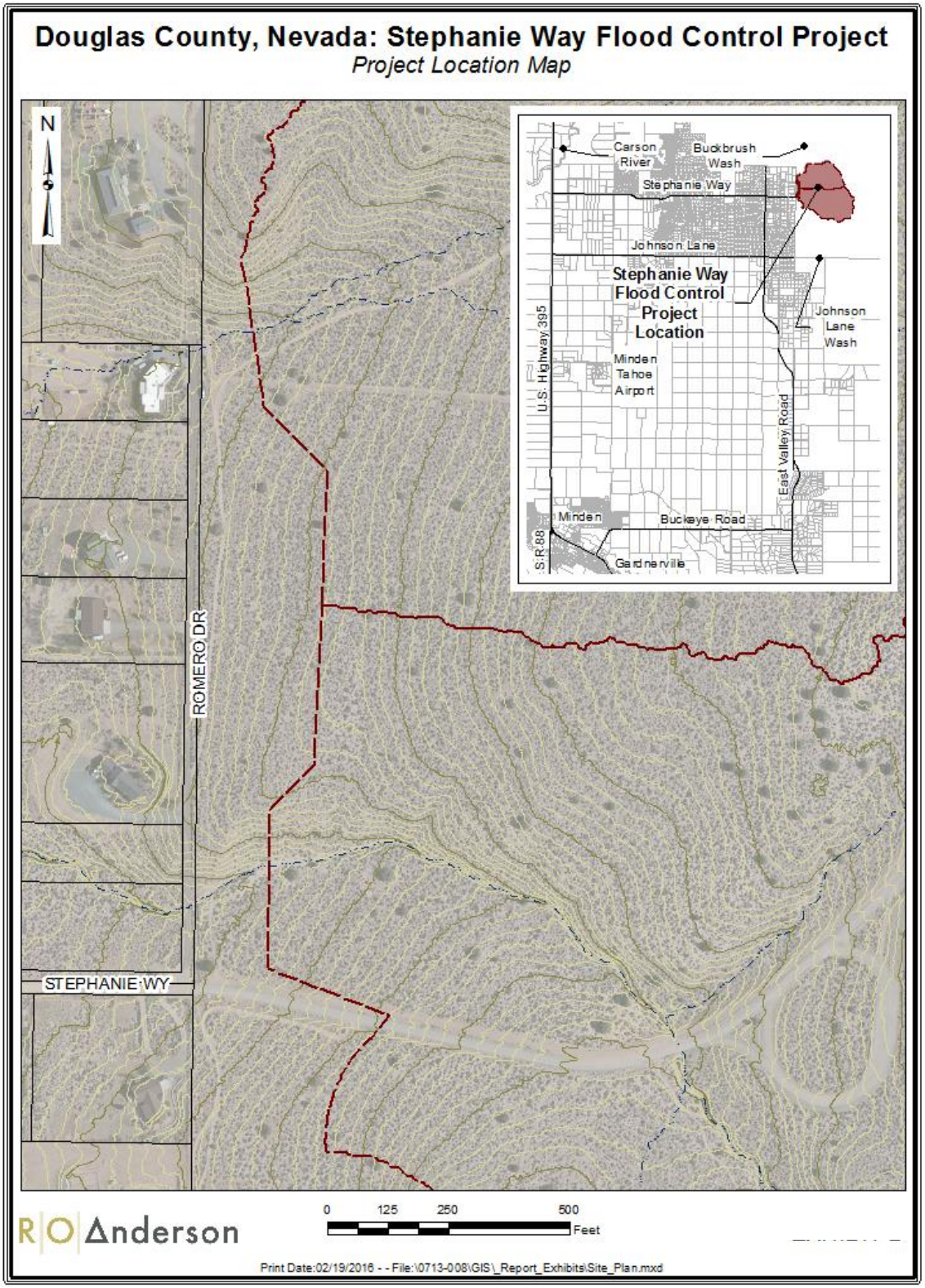


Figure 2 – Effective FEMA FIRM

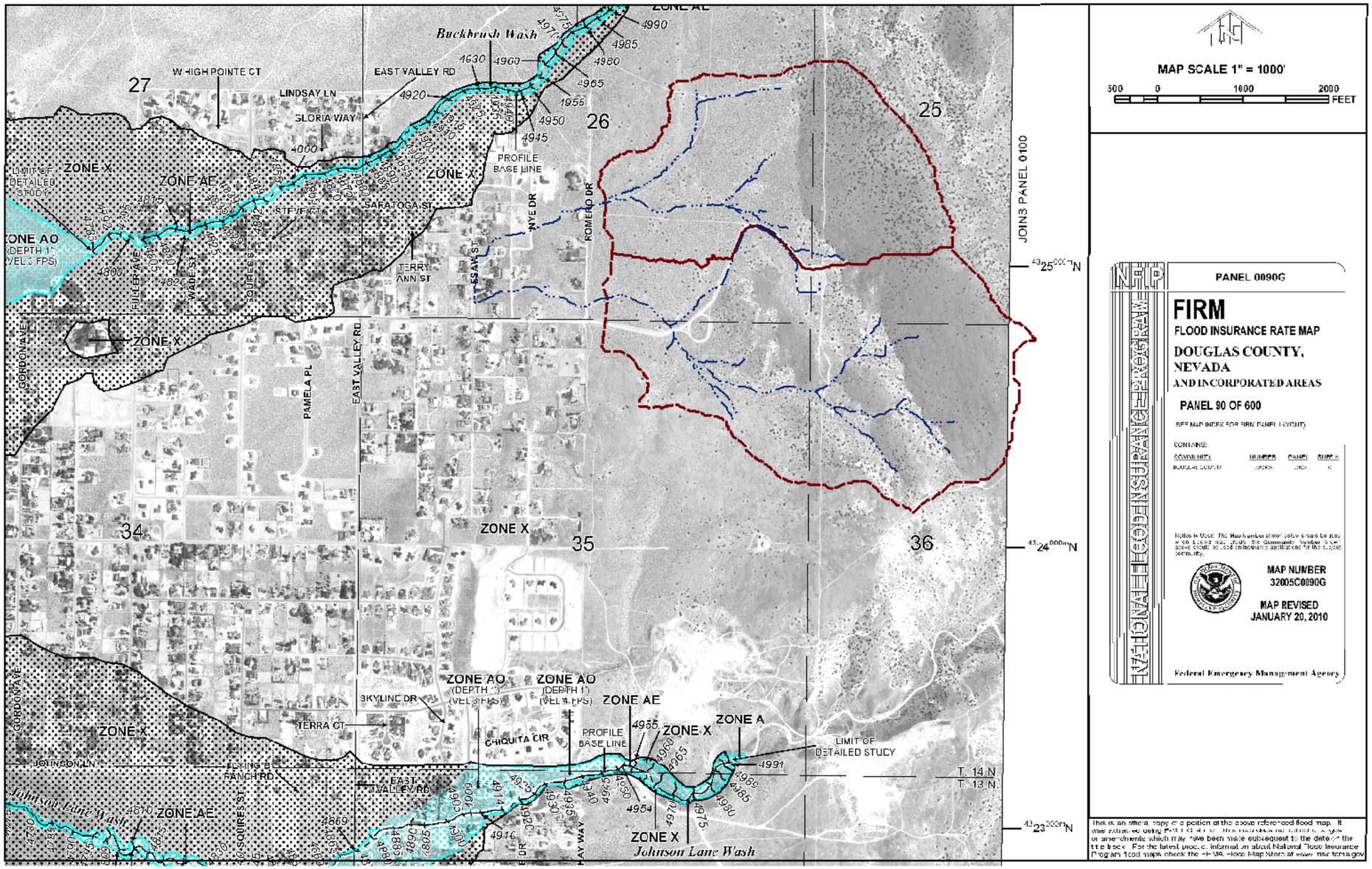
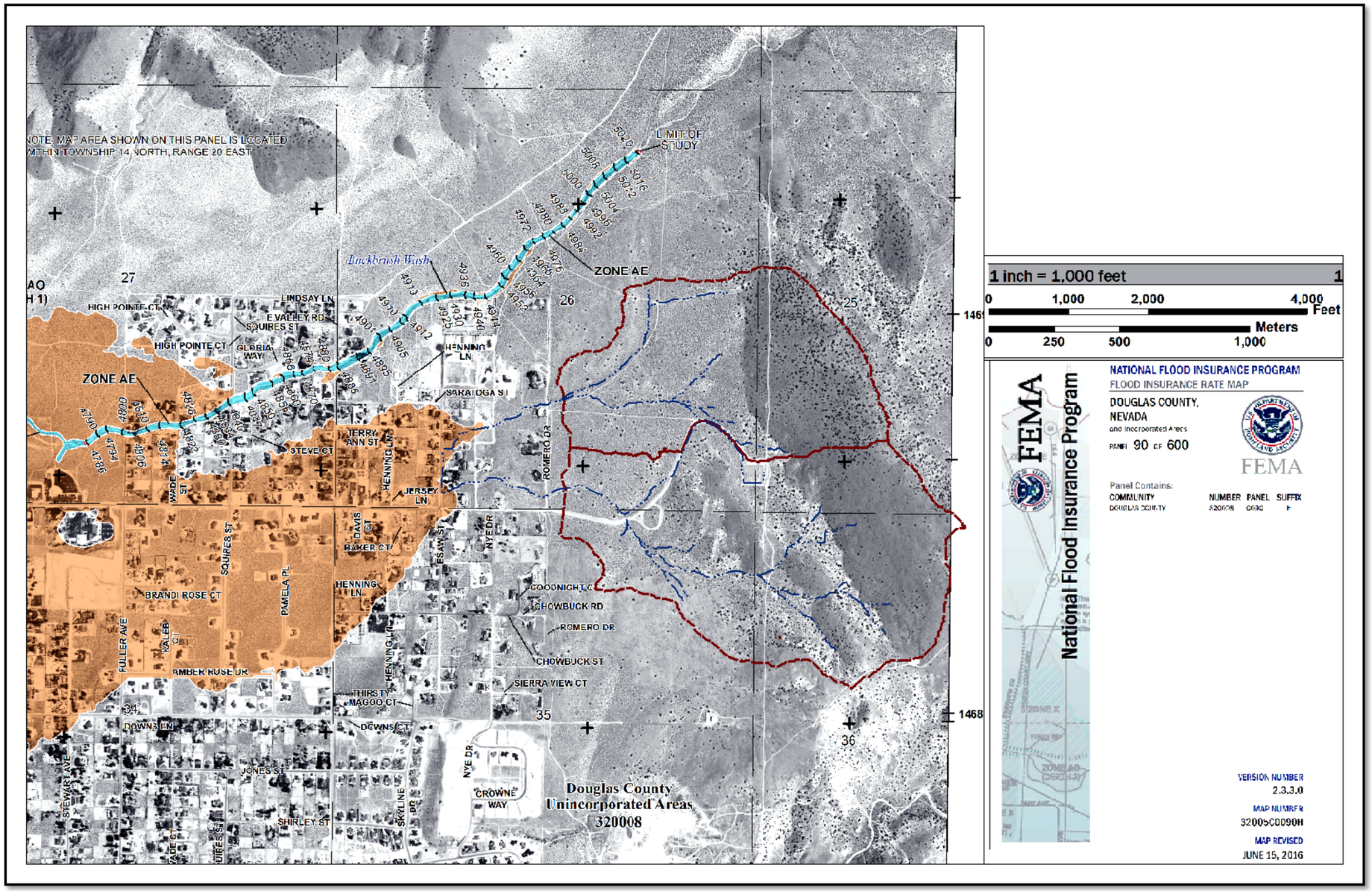


Figure 3 – Preliminary FEMA FIRM



2 Hydrologic Modeling

This section describes procedures and methodology used for the development of watershed model using the U.S. Army Corps of Engineers' (USACE) Hydrologic Engineering Center-Hydrologic Modeling System (HEC-HMS V 4.0) software. HEC-HMS is the next generation Windows version of the popular HEC-1 program, developed by the USACE. It is capable of modeling various catchments' components such as infiltration / evapotranspiration losses, runoff transformations, and a variety of open channel routing methods. HEC-HMS method provides both peak flow and the total volume of runoff and is appropriate method to use when modeling large watersheds that include large conveyance facilities and storage facilities. The following precipitation return interval events were used while preparing the hydrologic modeling.

- 50-percent annual chance of exceedance (2-year event)
- 10-percent annual chance of exceedance (10-year event)
- 4-percent annual chance of exceedance (25-year event)
- 1-percent annual chance of exceedance (100-year event)
- 0.2-percent-annual-chance of exceedance (500-year event)
- ½-Probable Maximum Precipitation (½-PMP)

2.1 HEC-HMS Model Setup

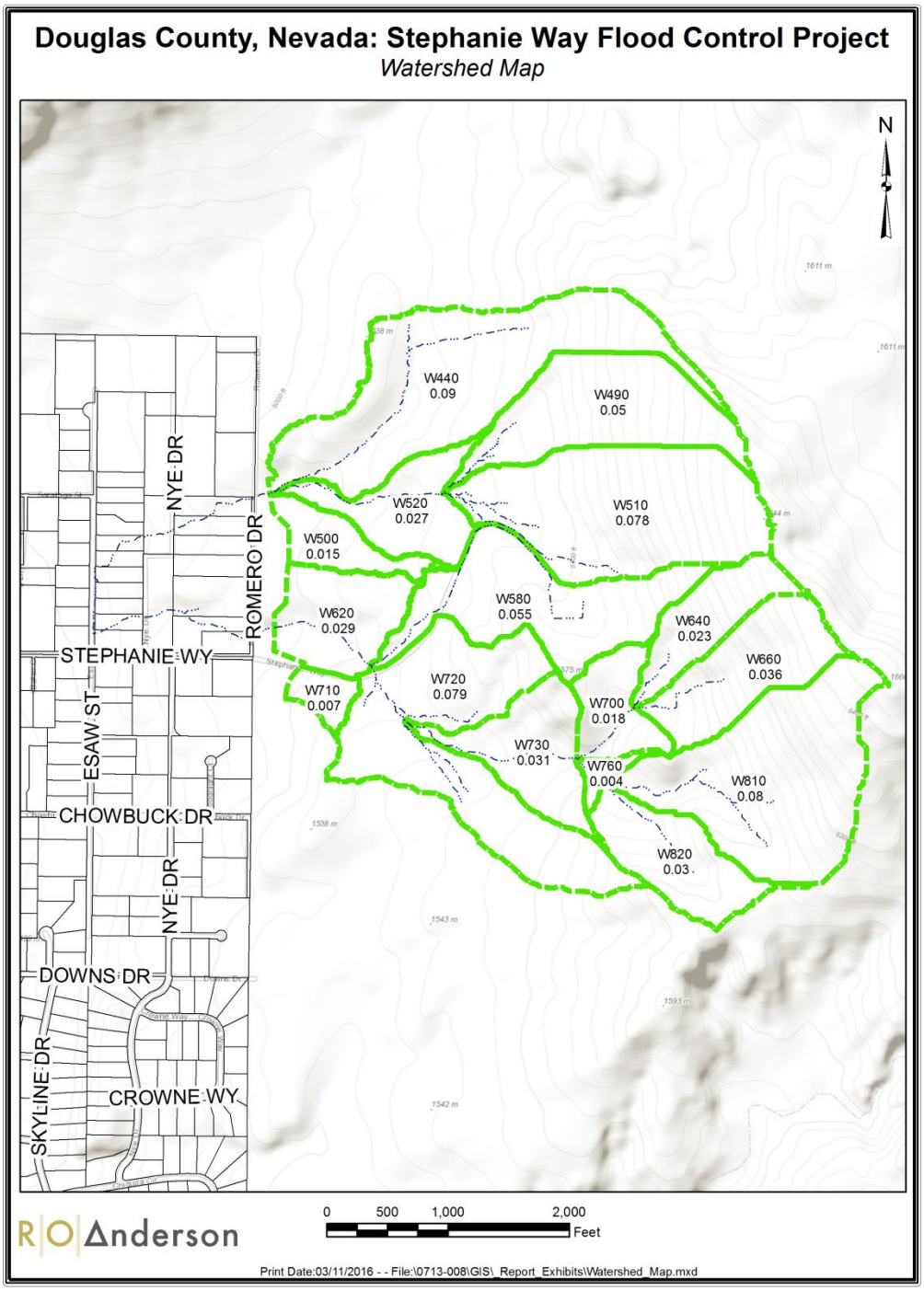
The first step in the development of a hydrologic model is to delineate the contributing watershed boundary. A DEM was created from the topographic data and HEC-GeoHMS tools were used in ESRI's ArcGIS environment to delineate contributing watershed. The total drainage area of the contributing watershed is approximately 0.65 square miles.

To perform detailed hydrologic analyses of the study area, the 0.65 square mile drainage area was subdivided into fifteen sub-basins based on distinct topographic characteristics. The runoff from these sub-basins is routed downstream, and the flow is added at the junction of sub-basins as shown in Figure 4 – Watershed Map.

Once the sub-basins were delineated, the next step in the development of the hydrologic model was to estimate the parameters used to build the components of the model. After

sub-basin delineation, ArcGIS and HEC-GeoHMS were used to develop modeling input parameters and develop the connectivity schematic for the HEC-HMS model.

Figure 4 – Watershed Map



A HEC-HMS hydrologic model consists of three basic components:

- *A Basin Model*, consisting of a physical representation of watersheds;
- *A Meteorologic Model*, consisting of precipitation, evapotranspiration, and snowmelt data; and
- *A Control Specification*, consisting of information such as hydrologic simulations time span.

2.1.A Basin Model:

In order to estimate excess runoff generated from any particular precipitation event the following input information is entered in the Basin Model of HEC-HMS:

- Loss Rate Parameters;
- Transformation Parameters;
- Base flow Parameters;
- Reach Parameters; and
- Reservoir Parameters, if detention/retention ponds are being modeled.

An assortment of different methods is available in HEC-HMS to physically represent these parameters. The following methodologies were used in developing the hydrologic model for the Stephanie Way watershed:

- Loss Rate: Green-Ampt Method;
- Transformation: Snyder Unit Hydrograph Method;
- Reach Routing: Muskingum-Cunge Method; and
- Reservoir Routing: Outflow Structures.

A detailed description of estimation methods to develop these model parameters are discussed in the subsequent sections of this report.

For this basin, base flow is assumed to be negligible and, therefore, not taken into account in developing these hydrologic models. The other model parameter estimation is described in the subsequent sections of this report.

2.1.A.1 Loss Rate Parameters

Watershed loss or abstraction is a term used to describe the collective precipitation losses throughout the watershed that occur during a storm. These losses play a significant role in rainfall-runoff modeling as they determine the amount of rainfall excess, or direct runoff, produced by the storm within the model. Typical losses abstracted from rainfall include:

- Soil infiltration;
- Landscape interception;
- Depression storage (aka: surface storage);
- Evaporation; and
- Evapotranspiration.

The rainfall volume attributable to these losses is not converted to direct runoff. For this study losses such as evaporation, landscape, interception and evapotranspiration by vegetation are considered minor and were not included.

Depression storage, or initial loss, in a sub-basin is the process by which precipitation is abstracted by being retained in puddles, ditches, interception, and other natural or artificial depressions on the land surface. The water either evaporates or eventually contributes to soil moisture by infiltration. Depression storage, in inches over the sub-basin area or computational cell, is subtracted from rainfall and reduces the contribution to runoff. Land use characteristics are used to help quantify estimates of depression storage.

Infiltration is the process by which precipitation is abstracted by seeping into the soil below the land surface. Soil infiltration was estimated using the Green-Ampt method. The Green - Ampt method applies Darcy's law and principle of conservation of mass to estimate infiltration. The method works under the assumption that water enters the soil as a sharp, vertical wetting front that travels as a function of the hydraulic conductivity.

The Green-Ampt infiltration function (in rate form) is

$$f = K_s\left(1 + \frac{\Psi\theta}{F}\right)$$

Where f is the infiltration rate (capacity, L/T), F is the cumulative infiltration (L), K_s is the saturated hydraulic conductivity (L/T), Ψ is the soil suction at the wetting front (L), and θ is the dimensionless soil moisture deficit of the soil at the beginning of the storm.

Parameters (K_s, Ψ, θ) were determined using the protocol defined by Maricopa County, Arizona (Engineering Division, Flood Control District of Maricopa County, 2010). The basic approach is to estimate a weighted saturated hydraulic conductivity by computing the area-weighted mean logarithm (equivalent to computing the area-weighted geometric mean) and then using that value to enter the table in the Maricopa County manual to choose the suction (Ψ) and soil moisture deficit (θ) parameters. Table 1 – Weighted-Average Green-Ampt Parameters below shows a summary of Green-Ampt parameters calculated for each sub-basin: Figure 5 – Soils Map shows NRCS soils overlaid on the sub watersheds of Stephanie Way watershed.

Table 1 – Weighted-Average Green-Ampt Parameters

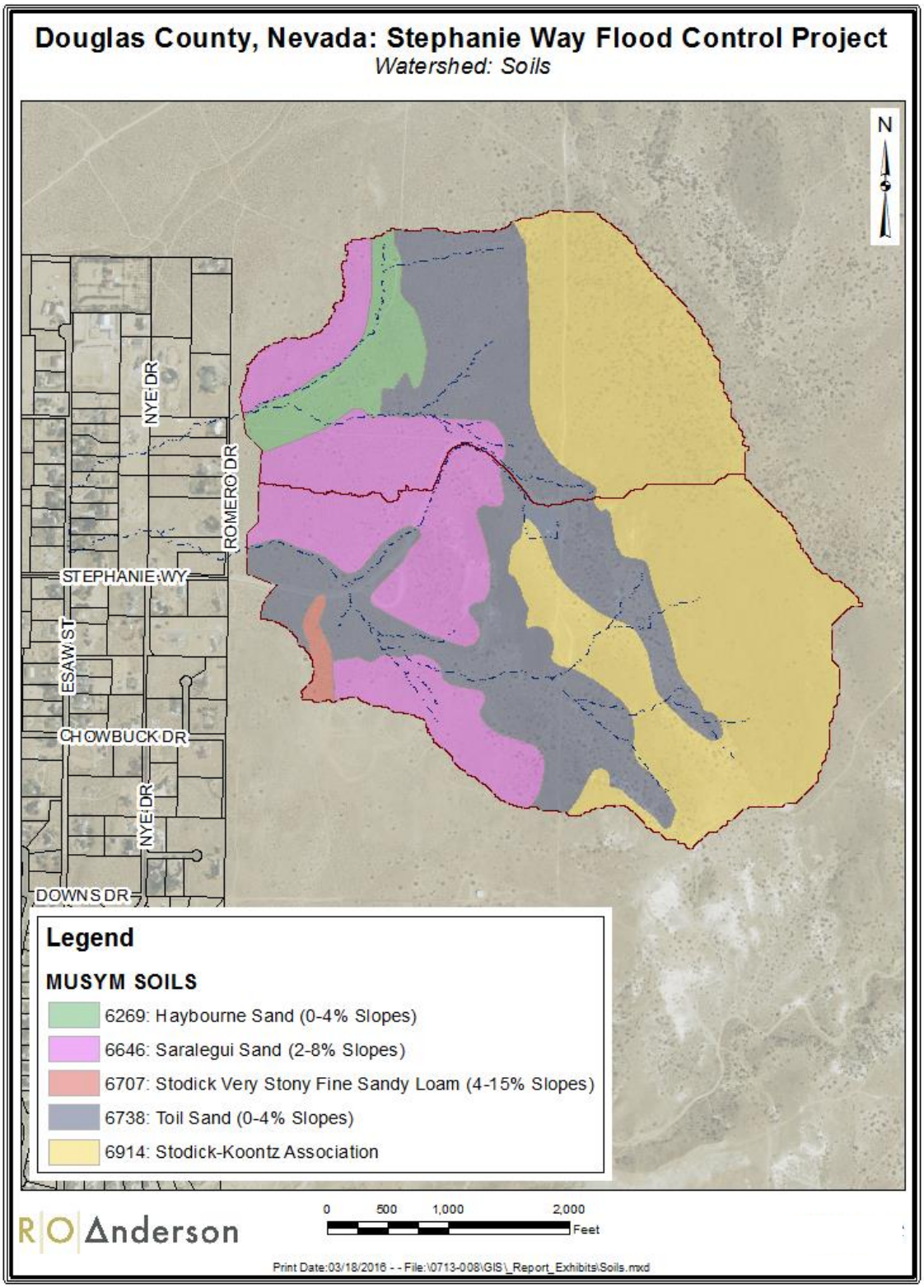
Subwatershed	K_s (in/hr)	Ψ (in)	θ[1]
W440	0.33	5.16	0.33
W490	0.15	7.43	0.28
W500	0.40	4.30	0.35
W510	0.16	7.30	0.28
W520	0.40	4.30	0.35
W580	0.32	5.32	0.33
W620	0.40	4.30	0.35
W640	0.12	7.80	0.27
W660	0.10	8.05	0.26
W700	0.16	7.31	0.28
W710	0.34	5.05	0.33
W720	0.37	4.63	0.34
W730	0.38	4.55	0.34
W760	0.34	5.09	0.33
W810	0.21	6.70	0.29
W820	0.21	6.70	0.29

[1]Dimensionless Parameter

2.1.A.2 Transformation Parameters

Rainfall transformation, as it relates to rainfall-runoff modeling, refers to the process of converting excess rainfall into storm-water runoff – typically in the form of a runoff hydrograph. HEC-HMS has a total of eight different transform methods available. The choices include various unit hydrograph methods, a kinematic wave implementation, and a linear quasi-distributed method. Out of all the available transformation methods within HEC-HMS, Snyder Unit Hydrograph (UH) method was selected to perform runoff transformation calculations. The Snyder UH method was selected because of its

Figure 5 – Soils Map



wide spread use in the mountainous watersheds, and the reliable input parameters available for this particular region. Other available rainfall transformation methods, such as the SCS UH and the Clark UH were considered but known limitations of each made the Snyder UH a better selection.

The Snyder UH method, as proposed by F.F. Snyder in 1938, was developed from studies of basins in the Appalachian Mountain region and uses a synthesized hydrograph approach derived from specific physical watershed measurements (Johnstone, 1949). The method calculates flow values using a Snyder lag time as presented in the following equations:

$$Q_p = \frac{640 C_p A}{L_g}$$

where

Q_p= peak runoff (cfs)

C_p= empirical storage or peaking coefficient,

A = watershed or sub-basin area (mi^2), and

L_g = standard Snyder basin lag time (hr).

and

$$L_g = C_t (L L_c)^{0.3}$$

where

C_t = empirical landform coefficient,

L = length of the watershed main stem from divide to outlet (mi), and

L_c = length along the main stem to a point nearest (perpendicular) to the watershed centroid (mi).

Snyder UH is based on five input parameters – three of which are directly measurable from the watershed. The two remaining parameters (C_p and C_t) are empirically based and usually subjectively derived. It is recommended that values for these two parameters be developed through model calibrations from gaged watersheds. Currently, the Stephanie Way watershed does not contain gages, therefore it was decided to use published values for these parameters, which is discussed later in this section.

Complications with using referenced sources of C_t parameter values have been reduced since the inception of the Snyder UH method. The method has been studied, modified, and regionalized by the USACE, US Bureau of Reclamation (USBR), and others. In 1944, the

Los Angeles District of the USACE introduced a modification to the original Snyder standard basin lag time by including the slope of the longest watercourse – a sixth physical watershed parameter (Cudworth, 1989). Subsequently, the USBR has studied, synthesized, calibrated, and further modified the Snyder standard lag time equation into the form used in this restudy, which is:

$$L_g = 26K_n\left(\frac{LL_c}{\sqrt{S}}\right)^{0.33}$$

where

K_n = an average Manning's *n* roughness coefficient for the principal watercourse of the watershed set to reflect hydraulic conditions during flood events and

S = overall or average slope of the longest watercourse of the watershed reflecting average conditions (ft/mi).

The primary modification in this form of the Snyder lag time equation is the conversion of the *Ct* parameter into the factor of 26 times average Manning's *n* roughness coefficient, K_n. Most hydrologic modelers have an intuitive or educated sense of appropriate Manning's *n* values – versus the subjective selection of the widely ranging C_t landform parameter.

Runoff using the Snyder UH method is estimated using the following parameters:

- Empirical storage or peaking coefficient, C_p
- Watershed or sub-basin area (mi^2), A
- Length of the watershed main stem from divide to outlet (mi), L
- Length along the main stem to a point nearest (perpendicular) to the watershed centroid (mi), L_c
- Average Manning's roughness coefficient for the principal watercourse of the watershed, K_n
- Average slope of the longest watercourse (ft/mi), S

Early studies developed from the use of the Snyder UH method produced a fairly narrow band of peaking coefficient, C_p, values, ranging from 0.4 to 0.8 (Bedient, 1992). For this study, peaking coefficients are set near the middle of the published range at 0.50. Watershed area, watercourse lengths and slopes were determined using ArcGIS tools. Table 2 – Snyder Unit Hydrograph Parameters lists estimated model parameters.

Table 2 – Snyder Unit Hydrograph Parameters

Subbasin	Area (sq. mi)	Length of Longest Water Course "L" (mile)	Length Along Longest Water Course Nearest to Centroid "L_c" (mile)	High Point (ft)	Low Point (ft)	Elevation Diff (ft)	Slope of Longest Water Course (ft/mile)	UH Peaking Coefficient (C_t)	Manning's n	USBR Method Lag Time (hrs)
W440	0.090	0.97	0.46	5,350.75	4,979.04	371.72	382.44	0.5	0.11	0.82
W490	0.050	0.60	0.38	5,342.35	5,041.62	300.73	498.89	0.5	0.11	0.63
W500	0.015	0.39	0.12	5,053.36	4,974.00	79.36	203.40	0.5	0.11	0.44
W510	0.078	0.62	0.41	5,393.75	5,041.58	352.17	568.58	0.5	0.11	0.64
W520	0.027	0.45	0.23	5,082.12	4,979.10	103.02	227.32	0.5	0.11	0.55
W580	0.055	0.89	0.50	5,341.46	5,003.48	337.98	381.23	0.5	0.11	0.82
W620	0.029	0.35	0.12	5,044.32	4,966.00	78.32	224.97	0.5	0.11	0.42
W640	0.023	0.41	0.20	5,407.91	5,115.20	292.71	721.15	0.5	0.11	0.42
W660	0.036	0.41	0.23	5,422.81	5,115.14	307.66	753.00	0.5	0.11	0.44
W700	0.018	0.29	0.12	5,170.87	5,080.12	90.76	308.28	0.5	0.11	0.37
W710	0.01	0.13	0.05	5,026.00	4,992.00	34.00	255.62	0.5	0.11	0.23
W720	0.079	0.65	0.23	5,194.21	5,003.49	190.73	291.32	0.5	0.11	0.60
W730	0.031	0.43	0.21	5,144.58	5,023.35	121.23	282.64	0.5	0.11	0.51
W760	0.004	0.17	0.06	5,167.29	5,080.12	87.17	526.81	0.5	0.11	0.22
W810	0.080	0.59	0.33	5,431.29	5,094.21	337.08	568.00	0.5	0.11	0.59
W820	0.030	0.42	0.19	5,235.78	5,093.92	141.86	337.00	0.5	0.11	0.47

2.1.A.3 Reach Parameters

A reach is an element of the watershed with one or more inflow and only one outflow. Inflow comes from other elements in the basin model. Outflow is computed using one of 7 different routing methods that simulate open channel flow. Given the predominantly natural terrain and limited land uses in the study area, the Muskingum-Cunge 8-point routing method was selected, and is appropriate. The Muskingum-Cunge routing method is a combination of the conservation of mass and the iterative diffusion of the conservation of momentum at every time step within the channel (USACE, 2009). The following parameters need to be estimated in order to use Muskingum-Cunge routing method:

- Channel length;
- Channel average slope;
- Manning's *n* roughness coefficient for the channel and overbank areas; and
- Eight-point cross-section of channel and effective overbank flow areas.

ArcGIS was utilized to determine average reach cross-sections, channel lengths, and average slopes for each of the reaches defined in the study area. It is important to note that for the Muskingum-Cunge method, the Manning's *n* values are selected to reflect average conditions throughout the entire routing reach. The Manning's *n* value of 0.037 was selected for the main channels and 0.07 was chosen for overbanks areas. A summary of the estimated Muskingum-Cunge parameters are shown in the Table 3 – Muskingum-Cunge Reach Parametets on the next page:

Table 3 – Muskingum-Cunge Reach Parametets

Reach	Length (ft)	Slope (ft/ft)	Mannig's n (Main Channel)	Mannig's n (Over Banks)
R130	1327.18	0.027	0.037	0.070
R140	1203.8	0.033	0.037	0.070
R150	126.5	0.046	0.037	0.070
R160	322.59	0.025	0.037	0.070
R180	158.18	0.040	0.037	0.070
R220	1570.5	0.040	0.037	0.070
R350	1650.8	0.035	0.037	0.070
R380	324.98	0.042	0.037	0.070
R410	710.37	0.049	0.037	0.070

2.1.A.4 Reservoir Parameters

A reservoir element is added to model storage and resulting attenuation of peak flood flows resulting from various precipitation events. A reservoir element in the HEC-HMS model can be used to model reservoirs, lakes, and ponds, and may have one or more inflow and one computed outflow. Inflow into the reservoir element comes from other elements in the basin model. If there is more than one inflow, all inflow is added together before computing the outflow. It is assumed that the water surface in the reservoir pool is level.

While a reservoir element conceptually represents a natural lake, or a lake behind a dam, as in this case, the actual storage simulation calculations are performed by a reservoir routing method. Four different reservoir routing methods are available in HEC-HMS, and Outflow Structures routing method was chosen for this study. Outflow Structures routing method is designed to model reservoirs with a number of uncontrolled outlet structures. For example, a reservoir may have a spillway and several low-level outlet pipes. Low-level outlet was modeled as a raised structure with an 18-inch RCP culvert that allows for partially full or submerged flow that takes both Inlet and Outlet control conditions into consideration. In addition, a 25-ft wide spillway was included to pass flood flows reaching the reservoir during the occurrence of more extreme events such as 0.2-percent annual chance (500-year) and ½-PMP events. The spillway was modeled as a broad-crested weir with a Discharge Coefficient of 3. The crest of the weir (spillway) was set such that it will only be used (discharge floodwaters) during 0.2-percent-annual-chance, and ½-PMP events. That is, the 1-percent annual chance of exceedance (100-year) event will be detained within the

reservoir with the water surface elevation in the reservoir below the crest of the emergency spillway.

Several methods are available for defining the storage properties of the reservoir. Elevation-Area method was used for this study to define the characteristics of the proposed reservoir. The Elevation-Area data was extracted from the topographic data using Autodesk Civil 3D and is graphically shown on Figure 6 – Reservoir Stage – Storage Volume Curve The HEC-HMS automatically transforms provided elevation-area into an elevation-storage curve using the conic formula, and will compute the elevation-area-storage characteristics for each time interval.

In order for HEC-HMS to start reservoir transformation computations, initial conditions must be specified. Out of the two choices HEC-HMS provides to set initial condition, the pool elevation method was chosen, and the bottom of the proposed reservoir was used as the initial pool elevation. Tailwater was assumed to have no effect on the reservoir flow, and was, therefore, ignored. The following table summarizes low-level outlet and spillway characteristics considered:

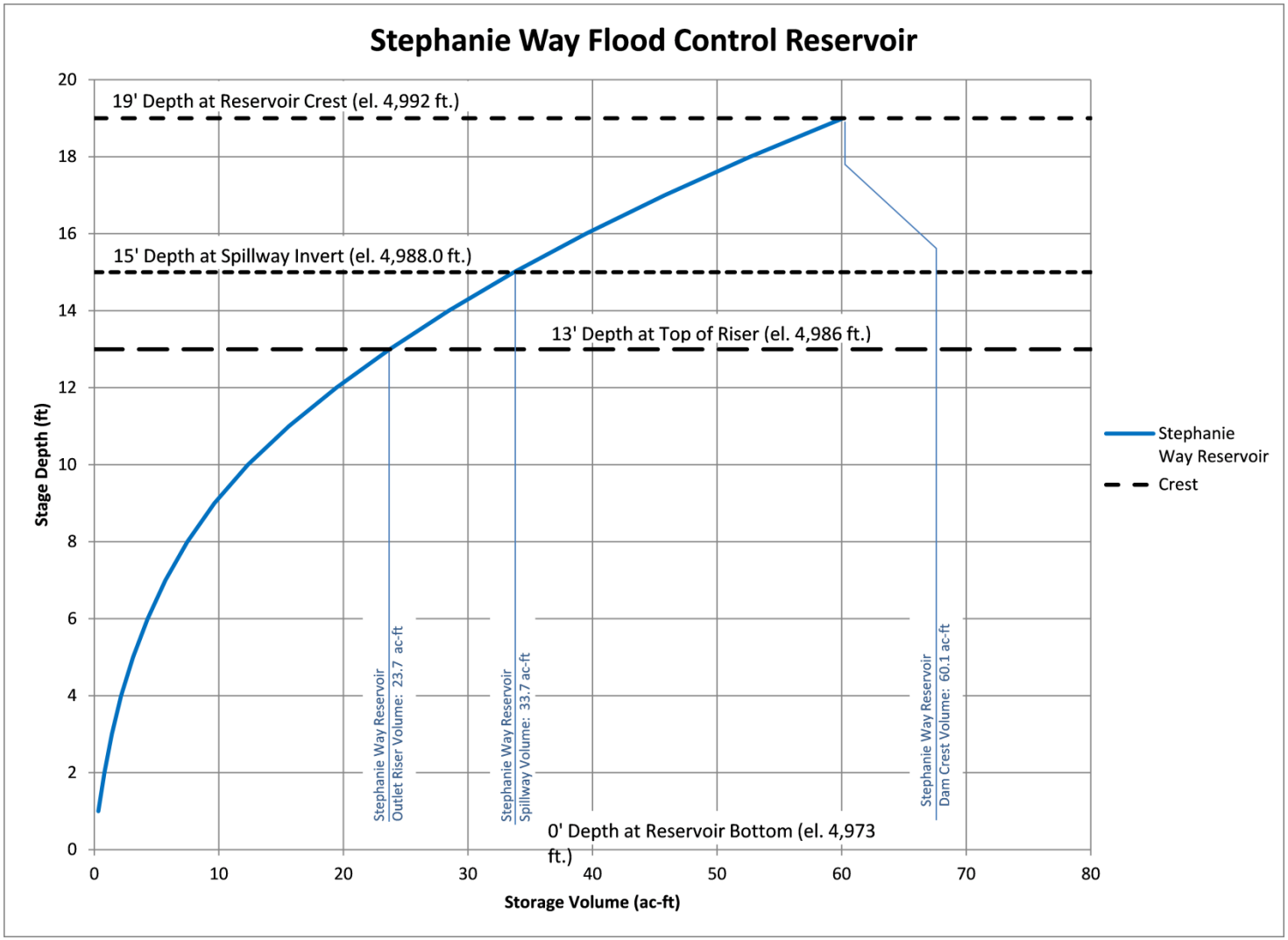
Table 4 – Low-Level Outlet and Spillway Details

Reservoir Outlet Works - Units: feet	
Riser Structure (Circular)	3
Top of Riser	4,986
Orifices (2EA)	0.5
Primary Outlet IE_{IN}	4,973
Primary Outlet IE_{OUT}	4,971
Primary Outlet Size	1.5
Emergency Spillway Crest	4,988.0
Emergency Spillway Width	25
Top of Dam	4,992
Height of Dam	19

2.1.B Meteorologic Model:

In the Meteorologic Model, only the information pertaining to precipitation is entered. Out of several possible methods available to enter precipitation data, Frequency Storm Method was selected for use in developing the Meteorologic Model. A total of six meteorologic models were built to represent 50-, 10-, 4-, 1-, 0.2-percent annual chance precipitation events and ½ PMP precipitation events. Appendix 2 includes a summary table for the original NOAA Atlas 14 rainfall depths.

Figure 6 – Reservoir Stage – Storage Volume Curve



The rainfall depths for the Probable Maximum Precipitation (PMP) were estimated using the protocol presented in Hydrometeorological Report 49 (U.S. Department of Commerce, 1984). The PMP calculations are presented in Table 5 – PMP Calculations and graphically depicted on Figure 7 – General Storm PMP Plot.

2.1.C Control Specifications:

Control specifications are one of the main components of the model, even though they do not contain much parameter data. Control specifications will govern the model simulation time, or the duration of the runoff. The duration of the simulation is defined by the starting date, starting time, ending date, and the ending time in the control specifications. The control specifications are selected so that it exceeds the duration of the rainfall specified in the meteorologic model.

2.2 Hydrologic Modeling Results

The HEC-HMS hydrologic model was used to determine storm-water hydrographs and peak flow rates for the 50-, 10-, 4-, 1-, 0.2-percent-annual-chance, and ½-PMP events under existing land use and watershed conditions for the entire study area. The model is based on the input parameters and modeling methodologies as described in detail in the previous sections of the report. Table 6 summarizes peak flow rates, and associate runoff volume for each rainfall event considered in this study for each sub-basin, including junctions, reaches of the model. Table 7 lists peak storage, peak elevation, along with the available freeboard in the proposed reservoir for each rainfall event modeled. HEC-HMS has limited reservoir routing functionality and does not allow direct modeling of a raiser structure with orifice openings. HydroCAD program has this functionality readily available, and therefore, was used to perform reservoir routing calculations. Detailed printouts of the Hydrologic Modeling results for each storm event are included in Appendix 2.

Table 5 – PMP Calculations

Table 6.1. General -Storm PMP Computations for the Colorado River and Great Basin.

Drainage: Unnamed (Stephanie Way) — Area: 0.67 Sq. Miles

Latitude: 39.04310 — Longitude: -119.69803 of Basin Center

Month: October

Step				Duration (hrs) 6	12	18	24	48	72	
A	Convergence PMP									
	1. Drainage average value (from one of the figures 2.5 to 2.16)	9.2	Inch							
	2. Reduction for barrier elevation (fig. 2.18)	50	%							
	3. Barrier elevation reduced PMP	4.6	Inch							
	4. Durational Variation (Figs. 2.25 to 2.27 & Table 2.7)			62	82	93	100	119	129	%
	5. Convergence PMP for indicated durations (Steps 3X4)			2.9	3.8	4.3	4.6	5.5	5.9	Inch
	6. Incremental 10 mi^2 PMP (Successive subtraction in step 5)			2.9	0.9	0.5	0.3	0.9	0.4	Inch
	7. Areal reduction (Select from figs 2.28 and 2.29)			100	100	100	100	100	100	%
	8. Areally reduced PMP (Step 6 X Step 7)			2.9	0.9	0.5	0.3	0.9	0.4	Inch
	9. Drainage average PMP (accumulated values of step 8)			2.9	3.8	4.3	4.6	5.5	5.9	Inch
B	Orographic PMP									
	1. Drainage average orographic index (from figure 3.11 a to d)	4	Inch							
	2. Areal reduction (figure 3.20)	100	%							
	3. Adjustment for month (one of figs 3.12 to 3.17)	105	%							
	4. Areally and seasonally adjusted PMP (Steps 1 X 2 X 3)	4.2	Inch							
	5. Durational variation (Table 3.9)			30	57	80	100	157	185	%
	6. Orographic PMP for given durations (Steps 4 X 5)			1.3	2.4	3.4	4.2	6.6	7.8	Inch
C.	Total PMP									
	1. Add Steps A9 and B6			4.2	6.2	7.7	8.8	12.1	13.7	Inch
	2. PMP for other durations from smooth curve fitted to plot of computed data									
	3. Comparison with local-storm PMP (see sec 6.3)									

Reference:
Hydrometeorological Report No. 49 - Probable Maximum Precipitation Estimates, Colorado River and Great Basin Drainages, Reprinted 1984
U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Army Corps of Engineers

Figure 7 – General Storm PMP Plot

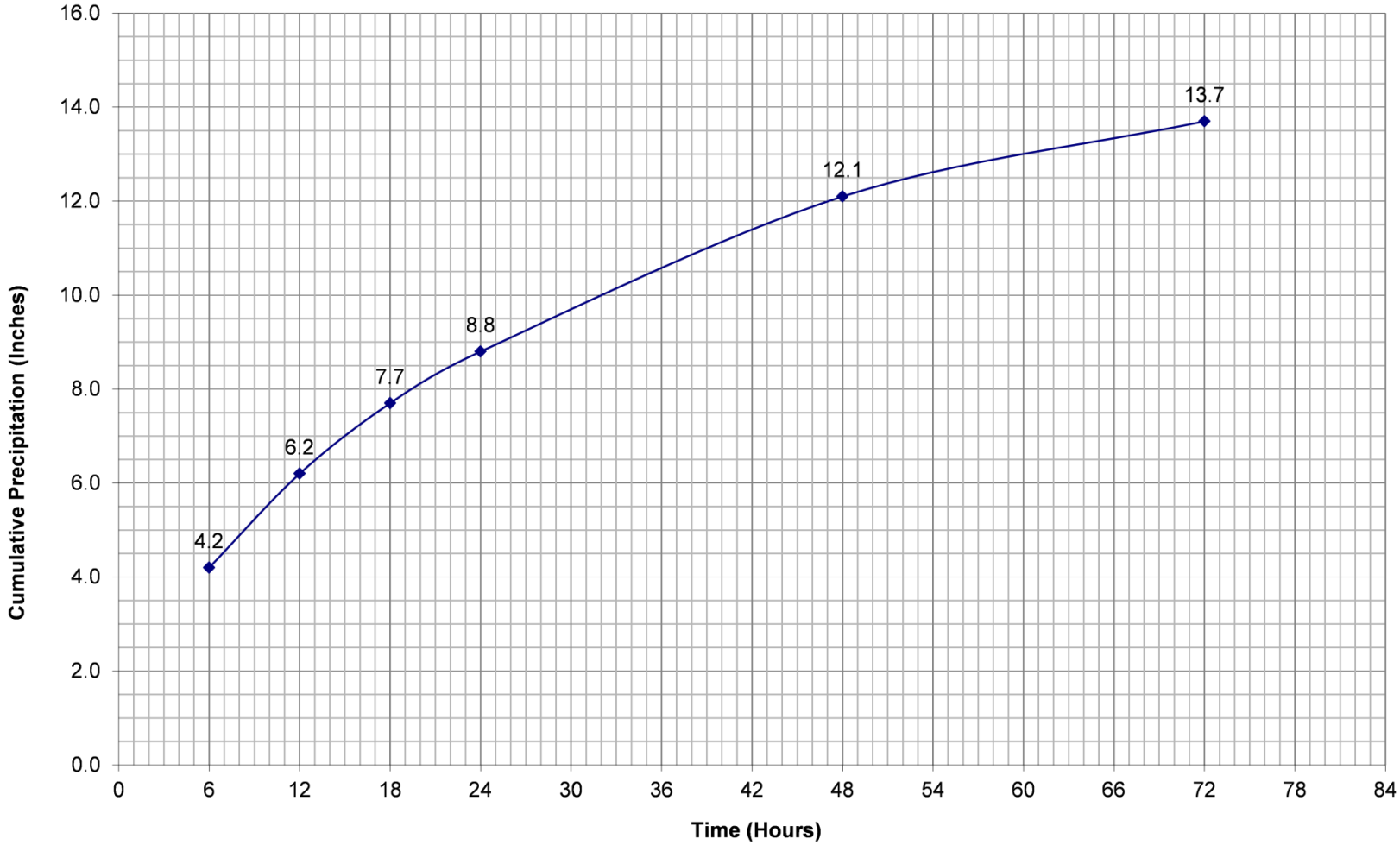


Table 6 – Summary of Hydrologic Modeling Results

		50-percent annual chance		10-percent annual chance		4-percent annual chance		1-percent annual chance		0.2-percent annual chance		Half PMP	
Hydrologic Element	Drainage Area (Sq. miles)	Peak Discharge (cfs)	Volume (Acre-feet)	Peak Discharge (cfs)	Volume (Acre-feet)	Peak Discharge (cfs)	Volume (Acre-feet)	Peak Discharge (cfs)	Volume (Acre-feet)	Peak Discharge (cfs)	Volume (Acre-feet)	Peak Discharge (cfs)	Volume (Acre-feet)
W440	0.090	1.3	0.1	6.1	0.6	10.2	1.1	12.2	1.6	23.8	3.3	26.5	3.6
W490	0.050	3.2	0.3	15.0	1.6	25.3	2.7	22.1	2.2	43.4	4.5	48.6	5.0
W500	0.021	0.0	0.0	1.3	0.1	2.7	0.2	9.9	0.9	19.4	1.7	21.8	1.9
W510	0.078	3.3	0.3	15.1	1.6	25.4	2.7	2.5	0.1	4.7	0.2	5.3	0.2
W520	0.027	2.0	0.2	9.0	1.0	15.3	1.6	10.6	0.7	18.4	1.4	20.3	1.5
W580	0.055	0.2	0.0	3.1	0.4	6.0	0.8	20.3	1.7	33.9	2.9	37.1	3.4
W620	0.035	0.0	0.0	2.6	0.2	5.2	0.4	13.0	1.0	22.0	1.8	24.1	2.0
J164	0.059	3.2	0.2	12.1	0.9	19.1	1.5	33.2	2.7	55.9	4.7	61.2	5.4
R410	0.059	3.2	0.2	12.0	0.9	18.9	1.5	32.9	2.7	55.4	4.7	60.6	5.4
W640	0.023	1.2	0.1	4.6	0.3	7.4	0.5	28.4	2.9	52.4	5.5	57.7	6.0
W660	0.036	2.1	0.2	7.5	0.6	11.8	0.9	13.0	1.1	23.6	2.1	26.1	2.3
J135	0.110	2.2	0.2	12.4	1.2	21.3	2.0	40.9	3.9	75.0	7.6	82.6	8.3
R380	0.110	2.2	0.2	12.4	1.2	21.1	2.0	40.7	3.9	74.6	7.6	82.2	8.3
J138	0.191	5.9	0.5	27.3	2.3	45.1	3.9	82.9	7.5	146.9	13.8	161.1	15.4
R350	0.191	5.9	0.5	27.2	2.3	45.0	3.9	82.9	7.5	146.8	13.8	161.0	15.4
J144	0.222	5.9	0.5	29.6	2.5	49.7	4.3	92.8	8.4	166.3	15.6	182.8	17.3
R180	0.222	5.9	0.5	29.5	2.5	49.5	4.3	92.6	8.4	165.9	15.6	182.5	17.3
J178	0.222	5.9	0.5	29.5	2.5	49.5	4.3	92.6	8.4	165.9	15.6	182.5	17.3
R160	0.222	5.8	0.5	29.2	2.5	49.0	4.3	91.8	8.4	164.9	15.6	181.5	17.3
J176	0.222	5.8	0.5	29.2	2.5	49.0	4.3	91.8	8.4	164.9	15.6	181.5	17.3
R150	0.222	5.8	0.5	29.2	2.5	48.9	4.3	91.4	8.4	164.4	15.6	180.9	17.3
J141	0.356	6.0	0.5	37.3	3.5	64.9	6.2	124.4	12.2	228.5	23.3	251.5	25.9
R140	0.356	6.0	0.5	36.8	3.5	64.4	6.2	123.8	12.2	227.7	23.3	251.1	25.9
W700	0.018	0.8	0.0	3.5	0.2	5.8	0.4	28.3	3.1	50.6	5.8	55.3	6.4
W710	0.008	0.3	0.0	1.6	0.1	2.6	0.2	18.7	2.0	33.1	3.7	36.2	4.2
W720	0.079	0.1	0.0	5.3	0.5	10.6	1.1	47.0	5.2	83.7	9.5	91.5	10.5
W730	0.031	0.0	0.0	2.4	0.2	4.8	0.4	46.8	5.2	83.3	9.5	90.9	10.5
J152	0.128	0.3	0.0	4.9	0.7	9.6	1.3	19.6	2.7	38.5	5.3	42.8	5.9
R220	0.128	0.0	0.0	1.9	0.2	3.9	0.4	8.1	0.8	16.0	1.5	17.9	1.7
J149	0.246	3.5	0.4	21.4	2.4	37.9	4.4	73.0	8.6	135.0	16.3	148.4	18.1
R130	0.246	3.5	0.4	21.3	2.4	37.8	4.4	72.7	8.6	134.1	16.3	147.8	18.1
W760	0.004	0.0	0.0	0.7	0.0	1.3	0.1	10.9	0.8	21.4	1.6	24.1	1.8
W810	0.080	1.5	0.1	8.7	0.8	14.8	1.5	5.6	0.4	11.0	0.9	12.3	1.0
W820	0.030	0.7	0.1	4.0	0.3	6.8	0.5	4.7	0.3	8.2	0.6	9.0	0.7
CP	0.658	9.4	0.9	60.6	6.3	107.3	11.3	207.5	22.4	385.7	42.7	424.2	47.4
Reservoir	0.658	0.0	0.0	0.0	0.0	0.2	0.1	11.0	8.0	41.1	22.0	67.9	26.4

Table 7 – Reservoir Summary

Hydrologic Event	Peak Inflow (cfs)	Peak Discharge (cfs)	Inflow Volume (Acre-Feet)	Discharge Volume (Acre-Feet)	Peak Storage (Acre-Feet)	Peak Elevation (Feet)	Freeboard (feet)
50-percent annual chance	9.4	-	0.9	-	0.9	4,975.2	**16.8**
10-percent annual chance	60.6	-	6.3	-	6.3	4,980.3	**11.7**
4-percent annual chance	107.3	0.2	11.3	0.1	11.3	4,982.6	**9.4**
1-percent annual chance	207.5	11.0	22.4	8.0	19.9	4,985.1	6.9
0.2-percent annual chance	385.7	41.1	42.7	22.0	35.4	4,988.3	3.7
Half PMP	424.2	67.9	47.4	26.4	37.6	4,988.7	3.3

3 Hydraulic Analysis

Two major natural drainage channels traverse through this neighborhood and carry flood flows generated from the upstream watershed. These natural channels are stony, contain considerable amount of weeds with longitudinal slopes ranging from 2 percent to 4 percent along the reach. These channels abruptly end at Esaw Street resulting in heavy sediment build up along Esaw Street and further results in flood waters being dispersed haphazardly.

The proposed flood control dam will detain and attenuate flood flows reducing flows in these natural drainage channels. The outflow from the flood control structure will be discharged into the existing culvert under Romero Drive, just north of Stephanie Way, and ultimately follow the natural drainage course. The other existing natural drainage channel to the north will not receive any flood flows from the upstream watershed with the exception of minor flows generated from the areas lying between the proposed flood control structure and Romero Drive.

In order to analyze the capacity of existing drainage channels and compare anticipated flow depths in the current and proposed conditions (flood-control structure in place), channel cross sections data was obtained at three random locations along the reach of the southern natural drainage way between Romero Drive and Esaw Street. The cross section locations and plot of cross sections data is shown on Figure 8 – Cross Section Map. The extracted channel cross section data and the corresponding channel slope information was then used to perform hydraulic analysis for current and proposed (flood-control structure in place) conditions.

Manning's Roughness Coefficient (Manning's n) is used to calculate energy losses due to channel and overbank characteristics, such as surface roughness, vegetation, channel irregularities, and channel alignment. When corresponding discharge data and water level data are available, Manning's n is calibrated (adjusted) to match observed data. The corresponding data were not available for the study reach; therefore, the Manning's n was estimated from standard engineering references and previous modeling experience. Standard references include Chow (1959) and Barnes (1967). Manning's coefficient of 0.05 was selected that represents natural channels with stones and weeds.

A set of seven hydraulic calculations were performed to represent following conditions:

Current Conditions

- Peak flow resulting from 50-percent annual chance (2-year) storm event (6 cfs)
- Peak flow resulting from 10-percent annual chance (10-year) storm event (40 cfs)
- Peak flow resulting from 4-percent annual chance (25-year) storm event (71 cfs)
- Peak flow resulting from 1-percent annual chance (100-year) storm event (136 cfs)
- Peak flow resulting from 0.2-percent annual chance (500-year) storm event (252 cfs)

Proposed Conditions (Flood-control structure in place)

- Allowed outflow from the proposed flood control reservoir during 1-percent annual chance flood (11 cfs)
- Allowed outflow from the proposed flood control reservoir during 0.2-percent-annual-chance flood (41 cfs)

3.1 Hydraulic Analyses Results

After all the required data were entered in Bentley's FlowMaster software program, Manning's Formula was used to solve for normal depth for a given discharge, and channel slope. The following observations were made after analyzing the hydraulic calculations results:

- During 50-, 10-, and 4-percent annual chance events (2-year, 10-year, and 25-year) flood flows will be completely detained in the flood control reservoir. In comparison, without the proposed flood control structure, estimated flow depths, ranging from 0.4 to 1.9 feet, will occur in the natural drainage channels.
- During the occurrence of 1-percent annual chance event (100-year), the proposed flood control facility limits the outflow from the reservoir to approximately 11 cfs. This outflow is contained within the existing channel and depth of flow from 0.5 to 0.9 feet. In comparison, without the proposed flood control structure an estimated peak flow of 136 cfs will flow through this natural channel with estimated flow depths ranging from 1.7 to 2.6 feet.
- During the occurrence of 0.2-percent annual chance event (500-year), the proposed flood control facility would limit the outflow from the reservoir to approximately 41 cfs. The resulting flow is entirely contained within the channel with estimated flood flow

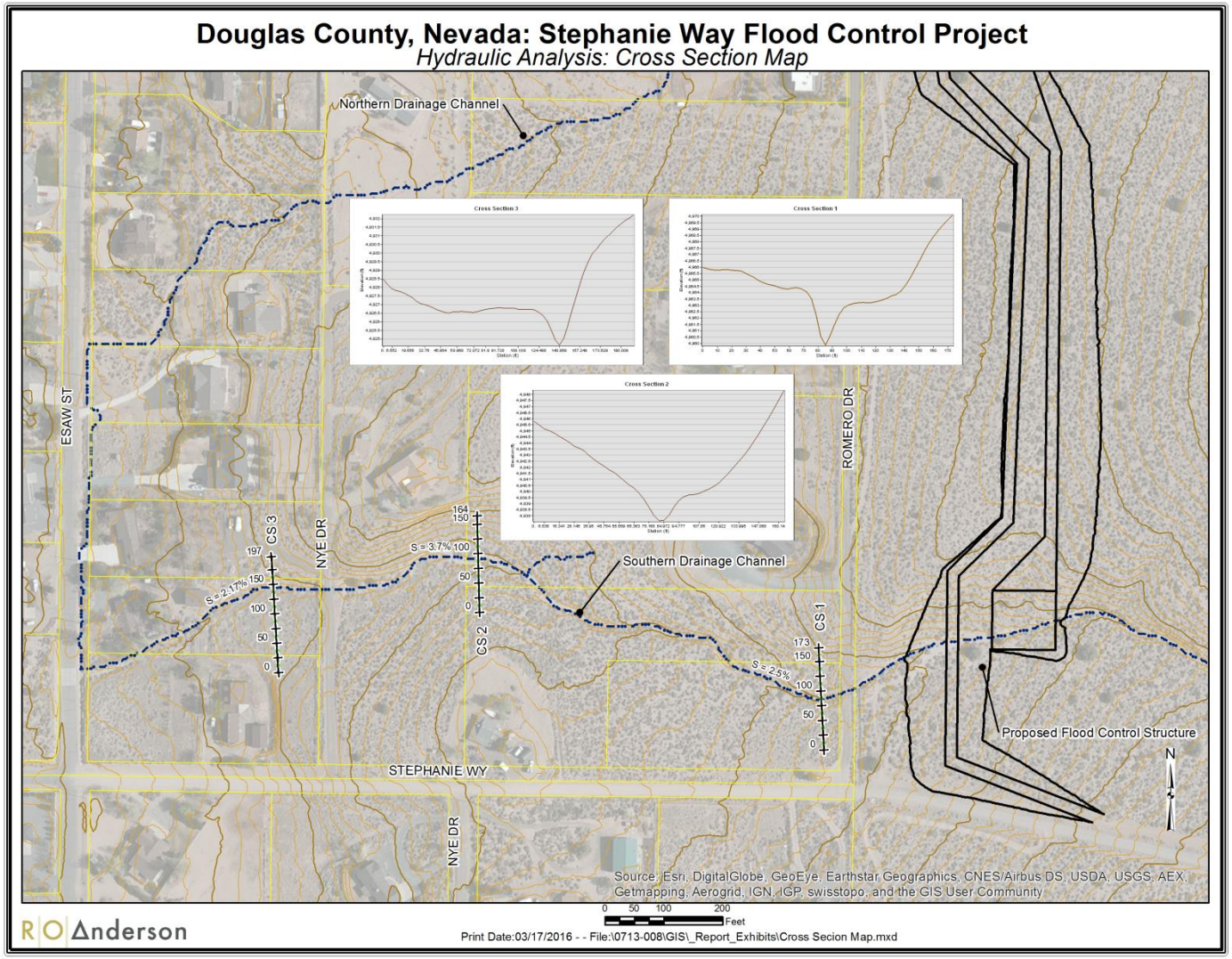
depths ranging from 1 to 1.5 feet. In comparison, without the proposed flood control structure an estimated peak flow of 250 cfs will flow through this natural channel with estimated flood flow depths ranging as high as 2.4 feet to 3.6 feet.

Table 8 – Summary of Hydraulic Analyses Results contains condensed results of hydraulic analyses. Detailed results, including cross section plots are provided in Appendix 3.

Table 8 – Summary of Hydraulic Analyses Results

Storm Event (Year)	Cross Section	Slope (ft/ft)	Current Conditions			Proposed Conditions		
			Peak Flow (cfs)	Normal Depth (ft)	Velocity (ft/sec)	Peak Flow (cfs)	Normal Depth (ft)	Velocity
500	1	0.025	252	3.6	4.81	41	1.5	4.19
	2	0.037	252	2.4	5.82	41	1.0	4.21
	3	0.022	252	2.5	3.21	41	1.3	3.51
100	1	0.025	136	2.6	5.64	11	0.9	2.88
	2	0.037	136	1.7	5.72	11	0.5	2.85
	3	0.022	136	2.3	2.59	11	0.7	2.46
25	1	0.025	71	1.9	4.83	-	-	-
	2	0.037	71	1.3	4.87	-	-	-
	3	0.022	71	1.6	3.96	-	-	-
10	1	0.025	40	1.5	4.16	-	-	-
	2	0.037	40	1.0	4.18	-	-	-
	3	0.022	40	1.3	3.48	-	-	-
2	1	0.025	6	0.7	2.39	-	-	-
	2	0.037	6	0.4	2.36	-	-	-
	3	0.022	6	0.6	2.07	-	-	-

Figure 8 – Cross Section Map



4 Basis of Design, Flood Control Reservoir Layout and Engineer's Estimate of Probable Costs

4.1 Basis of Design

Given the lack of storm water conveyance infrastructure along the Stephanie Way right-of-way, it was determined that the proposed flood control structure should be designed to limit the outflow from the structure to no more than that of 10-year peak flow in current conditions. In addition, representatives of Nevada Division of Water Resources, Bureau of Dam Safety were contacted to confirm the Design Inflow event to safely mitigate and control flood discharges from this watershed. From those discussions, the proposed structure will likely be characterized as a High Hazard Dam. The Design Inflow criteria will, therefore, be the ½-Probable Maximum Precipitation (PMP) event. That is, the proposed dam and its spillway must be sized to safely pass the ½-Probable Maximum Flood (PMF) through the proposed spillway with approximately three feet of freeboard before overtopping the dam structure.

The outlet works and the dam were, therefore, sized to completely detain the inflow from more frequent storm up to 4-percent annual chance (25-year) events. During the occurrence of 1-percent-annual chance (100-year) storm event, a maximum of 11 cfs will be released through the primary outlet structure with water surface elevation in the reservoir well below the crest of the emergency spillway. During the occurrence of 0.2-percent annual chance (500-year) event and ½ PMP events, outflow from the flood control structure will be 41 cfs and 67 cfs, respectively with sufficient freeboard to the top of the dam. The outlet works consists of a low-level outlet with an 18-inch Reinforced Concrete Pipe (RCP) connected to a riser structure. The riser assembly consists of two 12-inch orifice opening on a 3-ft diameter and 13-ft tall concrete structure with aluminum grate on top. During final design, the capacity of the outlet structure and discharge pipe can be reviewed more fully to determine if additional restriction of the outlet discharge is needed.

4.2 Flood Control Reservoir

In order to attenuate peak flood flows and protect the downstream properties in the subdivision, a flood control reservoir was proposed to be constructed east of Romero Drive.

ROA personnel performed site reconnaissance surveys and identified potential location of the proposed flood control reservoir that will have least impact on the existing infrastructure such as access roads, underground and overhead utilities. The identified location was on property managed by the United State Department of the Interior, Bureau of Land Management (BLM). The plausibility of using the identified site for this purpose should be confirmed with representatives of BLM before proceeding with the design of the proposed flood control reservoir. Furthermore, archaeological / paleontological investigation maybe necessary to confirm that there are no cultural resources in this area.

During this feasibility engineering study, the hydrologic modeling of Stephanie Way watershed was undertaken to obtain reasonable estimates of peak flood flows and associated flood volumes for 50-, 10-, 4-, 1-, 0.2-percent annual chance, and ½-PMP storm events. Reservoir stage-area curves were developed using available topographic data to define the reservoirs in HEC-HMS model, and the model was run with the reservoir in place. The modeling results suggested that the proposed reservoir configuration and location is desirable and feasible, primarily because of the available storage area, and reduced cut / fill (earthwork) volumes.

After the reservoir site was selected, HEC-HMS model was further refined by adding detailed information such as low-level outlet works, and spillway information. Detailed discussion of model parameter estimation and the results are presented in Section 2 – Hydrologic Modeling.

The proposed location of the flood control reservoir was compared to the locations of USGS- documented earthquake faults (Quaternary Faults) and is included as Figure 9 – USGS Quaternary Fault Map. It should be noted that there are moderately constrained faults within the reservoir pool area, but no identified faults exists within the limits of the proposed footprints of the flood control structure.

Conceptual layout of the proposed flood control reservoir along with the cross section is displayed on Figure 10 –Reservoir Site Plan. The proposed layout of the flood control structure provides 28.1 acre-feet of storage below the spillway elevation and a dam crest height of 4,992 feet, which is about 19 feet above the channel elevation of the site of the proposed dam.

Figure 9 – USGS Quaternary Fault Map

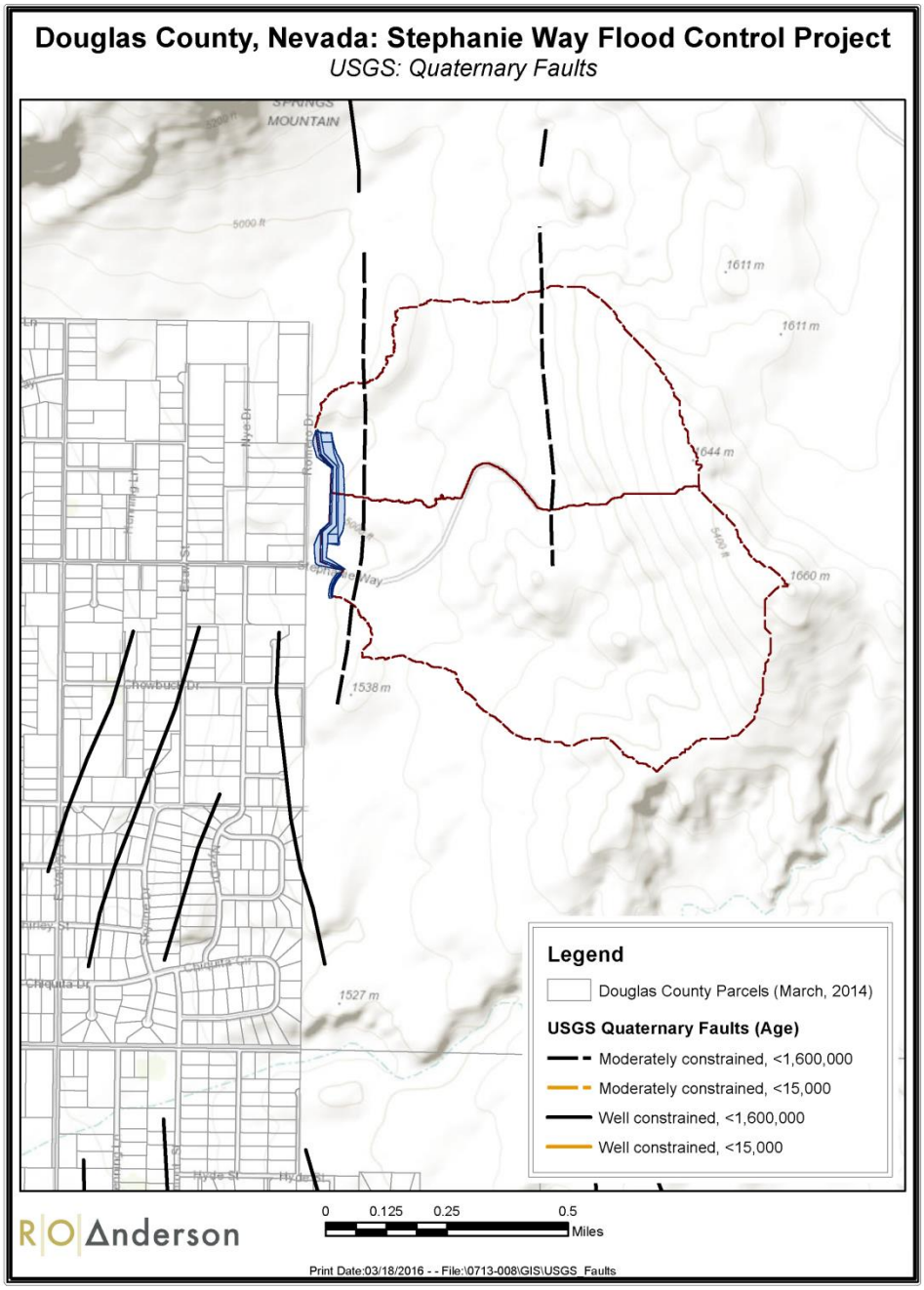
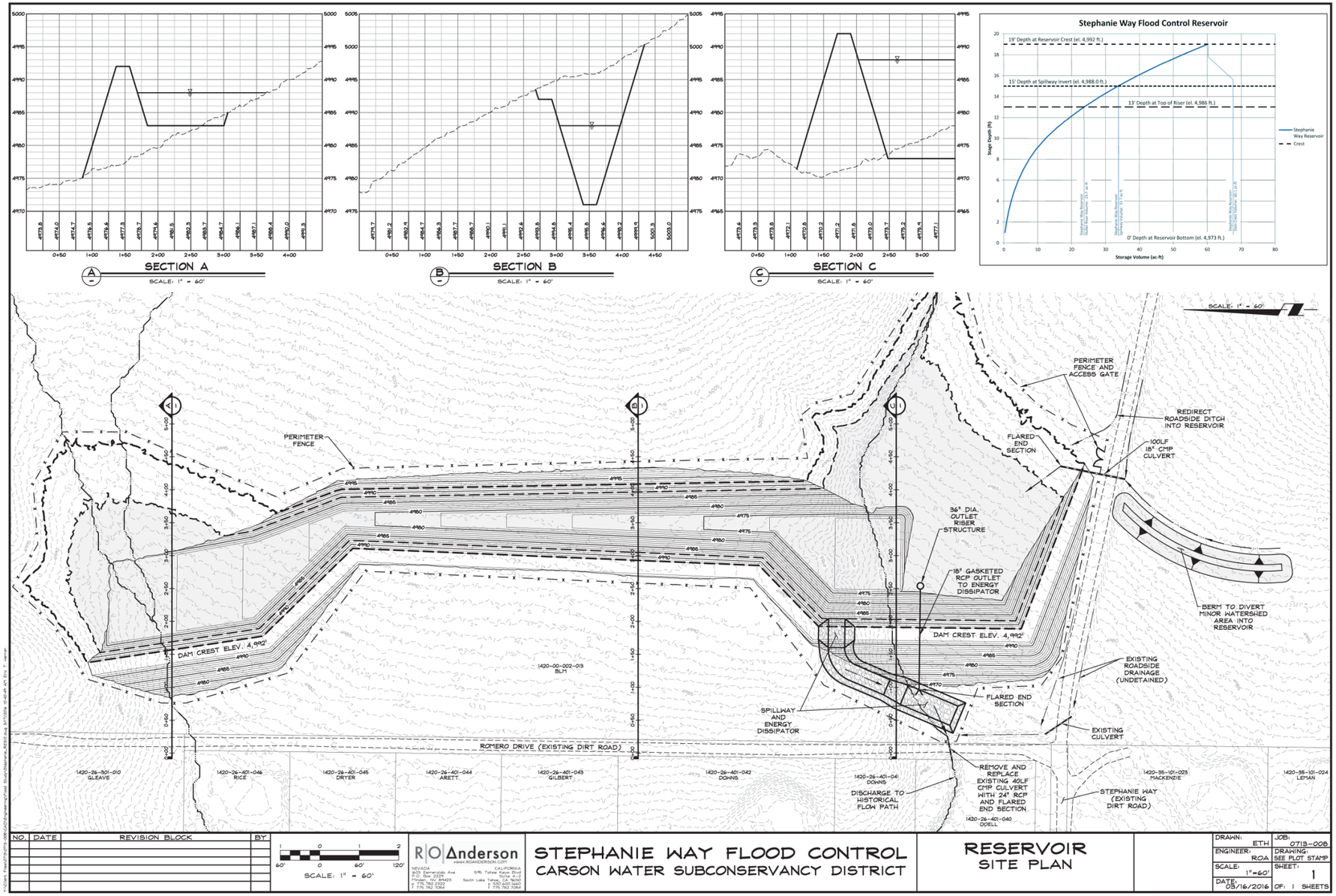


Figure 10 –Reservoir Site Plan



4.3 Engineer's Preliminary Estimate of Probable Cost and Benefit Cost Analyses

Using the schematic design, as shown in Figure 10, an Engineer's Preliminary Estimate of Probable Costs has been developed. The estimates for constructing proposed flood control structure are provided in Table 9 on the following page. The preliminary estimate of probable costs for constructing the proposed flood control structure is estimated to be about $1,337,600. This amount includes: an allowance ($119,700) for construction contingencies at 15% of the estimated probable construction costs; an allowance ($55,000) for land acquisition costs through BLM; an allowance ($185,000) for engineering design and permitting; and, an allowance ($125,000) for construction phase services.

The Stephanie Way Flood Control facility, if constructed will significantly reduce flood induced damages to the residential structures and public infrastructure in this neighborhood, and may be eligible for FEMA's Hazard Mitigation Grant Program. For eligible projects, this program currently provides a 75% grant to complete the design, permitting and construction of proposed flood control facilities. Presuming Douglas County is determined to pursue and was successful in obtaining such a grant, the project cost distribution would be:

- Total Estimated Project Cost: $1,337,600
- Federal HMG Funds (75)%) $1,003,200
- Required Local Match $334,400

Several potential sources for deriving the required local match have been identified including:

- Formation of a Flood Control District specific to Stephanie Way pursuant to NRS 543.170-543.830.
- Formation of a local Assessment District of the benefitted properties.
- A combination of funding from the County and the members of local assessment district.

There may be other grant opportunities available (CDBG, etc.) to assist in achieving the required local match for this project. These opportunities should be researched and considered as the project progresses in to the design and construction phases.

A preliminary BCA was performed using FEMA BCA Version 5.2.1 tool. This tool is a key mechanism for evaluating Hazard Mitigation Grant applications and determining whether mitigation projects are eligible for Federal funding. To be eligible for Federal funding assistance, a BCA should show that the proposed project have a BCA ratio greater than 1.0, and prove that that the proposed project will reduce future damages and losses from natural disasters, such as flooding. FEMA considers reduction in losses or prevention of future damages as benefits of the proposed project, and these benefits should be quantified and at a minimum should outweigh the cost of the proposed project.

Primary input data required for performing BCA is probable construction cost estimate for the proposed flood mitigation project, which was obtained from the engineer's probable cost estimate. The other major element of BCA is quantification of estimated benefits realized from the construction of the proposed flood control reservoir project. The estimated benefits resulting from the implementation of the project can be derived from a variety of sources, such as collection, compilation of documentation of costs associated with expected damage to the structures; loss of use of utilities; loss of roadways and other public infrastructures; and costs incurred by public agencies for debris clean up, and necessary repairs to infrastructure as a direct result of flood damage. Unfortunately, this data is not readily available from the County at this time. Therefore, for the purposes of calculating preliminary BCA, ROA personnel made some simplified assumptions to estimate potential benefits of the project. Examples of some of the simplified assumptions used include cost of cleaning up debris, and sediment buildup, replacement costs of infrastructure such as culverts, roadway, etc. These simplified assumptions are appropriate for use with preliminary estimate of BCA for conceptual level studies. Using this data, FEMA BCA tool was operated and BCA was estimated to be 1.90.

Table 9 – Engineer's Preliminary Estimate of Probable Cost

ENGINEER'S PRELIMINARY ESTIMATE OF PROBABLE COSTS

R|O|Anderson

Client:	**CWSD**	**Estimated:**	**ROA**
Project:	**Stephanie Way Regional Flood Control Basin, 33.7 acre-feet**	**Checked:**	
Description:	**Preliminary Estimate of Probable Costs**	**Date:**	**17-Mar-16**
File:	\\1fileprint\clients\Client Files\0713\0713-008\Documents\Cost Estimate\[03_2016 Cost Estimate Worksheet - Stephanie Way.xlsx]Cost Analysis		

DIVISION 1 - GENERAL REQUIREMENTS

ITEM	DESCRIPTION	QUANTITY		UNIT COST		TOTAL
1	Mobilization, Demobilization, BMPs (15% of construction costs)	1	Lump Sum	$0.00	/LS	$104,100
					SUB TOTAL	**$104,100**

DIVISION 2 - SITE CONSTRUCTION

ITEM	DESCRIPTION	QUANTITY		UNIT COST		TOTAL
1	Clear & Grub	11	Acres	$5,500.00	/Acre	$60,500
2	On-site Earthwork	50,500	Cubic Yards	$5.50	/CYDS	$277,800
3	Rip-Rap - Dam Face	1,536	Cubic Yards	$30.00	/CYDS	$46,100
4	Roller Compacted Concrete - Spillway	2,060	Sq. Feet	$20.00	/SF	$41,200
5	Rip-Rap - Spillway Channel	346	Cubic Yards	$30.00	/CYDS	$10,400
6	Rip-Rap - Energy Dissipation Basin	278	Cubic Yards	$31.00	/CYDS	$8,600
7	Revegetate Disturbed Areas	11	Acres	$2,200.00	/Acre	$24,200
8	Site Fencing & Access Gate	4,640	Lineal Feet	$25.00	/LF	$116,000
9	18" CMP Culvert	100	Lineal Feet	$50.00	/LF	$5,000
10	18" CMP Flared End Section	1	Each	$200.00	/EA	$200
13	Construction Water	1	Lump Sum	$50,000.00	/LS	$50,000
					SUB TOTAL	**$640,000**

DIVISION 3 - CONCRETE

ITEM	DESCRIPTION	QUANTITY		UNIT COST		TOTAL
1	Outlet (36" Dia. 13' Tall Riser with (2) 12" Dia. Orifices)	1	Lump Sum	$5,000.00	/LS	$5,000
2	18" RCP, Gasketed	150	Lineal Feet	$150.00	/LF	$22,500
3	18" RCP Flared End Section	1	Each	$1,500.00	/EA	$1,500
4	24" RCP Culvert	40	Lineal Feet	$200.00	/LF	$8,000
5	24" RCP Flared End Section	1	Each	$1,750.00	/EA	$1,800
					SUB TOTAL	**$38,800**

DIVISION 17 - CONTROLS

ITEM	DESCRIPTION	QUANTITY		UNIT COST		TOTAL
1	Water Level Transducer + SCADA Package	1	Lump Sum	$15,000.00	/LS	$15,000
					SUB TOTAL	**$15,000**

CONSTRUCTION SUB TOTAL	**$797,900**
CONTINGENCY AT 15% OF CONSTRUCTION[1]	**$119,700**
Land Acquisition, BLM Permitting + NEPA	**$55,000**
Engineering Design & Geotechnical Investigation	**$185,000**
Permitting - Dam Safety + Douglas County + NDEP Air Quality + CLOMR/LOMR	**$55,000**
Construction Phase Services including Construction Staking	**$125,000**
ENGINEERS PRELIMINARY ESTIMATE OF PROBABLE PROJECT COSTS (EXCL. FINANCING)	**$1,337,600**

5 Findings and Conclusions

The contributing watershed of the project area is a relatively small, unmapped watershed situated between Buckbrush Wash and Johnson Lane Wash in Carson Valley. Even though the most recent FIRM issued by the FEMA does not identify the project area being in the Special Flood Hazard Areas (SFHA), this neighborhood has experienced repetitive flooding and heavy sediment deposition in the past. For example, floods of 2014 and 2015 resulted in considerable damages to the residential properties and public infrastructure in this area. This study was undertaken to explore the feasibility of constructing a flood control structure on BLM property east of Romero Drive to alleviate flood-induced recurring damages in this neighborhood. The following is the summary of findings and conclusions from this feasibility-level study:

- The effective FIS did not include detailed study of the project area and, therefore, does not contain estimated peak flows from typical storm events. However, as mentioned above, this neighborhood has experienced repetitive flooding in the past, and, therefore, it is appropriate and prudent to evaluate the hydrology of this watershed and estimate runoff peak flows and volumes for various precipitation events.
- The hydrologic study performed by ROA personnel and presented in this report used current NOAA precipitation data, and used Green-Ampt loss rate method that is proven to provide reasonable estimate of runoff peak and volume. The hydrologic modeling estimated runoff peak flows and volumes resulting from six hypothetical precipitation events, namely 50-,10-, 4-, 1-, 0.2-percent annual chance, and ½ PMP storm events.
- General PMP rainfall depths were computed using HMR-49 guidelines, and the resulting rainfall data was used to construct a hyetograph that was applied uniformly over the entire watershed. The resulting hydrograph at the most downstream end of the watershed was taken and the ordinates of this flood hydrograph were divided in half to obtain ½-PMF. The resulting ½-PMF was routed through the proposed flood control reservoir.
- While preparing this feasibility analysis, Nevada Division of Water Resources, Bureau of Dam Safety was contacted to confirm the Design Inflow event that the proposed structure will be required to be designed to safely pass. From those

discussions, the proposed structure will likely be characterized as a High Hazard Dam. The Design Inflow criteria will therefore be the ½-PMP event. That is, the proposed dam and its appurtenances must be sized to pass the ½-PMF through the proposed spillway with approximately three feet of freeboard before overtopping.

- After reviewing the estimated peak flood flows from 1-, 0.2-percent, and ½-PMF events, two alternate flood control basin configurations were considered, and a feasibility analysis was performed, which culminated in the selection of a preferred alternative that avoids conflicts with the existing overhead and underground utilizes located along the dirt access road to the power substation.
- The flood flows from a relatively small watershed south of the dirt access road to the power substation will be detained by constructing a 5-ft high berm and conveyed into the proposed flood control reservoir by an 18-inch CMP crossing.
- The embankment of the preferred alternative flood control structure is about 19 feet above natural grade with a normal storage capacity of 28.1 acre-feet, and a storage capacity of 61.3 acre-feet at dam crest.
- The proposed flood control structure outlet works consists of a 3-ft diameter concrete riser structure that is 13-ft tall with two 12-inch orifice openings, an aluminum grate on top and an18-inch RCP outlet pipe connected to the riser structure. The emergency spillway consists of a 25-ft wide Roller Compacted Concrete (RCC) structure discharging into a riprap energy dissipator.
- The primary and emergency outlet works were sized such that flood flows resulting from precipitation events up to 4-percent annual chance (25-year) storm events are completely detained and, during the 1-percent annual chance flood, the outflow discharge is limited to release just 11 cfs through the primary outlet. During 0.2-percent annual-chance flood and ½-PMF events, the emergency spillway was sized to safely convey incoming flood flows with sufficient freeboard and some attenuation.
- The existing 24-inch CMP culvert under Romero Drive, just north of Stephanie Way will be replaced with a 24-inch RCP with flared end sections. The outflow from the proposed flood control structure will be routed to the new 24-inch RCP culvert and perpetuated in the existing natural channel and follows the historic flow path.
- Hydraulic calculations of receiving downstream natural drainage channel below the proposed flood control facility were performed using Manning's Formula. A set of seven hydraulic calculations were performed that represent discharges from the

current and proposed (flood-control structure in place) conditions and compared the resulting flood depths within the channel for current and proposed conditions. It was observed that the flood control structure drastically reduces peak flows resulting in reduced flow depth in the existing natural channel. This ultimately translates to reduced sediment loading, deposition and more manageable storm water flows in the natural channels.

- Constructing a flood control basin east of Romero Drive on BLM property with an estimated cost of $1.3 million dollars results in direct and substantial benefit to the residents in this area. The project provides additional indirect benefits to the residents of Douglas County by reducing potential damage to public infrastructure such as roads and drainage structures in this area.
- The Engineer's Preliminary Estimate of Probable Costs for preferred alternative is $1,337,600, which amount includes allowances for construction contingencies, land acquisition, engineering design, permitting and construction phase services.
- The Stephanie Way Flood Control project may be eligible for FEMA's Hazard Mitigation Grant Program that currently provides 75% grants for qualified projects.
- If successful in obtaining a Hazard Mitigation Grant for this project, the required local match to complete improvements is estimated to be $334,400.
- Preliminary BCA shows a BCA of 1.90 for the proposed improvements.
- The proposed location of the flood control structure footprint and the extents of reservoir area were compared to the locations of USGS- documented earthquake faults (Quaternary Faults). There are no identified active faults within the foot prints of the proposed structure.
- From these investigations, we conclude that the project is eminently feasible and worthy of pursuing further.

6 References

Bedient, P.B., and Huber, W.C. (1992). *Hydrology and Floodplain Analysis* (2nd ed.). Massachusetts: Addison-Wesley Publishing Company.

Cudworth, Arthur G. Jr. (1989). *Flood Hydrology Manual - A Water Resource Technical Publication*. United States Department of the Interior, Bureau of Reclamation. Denver, CO.

ESRI. (2015). *ArcMap* 10.2.2 (ArcGIS). [computer software]. Environmental Systems Research Institute, Redlands, CA.

Federal Emergency Management Agency [FEMA]. (2015) Benefit Cost Analysis Tool 5.2.1 [computer software]

Federal Emergency Management Agency [FEMA]. (2009). *Guidelines and Specifications for Flood Mapping Partners.* Washington, D.C.

Federal Emergency Management Agency [FEMA]. (2010). *Digital Flood Insurance Rate Maps for Douglas County and Incorporated Areas.* Revised January 20, 2010.

Federal Emergency Management Agency [FEMA]. (2010). *Flood Insurance Study – Douglas County, Nevada and Incorporated Areas*. FIS Study Number 32005CV000A Revised January 10, 2010.

Maricopa County Flood Control District [MCFCD]. (2009). *Drainage Design Manual for Maricopa County, Arizona* (4th Ed.), Phoenix, AZ.

National Oceanic and Atmospheric Administration's [NOAA] Atlas 14. Retrieved from the Hydrometeorological Design Studies Center - Precipitation Frequency Data Server located at: http://hdsc.nws.noaa.gov/hdsc/pfds/. NOAA Atlas 14 Volume 1, Version 5.0

Natural Resources Conservation Service [NRCS]. (2015). *Soil Survey Geographic (SSURGO) Database for Douglas County Area, Nevada.* Washington, D.C.: Author

Natural Resources Conservation Service [NRCS]. (2015). *Soil Data Mart – SSURGO Metadata*. Retrieved from: http://sdmdataaccess.nrcs.usda.gov/

USACE Hydraulic Engineering Center. (2013). *Hydraulic Modeling System HEC-HMS – Version 4.0*. [computer software]. Davis, CA.: Author

USACE Hydraulic Engineering Center. (2010). *Hydrologic Modeling System HEC-HMS – User's Manual – Version 3.5*. Retrieved from http://www.hec.usace.army.mil/software/hec-hms/documentation/HEC-HMS_Users_Manual_3.5.pdf

U.S. Department of Commerce, National Oceanic and Atmospheric Administration, U.S. Department of Army Corps Of Engineers (1984). *Hydrometeorological report No. 49 – Probable Maximum Precipitation Estimates, Colorado River and Great Basin Discharges*

U.S. Geological Survey [USGS]. URL:http://earthquake.usgs.gov/hazards/qfaults/

7 Appendices

Appendix 1: March 9, 2016 Site Reconnaissance Pictures

Appendix 2: Hydrologic Modeling Results

Appendix 3: Hydraulic Analyses Results

AGENDA ITEM #23

CARSON WATER SUBCONSERVANCY DISTRICT

TO: BOARD OF DIRECTORS

FROM: EDWIN D. JAMES

DATE: JUNE 15, 2016

SUBJECT: Agenda Item #23 - Discussion for possible action regarding an update on the June 7-8, 2016, "Get on the Bus" Watershed Tour

DISCUSSION: On June 7 and 8, CWSD held its annual Get on the Bus tour. Over 40 people participated, and we had over 20 different speakers. Attached for your information is the schedule. Staff will briefly go over the highlights of the tour.

STAFF RECOMMENDATION: Received and file.

Much appreciation to our speakers!
Without your voice,
the 2016 "Get on the Bus" tour
would not be possible!

Special thanks to our lunch and snack sponsors:

HDR

Cardno
Shaping the Future

Michael Baker
INTERNATIONAL

VIDLER
Water. Quality. Life.

"Get on the Bus" Tour is Supported by:

Carson River Coalition
Working together for the Carson River Watershed

NEVADA DIVISION OF
ENVIRONMENTAL PROTECTION

Nevada Department of Education

CEUs Credit Provided By

Carson Water Subconservancy District

APA NV

This is an American Planning Association Nevada Chapter Sponsored event

Find out about other watershed events at www.cwsd.org

Like the Carson River Watershed on Facebook!

Carson Water Subconservancy District Presents:

The "Get on the Bus" Tour

June 7-8, 2016

The Carson River Watershed:

A Lifeline Connecting

Our Communities

Upper Watershed Tour Itinerary

Tuesday, June 7, 2016	
8:30am	* **Bus departs Carson City Smith's: Welcome & overview of day: Brenda Hunt and Shane Fryer, CWSD**
8:30-12:00pm Site Visits: Centerville, Hangmans Bridge, Hope Valley & STPUD C-Line	* Carson River Watershed Overview Video & Non-Point Source Pollution: Brenda Hunt, CWSD * Carson Valley Groundwater and Upper Watershed Geology: Dave Berger, USGS * Washington Fire, Native Trout, Frogs and toads: Sally Champion USFS; Ben Ewing CDFW; Rachel Van Horne USFS * East Carson Restoration and Recreation: Sarah Green, Alpine Watershed Group; Dan Morris, USFS; Debbi Waldear, Friends of Hope Valley * C-Line Wastewater Project: Jim Hilton, STPUD
12:00-1:30pm Site Visit: Dangberg- Home Ranch	* Leviathan Mine Video * **Lunch** * Dangberg Home Ranch Historic Park: Mark Jensen, Curator * Dangberg Proposed Conservation Easement/Douglas County Lands Bill: Dominique & Jacques Etchegoyhen, Legacy Land & Water llc. * Washoe Tribe Projects: Norman Harry, Washoe Tribe * Dangberg Home Ranch Property Tour
1:30-2:45pm Site Visit: River Fk. Ranch	* Watershed-Literacy Update: Brenda Hunt, Shane Fryer CWSD * River Projects: Craig Burnside, Carson Valley Conservation District * River Fork Ranch Overview: Duane Petite, The Nature Conservancy * Ranching in the Carson Valley: Matt McKinney, Bently Ranch * Floodplain Protection: Steve Lewis, Univ. of Nevada Cooperative Extension
2:45-4:30pm Site Visit: Eagle RDG. Hwy. 50	* Carson Valley Trails Association: CTVA * Floodplain Mapping and Modeling: Debbie Neddenriep, CWSD * Clear Creek Erosion Control Project: Karin West and Jason Prock, NDOT * Clear Creek Water quality Monitoring: Jena Huntington, USGS * **Return to Carson City and next day overview**

Lower Watershed Tour Itinerary

Wednesday, June 8, 2016	
8:30am	* **Bus departs Carson City Smith's: Welcome & overview of day: Ed James and Brenda Hunt, CWSD**
8:30-9:10am Site Visit: Carson River Park	* Carson City Open Space Management: Ann Bollinger & Rich Wilkinson, Carson City Open Space
9:10 –10:10am Site Visit: Rolling A Ranch	* Carson River Mercury Superfund Site: Andy Bain, USEPA; Dave Friedman, NDEP * Dayton Valley Conservation District projects: Rob Holley, Dayton Valley Conservation District
10:10-11:10am Site Visit: Buckland Station	* Lyons County Projects: Sean Sinclair, Lyons County * Buckland Station and Carson River Area State Parks: Kristen Sanderson & Anthony Beauregard, NV State Parks
11:10-12:50pm Site Visit: Lahontan Dam	* Water Rights and Alpine Decree: Ed James, CWSD * Lahontan Dam Tour: Ernie Schank, Truckee-Carson Irrigation District * **Lunch** * Environmental Ed and Outreach: Linda Conlin, River Wranglers
12:50-2:15 Fallon Paiute-Shoshone Tribal Wetlands	* Newlands Project: Ernie Schank, TCID * Fallon Paiute-Shoshone Tribal Projects & Wetlands: Caleb Kondor and Willie Steve, Fallon Paiute-Shoshone Tribe * Stillwater National Wildlife Refuge: Susan Sawyer, USFWS & Bill Henry, Retired USFWS Biologist
2:15-3:15pm Churchill Mus.	* Churchill County Projects: Michael Johnson, Churchill County * Churchill County Museum: Jennifer Jones, Education Curator * Self Guided Tour of Museum
3:15-4:30pm	* Weed Free Certifications and CWMAs: Nevada Department Agriculture Interns. * Q & A, closing remarks * Evaluation survey, CEUs Test and Certificates * **Return to Carson City**

STAFF REPORTS

CARSON WATER SUBCONSERVANCY DISTRICT

TO: BOARD OF DIRECTORS

FROM: EDWIN D. JAMES

DATE: JUNE 15, 2016

SUBJECT: Agenda Item #24 - Staff reports

DISCUSSION: The following is a list of meetings/activities attended by Ed James and staff since the last Board meeting on May 18, 2016:

- 5/19/16 - Ed met with Director Johnson regarding the General Manager's review.
- 5/19/16 - Debbie participated in a FEMA Mapping Information Platform (MIP) webinar.
- 5/19/16 - Ed participated in the Carson Truckee Water Conservancy District (CTWCD) Board meeting and FY 2016-17 Tentative Budget Hearing in Reno.
- 5/19/16 - Staff had a meeting regarding the 2016 bus tour.
- 5/21/16 - Debbie participated in the Spring Wings outreach event in Fallon.
- 5/23/16 - Ed met with representatives from the National Oceanic and Atmospheric Administration (NOAA) and Carson City and Mitch Blum of HDR Engineering regarding the Carson City Inundation Maps.
- 5/24/16 - Ed met with Director Abowd regarding the General Manager's review.
- 5/24/16 - Debbie participated in Water Sense Partner Marketing Webinar.
- 5/25/16 - Ed participated in a Northern Nevada Development Association (NNDA) breakfast meeting.
- 5/25/16 - Ed and Toni participated in the 2016 Flood Awareness Week (FAW) planning meeting.
- 5/25/16 -Shane and Brenda participated in a meeting regarding the American Rivers Meadow Assessments in the Carson River Upper Watershed.
- 5/26/16 - Ed met with Craig Burnside and Mike Hayes of Carson Valley Conservation District (CVCD) regarding potential Q1 projects.
- 6/1/16 - Ed, Brenda, and Shane participated in a CRC River Corridor Working Group meeting.
- 6/1/16 - Brenda and Shane met with Ben Ewing regarding a spawning video at Heenan Lake.
- 6/3/16 - Ed and Debbie participated in a conference call with Erik Nilssen of Douglas County, Todd Cochran of Kimley-Horn, and Eric Simmons of FEMA regarding FEMA MAS #6.
- 6/7/16 - Ed participated in a Legislative Committee on Water Studies meeting in Dyer, Nevada.
- 6/7/16 - Brenda, Shane, Debbie, and Toni participated in the 2016 Carson River Watershed "Get on the Bus" Tour of the upper watershed.
- 6/8/16 - Ed, Brenda, Shane, Debbie, and Toni participated in the 2016 Carson River Watershed "Get on the Bus" Tour of the lower watershed.
- 6/13/16 - Brenda and Shane participated in a conference call with Marcel Fernando Schaerer regarding the Spanish version of the Carson River Watershed Map.
- 6/14/16 - Ed participated in the Carson Truckee Water Conservancy District Board meeting.

- 6/14/16 - Ed and Brenda met with Mitch Blum of HDR and Jean Stone of NDEP regarding the FEMA MAS #4 model use.
- 6/15/16 - Shane participated in the Carson City Weed Coalition noxious weed workshop.
- 6/15/16 - Brenda participated in the aquatic invasive species meeting in Reno.
- 6/15/16 - Ed participated in a Desert Research Institute (DRI) climate meeting.

Additional meetings/activities anticipated by staff until the end of June include:

- 6/21/16 - Ed will participate in the Alpine Biomass Committee kick-off meeting in Markleeville.
- 6/21/16 - Ed will give a presentation to Alpine County Supervisors on groundwater issues in Alpine County.
- 6/23/16 - Ed will participate in a meeting with staff members from NDEP, the Washoe Tribe, Douglas County, and Cardno to discuss the Virginia/Rocky project design.
- 6/29/16 - Brenda or Shane and Toni will participate in the 2016 FAW planning meeting.

STAFF RECOMMENDATION: Receive and file.

NO CORRESPONDENCE