

**CARSON WATER SUBCONSERVANCY DISTRICT  
BOARD OF DIRECTORS  
AND CARSON RIVER WATERSHED COMMITTEE**

## **NOTICE OF PUBLIC MEETING**

**DATE:**           **October 21, 2020**

**TIME:**           **6:30pm**

**LOCATION:** **Video Conference ZOOM Meeting**

***NOTICE TO PUBLIC:** The State of Nevada and Carson City are currently in a declared State of Emergency in response to the global pandemic caused by the coronavirus (COVID-19) infectious disease outbreak.*

*In accordance with the Governor's Declaration of Emergency Directive 006, which has suspended the provisions of NRS 241.020 requiring the designation of a physical location for meetings of public bodies where members of the public are permitted to attend and participate, public meetings of Carson Water Subconservancy District will NOT have a physical location open to the public until such time this Directive is removed.*

*Members of the public who wish to participate during a public meeting may do so by providing public comment during the two designated public comment periods, indicated on the agenda, via telephone.*

*To join by telephone, you must call **(712)451-0750** and then enter **Access Code: 411219**. You may also provide public comment in advance of a meeting by written submission to the following email address: [catrina@cwsd.org](mailto:catrina@cwsd.org). For inclusion or reference in the minutes of a meeting, your public comment must include your full name and be submitted via e-mail by not later than 3pm the day before the date of the meeting.*

## **AGENDA**

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***Please Note:** The Carson Water Subconservancy District (CWSD) Board may: 1) take agenda items out of order; 2) combine two or more items for consideration; and/or 3) remove an item from the agenda or delay discussion related to an item at any time. All votes will be conducted by CWSD Board of Directors. Reasonable efforts will be made to assist and accommodate individuals with disabilities who wish to attend the meeting. Please contact Catrina Schambra at (775)887-7450 ([catrina@cwsd.org](mailto:catrina@cwsd.org)), at least two business days in advance so that arrangements can be made.*

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1.     Call to Order the CWSD Board of Directors/Carson River Watershed Committee
2.     Roll Call
3.     Pledge of Allegiance
4.     For Discussion Only: Public Comment - Action may not be taken on any matter brought up under public comment until scheduled on an agenda for action at a later meeting.
5.     For Possible Action: Approval of Agenda
6.     For Possible Action: Approval of the Board Meeting Minutes of September 16, 2020

## **CONSENT AGENDA**

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***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.*

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7.     For Possible Action: Approval of Treasurer's Report for September 2020

8. For Possible Action: Approval of Payment of Bills for September 2020
9. For Possible Action: Approval of Contract #2020-15 CARDNO - Clear Creek Floodplain Restudy and Remap in an amount not to exceed \$161,360.
10. For Possible Action: Approval of Contract #2020-16 JE FULLER - Ruhenstroth ADMP Phase 2 in an amount not to exceed \$89,284.
11. For Possible Action: Approval of Contract #2020-17 NHC - Smelter Creek LOMR study in an amount not to exceed \$59,930.
12. For Possible Action: Approval of Contract #2020-18 HDR - Emergency Response Modeling Project for the Carson Valley in an amount not to exceed \$44,683.

**\*\*END OF CONSENT AGENDA\*\***

13. For Discussion Only: Update on the Carson River Watershed Virtual Workshop Webinar
14. For Discussion Only: Update on the 2020 Water Year
15. For Discussion Only: Staff Reports - General Manager
  - Legal
  - Correspondence
16. For Discussion Only: Directors Reports
17. For Discussion Only: Update on activities in Alpine County
18. For Discussion Only: Update on activities in Storey County
19. For Discussion Only: Public Comment - Action may not be taken on any matter brought up under public comment until scheduled on an agenda for action at a later meeting.
20. For Possible Action: Adjournment

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*Supporting material for this meeting may be requested from Catrina Schambra at 775-887-7450 ([catrina@cwsd.org](mailto:catrina@cwsd.org)) and is available on the CWSD website at [www.cwsd.org](http://www.cwsd.org).*

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**In response to COVID-19 Emergency Directive:**

Posting in public buildings in accordance with NRS 241.020 has been waived by COVID-19 Emergency Directive #6 of Governor Sisolak. Therefore, this notice and agenda of video conference meeting has been posted on or before 9am on October 13, 2020 on the following websites for the October 21, 2020 regular meeting of the Carson Water Subconservancy District and the Carson River Watershed Committee, in accordance with NRS 241.020:

**Carson Water Subconservancy District Website:** <http://www.cwsd.org>  
**State of Nevada Public Meetings Website:** <http://notice.nv.gov>

**AGENDA ITEM #6**

**MINUTES OF LAST  
BOARD MEETING**

CARSON WATER SUBCONSERVANCY DISTRICT  
BOARD OF DIRECTORS AND  
CARSON RIVER WATERSHED COMMITTEE MEETING  
September 16, 2020

**Draft Minutes**

***The CWSD September 16, 2020 Board of Directors meeting was held via Zoom Videoconference and teleconference due to Governor Sisolak's statewide Emergency Directive in response to the COVID-19 Pandemic.***

Chairman Erquiaga called the meeting of the Carson Water Subconservancy District (CWSD) to order at 6:30 pm. Roll call of the CWSD Board was taken and a quorum was determined to be present.

**CWSD Directors present:**

Brad Bonkowski, Treasurer  
Carl Erquiaga, Chairman  
Stacey Giomi, Director  
Ken Gray, Director  
Jack Jacobs, Director  
Barry Penzel, Director  
Fred Stodieck, Director  
Steve Thaler, Director  
Mike Workman, Director

**Absent Directors:** Ernie Schank and Larry Walsh

Roll call of the Caron River Watershed Committee was taken which included CWSD Directors and Committee Members Kathy Canfield and David Griffith.

**CWSD Staff present:**

Shane Fryer, Watershed Program Specialist  
Brenda Hunt, Watershed Program Manager  
Edwin James, General Manager  
Patrick King, CWSD Attorney  
Debbie Neddenriep, Water Resource Specialist II  
Catrina Schambra, Administrative Assistant/Secretary to the Board

*The Pledge of Allegiance was led by Chairman Erquiaga.*

**Item #4 – Discussion Only: Public Comment** – None

**Item #5 – For Possible Action: Approval of Agenda**

*Director Gray made a motion to approve the agenda as presented. The motion was seconded by Director Thaler and unanimously approved by the Board.*

**Item #6 – For Possible Action: Approval of the Board Meeting Minutes of August 19, 2020**

*Director Jacobs made a motion to approve the Board Meeting Minutes of August 19, 2020. The motion was seconded by Director Gray and unanimously approved by the Board.*

**\*\*CONSENT AGENDA\*\***

**Item #7 - For Possible Action: Approval of Treasurer's Report for August 2020**

**Item #8 - For Possible Action: Approval of Payment of Bills for August 2020**

*Director Giomi made a motion to approve Consent Agenda as presented. The motion was seconded by Director Penzel and unanimously approved by the Board.*

**\*\*END OF CONSENT AGENDA\*\***

**Item #9 - For Discussion Only: Update by CWSD Staff on the Drone Monitoring and Inventory Study**

Shane Fryer gave an update and video presentation on his drone use in the 106 Grant and the River Project Inventory. The grant ends at the end of September, but he will continue the river inventory under the Watershed Coordinator grant. Mr. Fryer answered technical questions regarding drone use and its precision compared to LiDAR, which is a totally different mapping tool.

*No action taken.*

**Item #10 - For Discussion Only: Presentation by CWSD Staff on Correcting the Federal Water Master Ditch Diversions Data**

Mr. James was to present a pre-recorded presentation, which is still a work in progress to be presented at the upcoming webinar. This was a test, and the video did not run as expected. Mr. James gave his presentation as a slide show instead. He explained the errors he has found in the Floodplain Water Master Ditch Diversion Database and his project to correct and update. He has been assisted in the project by Melissa James. It is important that this data be accurate as it is used for model runs. Mr. James showed what has been corrected and/or updated.

*No action taken.*

**Item#11 - For Discussion Only: Update on the Carson River Watershed Workshop**

Mr. James gave an update on the planning for the October 14, 2020 Carson River Watershed Virtual Workshop. It will be presented as a virtual all-day webinar open to the community. He described the tentative schedule, confirmed speakers, and planned schedule of presentations.

*No action taken.*

**Item# 12 For Possible Action: Funding request from Lyon County in an amount not to exceed \$2,000 to complete the Ramsey Canyon Floodplain Mapping**

Mr. James introduced Lyon County/FEMA Ramsey Canyon Mapping funding request. This project is required for work being done at airport in Silver Springs. The total cost for the project is \$6500. Mr. James recommends that CWSD provide \$2000 from Flood Fund towards this project.

*Director Workman made a motion to approve the funding request from Lyon County in an amount not to exceed \$2,000 to complete the Ramsey Canyon Floodplain Mapping. The motion was seconded by Director Bonkowski and unanimously by the Board.*

**Item #12 – For Discussion Only: Staff Reports –**

Mr. James reported on the following:

- He is meeting with Steve Walker tomorrow and has already talked with Austin Osbourne regarding the BDR to get the legislation moving towards getting Storey County and Alpine County to become CWSD members under NRS. Steve and Mary Walker, with their lobbyist expertise will help us with the process to get a BDR.

Brenda Hunt reported on the following:

- She is moving forward with the LID Ordinances in Carson City, Douglas County and Lyon County, in that order. Carson City is priority, as requested by Brad Bonkowski. The ordinance is with their attorney now. It will go to the October 28, 2020 Planning Commission to move it forward. She is hoping to final approval by the end of the year.

Debbie Neddenriep reported on the following:

- Debbie and Ed are already looking at FEMA MAS 12 projects.

**Legal** – None

**Correspondence** – Attached to the Board Package.

*No action was taken.*

**Item #13 – For Discussion Only: Directors Reports** –

Director Jacobs just had a question: Regarding YES on 3 campaign in Douglas County, is CWSD tracking Water Rights Transfers? There is a rumor among local farmers that the goal of Yes on 3 is to sell water rights to developers downstream. Director Penzel states that Douglas County track all water rights except Vidler because they are a private company. Mr. James thinks it may be just rumors, but he will check into this. There was further discussion regarding development rights and water rights.

Director Bonkowski sadly announced that the Bob Crowell, Carson City Mayor has passed.

*No action was taken.*

**Item #14 – For Discussion Only: Update on activities in Alpine County** – None

*No action was taken.*

**Item #15 – For Discussion Only: Update on activities in Storey County** –

Kathy Canfield reported the Storey County Water Tank Replacement and Gold Hill Treatment projects are still moving forward. Just renewed an agreement with USGS to collect groundwater levels. FEMA is starting a study of drainages into Truckee River. Storey County has one – Electric Wash, but most are in Washoe County.

*No action was taken.*

**Item #16 – For Discussion Only: Public Comment** – None

*No action was taken.*

There being no further business to come before the Board, Chairman Erquiaga adjourned the meeting at 7:46 pm.

Respectfully submitted,

*Catrina Schambra*, Secretary to the Board

**AGENDA ITEM #7**

**TREASURER'S REPORT**

CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND

Balance Sheet

As of September 30, 2020

	<u>Sep 30, 20</u>
<b>ASSETS</b>	
<b>Current Assets</b>	
<b>Checking/Savings</b>	
1013-00 · Cash in Checking - U. S. Bank	157,330.54
1014-00 · Local Gov't Inv. Pool-Regular	578,112.28
1030-00 · Petty Cash	105.76
<b>Total Checking/Savings</b>	<u>735,548.58</u>
<b>Other Current Assets</b>	
1055-00 · Payroll Deposit - Carson City	500.00
<b>Total Other Current Assets</b>	<u>500.00</u>
<b>Total Current Assets</b>	<u>736,048.58</u>
<b>TOTAL ASSETS</b>	<u><b>736,048.58</b></u>
<b>LIABILITIES &amp; EQUITY</b>	
<b>Liabilities</b>	
<b>Current Liabilities</b>	
<b>Other Current Liabilities</b>	
3360-00 · Accrued Vacation	31,478.76
3362-00 · Accrued sick leave	60,630.90
<b>Total Other Current Liabilities</b>	<u>92,109.66</u>
<b>Total Current Liabilities</b>	<u>92,109.66</u>
<b>Total Liabilities</b>	92,109.66
<b>Equity</b>	
4000-00 · Fund Balance	569,853.62
Net Income	74,085.30
<b>Total Equity</b>	<u>643,938.92</u>
<b>TOTAL LIABILITIES &amp; EQUITY</b>	<u><b>736,048.58</b></u>

## CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND

10/10/20

## Profit &amp; Loss Budget vs. Actual

Cash Basis

July through September 2020

	Jul - Sep 20	Budget	\$ Over Budget	% of Budget
<b>Ordinary Income/Expense</b>				
<b>Income</b>				
5008-00 · Alpine Co. Joint Powers contrib	10,897.74	10,897.74		100.0%
5009-00 · Churchill County Ad Valorem		218,984.88	-218,984.88	
5010-00 · Lyon County Ad Valorem		187,253.01	-187,253.01	
5011-00 · Douglas County Ad Valorem	217,272.55	617,790.62	-400,518.07	35.2%
5012-00 · Carson City Ad Valorem	25,316.94	458,361.52	-433,044.58	5.5%
5022-00 · Water Lease - Mud Lake		51,765.00	-51,765.00	
5031-00 · Interest Income-LGIP Reg.	1,367.41	4,821.36	-3,453.95	28.4%
5050-00 · Watershed Coordinator Grant				
5050-13 · NDEP-WS Coord IV 2019-2022		164,800.00	-164,800.00	
<b>Total 5050-00 · Watershed Coordinator Grant</b>		164,800.00	-164,800.00	
5058-00 · 208 Water Quality Plan				
5058-04 · NDEP-LID Implementation 2018-20		3,900.00	-3,900.00	
<b>Total 5058-00 · 208 Water Quality Plan</b>		3,900.00	-3,900.00	
5060-00 · Misc. Income	9.40	6,000.00	-5,990.60	0.2%
5082-00 · Alpine Co.-CASGEM Grant		400.00	-400.00	
5100-00 · NDEP -Drone Grant		18,165.00	-18,165.00	
6003-00 · FEMA-MAS #9	26,216.06	81,420.00	-55,203.94	32.2%
6004-00 · BOR WaterSMART Grant		53,078.00	-53,078.00	
6005-00 · FEMA - MAS # 10	55,800.50	319,590.00	-263,789.50	17.5%
<b>Total Income</b>	336,880.60	2,197,227.13	-1,860,346.53	15.3%
<b>Expense</b>				
7015-00 · Salaries & Wages	81,387.92	413,300.00	-331,912.08	19.7%
7020-00 · Employee Benefits	32,261.04	172,217.00	-139,955.96	18.7%
7021-00 · Workers Comp Ins.		2,300.00	-2,300.00	
7101-00 · Director's Fees				
7101-01 · Director Benefits	24.36	100.00	-75.64	24.4%
7101-02 · Director's Fees-Alpine Co.	240.00	2,800.00	-2,560.00	8.6%
7101-00 · Director's Fees - Other	1,680.00	13,100.00	-11,420.00	12.8%
<b>Total 7101-00 · Director's Fees</b>	1,944.36	16,000.00	-14,055.64	12.2%
7102-00 · Insurance	4,934.79	5,100.00	-165.21	96.8%
7103-00 · Office Supplies	314.97	2,100.00	-1,785.03	15.0%
7104-00 · Postage	390.80	1,050.00	-659.20	37.2%
7105-00 · Rent	9,438.00	37,752.00	-28,314.00	25.0%
7106-00 · Telephone/Internet	1,242.29	5,000.00	-3,757.71	24.8%
7107-00 · Travel-transport/meals/lodging				
7107-02 Staff Indirect Mileage	122.53		122.53	100.0%
7107-01 · Car Allowance	283.21		283.21	100.0%
7107-00 · Travel-transport/meals/lodging - Other	103.50	16,000.00	-15,896.50	0.6%
<b>Total 7107-00 · Travel-transport/meals/lodging</b>	509.24	16,000.00	-15,490.76	3.2%
7108-00 · Dues & Publications	210.00	1,100.00	-890.00	19.1%
7109-00 · Miscellaneous Expense		1,000.00	-1,000.00	
7110-00 · Seminars & Education	64.99	1,500.00	-1,435.01	4.3%
7111-00 · Office Equipment	184.95	3,000.00	-2,815.05	6.2%
7112-00 · Bank Charges	25.00	50.00	-25.00	50.0%
7114-00 · Outside Professional Services	260.02	30,000.00	-29,739.98	0.9%
7115-00 · Accounting		16,800.00	-16,800.00	
7116-00 · Legal	4,000.00	32,000.00	-28,000.00	12.5%
7117-00 · Lost Lakes Expenses	180.00	13,500.00	-13,320.00	1.3%
7118-00 · Mud Lake O & M		1,200.00	-1,200.00	
7120-00 · Integrated Watershed Programs				
7120-07 · Watershed Tour		6,000.00	-6,000.00	
7120-33 · Watershed Coord IV 2019-22				
7120-34 · WS Coord Grant MATCH 2019-21				
7120-35 · WS COORD MATCH - Travel	62.10		62.10	100.0%

## CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND

10/10/20

## Profit &amp; Loss Budget vs. Actual

Cash Basis

July through September 2020

	Jul - Sep 20	Budget	\$ Over Budget	% of Budget
7120-34 · WS Coord Grant MATCH 2019-21 - Other		9,900.00	-9,900.00	
Total 7120-34 · WS Coord Grant MATCH 2019-21	62.10	9,900.00	-9,837.90	0.6%
7120-38 · WS COORD-REIMBURSABLE				
7120-43 · WS COORD REIMB- NEON	4,500.00		4,500.00	100.0%
Total 7120-38 · WS COORD-REIMBURSABLE	4,500.00		4,500.00	100.0%
7120-33 · Watershed Coord IV 2019-22 - Other	32.42	49,200.00	-49,167.58	0.1%
Total 7120-33 · Watershed Coord IV 2019-22	4,594.52	59,100.00	-54,505.48	7.8%
Total 7120-00 · Integrated Watershed Programs	4,594.52	65,100.00	-60,505.48	7.1%
7126-00 · NDEP Drone Sub-Grant 2020	365.14	305.00	60.14	119.7%
7215-00 · Sierra NV Journeys-Family Night				
7215-01 · SNJ 2020-21		3,279.00	-3,279.00	
Total 7215-00 · Sierra NV Journeys-Family Night		3,279.00	-3,279.00	
7332-00 · Carson River Work Days				
7332-06 · CR Work Days 2020-21		26,000.00	-26,000.00	
Total 7332-00 · Carson River Work Days		26,000.00	-26,000.00	
7337-00 · Carson River Restoration				
7337-01 · Carson Valley Conserv District				
7337-20 · CVCD Genoa Bank EXTENDED		70,000.00	-70,000.00	
7337-25 · CVCD - Bioengineering 2020-21		65,000.00	-65,000.00	
7337-26 · CVCD - Westwood Channel 2020-21		100,000.00	-100,000.00	
Total 7337-01 · Carson Valley Conserv District		235,000.00	-235,000.00	
7337-03 · Dayton Valley Conserv				
7337-34 · DVCD Bank Stab/Dayton Br (EXT)		40,000.00	-40,000.00	
7337-36 · DVCD - Fort Churchill 2020-21		75,000.00	-75,000.00	
Total 7337-03 · Dayton Valley Conserv		115,000.00	-115,000.00	
7337-04 · Lahontan Conserv.Dist				
7337-43 · LCD- Clearing & Snagging 20-21		20,000.00	-20,000.00	
Total 7337-04 · Lahontan Conserv.Dist		20,000.00	-20,000.00	
Total 7337-00 · Carson River Restoration		370,000.00	-370,000.00	
7404-00 · Noxious Weeds Control-CR Wtrshd		75,000.00	-75,000.00	
7406-00 · 208 Water Quality Mgmt. Plan				
7406-03 · LID Implementation 2018-6/30/20	0.52		0.52	100.0%
7406-00 · 208 Water Quality Mgmt. Plan - Other		1,210.00	-1,210.00	
Total 7406-00 · 208 Water Quality Mgmt. Plan	0.52	1,210.00	-1,209.48	0.0%
7437-00 · FEMA MAS #9				
7437-01 · South Dayton Valley ADMP(JEF)	9,061.86		9,061.86	100.0%
7437-02 · North CC ADMP (MB)	3,497.71		3,497.71	100.0%
7437-03 · Pinenut Cr. Restudy-Remap.(HDR)	9,073.80		9,073.80	100.0%
7437-00 · FEMA MAS #9 - Other	83.46	66,824.00	-66,740.54	0.1%
Total 7437-00 · FEMA MAS #9	21,716.83	66,824.00	-45,107.17	32.5%
7438-00 · BOR WaterSMART Market Program				
7438-01 · Water Mktg Study-LUMOS 2019-21	13,681.50	53,078.00	-39,396.50	25.8%
Total 7438-00 · BOR WaterSMART Market Program	13,681.50	53,078.00	-39,396.50	25.8%
7439-00 · FEMA MAS #10				
7439-01 · Carson Valley Flood Model (HDR)	5,132.54		5,132.54	100.0%
7439-02 · West CC Study (Kimley-Horn)	22,890.00		22,890.00	100.0%
7439-03 · RuhenStroth ADMP (Fuller)	20,704.85		20,704.85	100.0%
7439-04 · Ch Cty Flood Maps (Precision)	1,107.50		1,107.50	100.0%

**CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND**

**Profit & Loss Budget vs. Actual**

July through September 2020

	<u>Jul - Sep 20</u>	<u>Budget</u>	<u>\$ Over Budget</u>	<u>% of Budget</u>
7439-05 · Ch Cty Flood Maps (HDR)	9,339.70		9,339.70	100.0%
7439-00 · FEMA MAS #10 - Other	617.22	297,642.00	-297,024.78	0.2%
<b>Total 7439-00 · FEMA MAS #10</b>	<b>59,791.81</b>	<b>297,642.00</b>	<b>-237,850.19</b>	<b>20.1%</b>
7440-00 · FEMA - MAS #11	8.11		8.11	100.0%
7500-00 · USGS Stream Gage Contract				
7500-03 · USGS Stream Flow Gauges 2019-21	19,601.00		19,601.00	100.0%
7500-00 · USGS Stream Gage Contract - Other		78,405.00	-78,405.00	
<b>Total 7500-00 · USGS Stream Gage Contract</b>	<b>19,601.00</b>	<b>78,405.00</b>	<b>-58,804.00</b>	<b>25.0%</b>
7508-00 · USGS Do.Co.WQ & GW Monitoring				
7508-03 · DoCo WQ/GW Mon. 2019-21	4,222.50	16,890.00	-12,667.50	25.0%
<b>Total 7508-00 · USGS Do.Co.WQ &amp; GW Monitoring</b>	<b>4,222.50</b>	<b>16,890.00</b>	<b>-12,667.50</b>	<b>25.0%</b>
7524-00 · USGS-GW Lvl & WQ in Ch.Co.				
7524-02 · USGS-GW Lvl & WQ-ChCo 2018-22	1,465.00	5,680.00	-4,215.00	25.8%
<b>Total 7524-00 · USGS-GW Lvl &amp; WQ in Ch.Co.</b>	<b>1,465.00</b>	<b>5,680.00</b>	<b>-4,215.00</b>	<b>25.8%</b>
7526-01 · USGS Middle Carson GW 2020-21		15,250.00	-15,250.00	
7600-00 · Alpine County Projects				
7600-09 · Al.Co.-CASGEM		5.00	-5.00	
7600-12 · AWG Programs 2020-21		25,000.00	-25,000.00	
<b>Total 7600-00 · Alpine County Projects</b>		<b>25,005.00</b>	<b>-25,005.00</b>	
7610-00 · Douglas County Projects				
7610-10 · Do.Co.Reg.Pipeline Debt Service		125,000.00	-125,000.00	
<b>Total 7610-00 · Douglas County Projects</b>		<b>125,000.00</b>	<b>-125,000.00</b>	
7620-00 · Carson City Projects				
7620-11 · CC Reg.Pipeline Debt Service		125,000.00	-125,000.00	
<b>Total 7620-00 · Carson City Projects</b>		<b>125,000.00</b>	<b>-125,000.00</b>	
7640-00 · Churchill County Projects				
7640-09 · Lahontan Vly.Wtr.Lvl. 2018-21		20,000.00	-20,000.00	
7640-18 · Dixie Vlt Wtr Lvl Meas 2019-22		21,000.00	-21,000.00	
7640-19 · TCID-Diversion Dam Gates 20-21		15,000.00	-15,000.00	
<b>Total 7640-00 · Churchill County Projects</b>		<b>56,000.00</b>	<b>-56,000.00</b>	
<b>Total Expense</b>	<b>262,795.30</b>	<b>2,176,637.00</b>	<b>-1,913,841.70</b>	<b>12.1%</b>
<b>Net Ordinary Income</b>	<b>74,085.30</b>	<b>20,590.13</b>	<b>53,495.17</b>	<b>359.8%</b>
<b>Other Income/Expense</b>				
<b>Other Income</b>				
8005-00 · Beginning Equity		642,848.30	-642,848.30	
<b>Total Other Income</b>		<b>642,848.30</b>	<b>-642,848.30</b>	
<b>Other Expense</b>				
8002-00 · Transfer Out-Acq/Const Fund		145,000.00	-145,000.00	
8008-00 · Preliminary Planning		385,000.00	-385,000.00	
<b>Total Other Expense</b>		<b>530,000.00</b>	<b>-530,000.00</b>	
<b>Net Other Income</b>		<b>112,848.30</b>	<b>-112,848.30</b>	
<b>Net Income</b>	<b>74,085.30</b>	<b>133,438.43</b>	<b>-59,353.13</b>	<b>55.5%</b>

## CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND

10/10/20

## Profit &amp; Loss YTD Comparison

Cash Basis

September 2020

	Sep 20	Jul - Sep 20
Ordinary Income/Expense		
Income		
5008-00 · Alpine Co. Joint Powers contrib	10,897.74	10,897.74
5009-00 · Churchill County Ad Valorem		
5010-00 · Lyon County Ad Valorem		
5011-00 · Douglas County Ad Valorem	179,096.73	217,272.55
5012-00 · Carson City Ad Valorem		25,316.94
5022-00 · Water Lease - Mud Lake		
5031-00 · Interest Income-LGIP Reg.	317.41	1,367.41
5050-00 · Watershed Coordinator Grant		
5050-13 · NDEP-WS Coord IV 2019-2022		
Total 5050-00 · Watershed Coordinator Grant		
5058-00 · 208 Water Quality Plan		
5058-04 · NDEP-LID Implementation 2018-20		
Total 5058-00 · 208 Water Quality Plan		
5060-00 · Misc. Income		9.40
5072-00 · Al.Co.Groundwtr Monitoring		
5082-00 · Alpine Co.-CASGEM Grant		
5096-00 · NFWF-Weed Mgmt.		
5100-00 · NDEP -Drone Grant		
6003-00 · FEMA-MAS #9	12,751.49	26,216.06
6004-00 · BOR WaterSMART Grant		
6005-00 · FEMA - MAS # 10	37,520.38	55,800.50
Total Income	240,583.75	336,880.60
Expense		
7015-00 · Salaries & Wages	31,972.90	81,387.92
7020-00 · Employee Benefits	12,524.97	32,261.04
7021-00 · Workers Comp Ins.		
7101-00 · Director's Fees		
7101-01 · Director Benefits	15.08	24.36
7101-02 · Director's Fees-Alpine Co.		240.00
7101-00 · Director's Fees - Other	1,040.00	1,680.00
Total 7101-00 · Director's Fees	1,055.08	1,944.36
7102-00 · Insurance		4,934.79
7103-00 · Office Supplies	116.22	314.97
7104-00 · Postage	85.25	390.80
7105-00 · Rent	3,146.00	9,438.00
7106-00 · Telephone/Internet	433.43	1,242.29
7107-00 · Travel-transport/meals/lodging		
7107-02 Staff Indirect Mileage	122.53	122.53
7107-01 · Car Allowance		283.21
7107-00 · Travel-transport/meals/lodging - Other	103.50	103.50
Total 7107-00 · Travel-transport/meals/lodging	226.03	509.24
7108-00 · Dues & Publications		210.00
7110-00 · Seminars & Education		64.99
7111-00 · Office Equipment	184.95	184.95
7112-00 · Bank Charges		25.00
7114-00 · Outside Professional Services		260.02
7116-00 · Legal	2,000.00	4,000.00
7117-00 · Lost Lakes Expenses		180.00
7120-00 · Integrated Watershed Programs		
7120-33 · Watershed Coord IV 2019-22		
7120-34 · WS Coord Grant MATCH 2019-21		
7120-35 · WS COORD MATCH - Travel	62.10	62.10
Total 7120-34 · WS Coord Grant MATCH 2019-21	62.10	62.10

**CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND**

**Profit & Loss YTD Comparison**

September 2020

	Sep 20	Jul - Sep 20
7120-38 · WS COORD-REIMBURSABLE		
7120-43 · WS COORD REIMB- NEON	4,500.00	4,500.00
<b>Total 7120-38 · WS COORD-REIMBURSABLE</b>	<b>4,500.00</b>	<b>4,500.00</b>
7120-33 · Watershed Coord IV 2019-22 - Other	8.79	32.42
<b>Total 7120-33 · Watershed Coord IV 2019-22</b>	<b>4,570.89</b>	<b>4,594.52</b>
<b>Total 7120-00 · Integrated Watershed Programs</b>	<b>4,570.89</b>	<b>4,594.52</b>
7126-00 · NDEP Drone Sub-Grant 2020	365.14	365.14
7215-00 · Sierra NV Journeys-Family Night		
7332-00 · Carson River Work Days		
7332-05 · CR Work Days 2019-20		
<b>Total 7332-00 · Carson River Work Days</b>		
7337-00 · Carson River Restoration		
7337-01 · Carson Valley Conserv District		
7337-20 · CVCD Genoa Bank EXTENDED		
<b>Total 7337-01 · Carson Valley Conserv District</b>		
7337-03 · Dayton Valley Conserv		
7337-33 · DVCD--Restoration 2017-20 EXT		
7337-34 · DVCD Bank Stab/Dayton Br (EXT)		
<b>Total 7337-03 · Dayton Valley Conserv</b>		
<b>Total 7337-00 · Carson River Restoration</b>		
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.	14,999.95	
7404-05 · Noxious Weed Control-Churchill		
<b>Total 7404-00 · Noxious Weeds Control-CR Wtrshd</b>	<b>14,999.95</b>	
7406-00 · 208 Water Quality Mgmt. Plan		
7406-03 · LID Implementation 2018-6/30/20		0.52
<b>Total 7406-00 · 208 Water Quality Mgmt. Plan</b>		<b>0.52</b>
7437-00 · FEMA MAS #9		
7437-01 · South Dayton Valley ADMP(JEF)	2,773.36	9,061.86
7437-02 · North CC ADMP (MB)	1,300.00	3,497.71
7437-03 · Pinenut Cr. Restudy-Remap.(HDR)	6,626.80	9,073.80
7437-04 · Flood Awareness 2019		
7437-41 · River Wranglers-FAW		
<b>Total 7437-04 · Flood Awareness 2019</b>		
7437-00 · FEMA MAS #9 - Other	81.15	83.46
<b>Total 7437-00 · FEMA MAS #9</b>	<b>10,781.31</b>	<b>21,716.83</b>
7438-00 · BOR WaterSMART Market Program		
7438-01 · Water Mktg Study-LUMOS 2019-21	6,214.75	13,681.50
<b>Total 7438-00 · BOR WaterSMART Market Program</b>	<b>6,214.75</b>	<b>13,681.50</b>
7439-00 · FEMA MAS #10		
7439-01 · Carson Valley Flood Model (HDR)	358.94	5,132.54
7439-02 · West CC Study (Kimley-Horn)	15,396.00	22,890.00
7439-03 · RuhenStroth ADMP (Fuller)	17,567.45	20,704.85
7439-04 · Ch Cty Flood Maps (Precision)		1,107.50
7439-05 · Ch Cty Flood Maps (HDR)	9,339.70	9,339.70

**CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND**  
**Profit & Loss YTD Comparison**  
**September 2020**

	Sep 20	Jul - Sep 20
7439-00 · FEMA MAS #10 - Other	10.87	617.22
<b>Total 7439-00 · FEMA MAS #10</b>	<b>42,672.96</b>	<b>59,791.81</b>
7440-00 · FEMA - MAS #11	8.06	8.11
7500-00 · USGS Stream Gage Contract		
7500-03 · USGS Stream Flow Gauges 2019-21	19,601.00	19,601.00
<b>Total 7500-00 · USGS Stream Gage Contract</b>	<b>19,601.00</b>	<b>19,601.00</b>
7508-00 · USGS Do.Co.WQ & GW Monitoring		
7508-03 · DoCo WQ/GW Mon. 2019-21	4,222.50	4,222.50
<b>Total 7508-00 · USGS Do.Co.WQ &amp; GW Monitoring</b>	<b>4,222.50</b>	<b>4,222.50</b>
7524-00 · USGS-GW Lvl & WQ in Ch.Co.		
7524-02 · USGS-GW Lvl & WQ-ChCo 2018-22	1,465.00	1,465.00
<b>Total 7524-00 · USGS-GW Lvl &amp; WQ in Ch.Co.</b>	<b>1,465.00</b>	<b>1,465.00</b>
7526-00 · USGS-Eagle/Dayt/Ch.Vly. 2016-20		
7620-00 · Carson City Projects		
7620-16 · CC Reuse Master Plan 2019-20		
<b>Total 7620-00 · Carson City Projects</b>		
7640-00 · Churchill County Projects		
7640-09 · Lahontan Vly.Wtr.Lvl. 2018-21		
7640-18 · Dixie Vlt Wtr Lvl Meas 2019-22		
<b>Total 7640-00 · Churchill County Projects</b>		
<b>Total Expense</b>	<b>156,646.39</b>	<b>262,795.30</b>
<b>Net Ordinary Income</b>	<b>83,937.36</b>	<b>74,085.30</b>
<b>Net Income</b>	<b>83,937.36</b>	<b>74,085.30</b>

**Balance Sheet**

As of September 30, 2020

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	<u>Sep 30, 20</u>
<b>ASSETS</b>	
Current Assets	
Checking/Savings	
1013-01 - Local Gov't Inv.Pool-Reserve	783,008.95
Total Checking/Savings	<u>783,008.95</u>
Total Current Assets	<u>783,008.95</u>
<b>TOTAL ASSETS</b>	<b><u>783,008.95</u></b>
<b>LIABILITIES &amp; EQUITY</b>	
Equity	
4000-01 - Fund Balance - Capital Project	781,483.15
Net Income	<u>1,525.80</u>
Total Equity	<u>783,008.95</u>
<b>TOTAL LIABILITIES &amp; EQUITY</b>	<b><u>783,008.95</u></b>

**CARSON WTR SUBCONSERVANCY DIST - ACQUISITION/CONSTRUCTION**  
**Profit & Loss Budget vs. Actual**  
 July through September 2020

	<u>Jul - Sep 20</u>	<u>Budget</u>	<u>\$ Over Budget</u>	<u>% of Budget</u>
<b>Ordinary Income/Expense</b>				
<b>Income</b>				
5032-01 · Interest Income - LGIP Res.	1,525.80	5,723.24	-4,197.44	26.7%
<b>Total Income</b>	<u>1,525.80</u>	<u>5,723.24</u>	<u>-4,197.44</u>	<u>26.7%</u>
<b>Expense</b>				
8015-03 · Upstream Storage Evaluation		33,648.00	-33,648.00	
8015-04 · Construction Projects		715,000.00	-715,000.00	
8015-05 · Right-A-Way Lyon Cty Utility SS		125,000.00	-125,000.00	
<b>Total Expense</b>		<u>873,648.00</u>	<u>-873,648.00</u>	
<b>Net Ordinary Income</b>	<u>1,525.80</u>	<u>-867,924.76</u>	<u>869,450.56</u>	<u>-0.2%</u>
<b>Other Income/Expense</b>				
<b>Other Income</b>				
8000-01 · Beginning Equity		763,099.00	-763,099.00	
8001-01 · Transfer In-General Fund		145,000.00	-145,000.00	
<b>Total Other Income</b>		<u>908,099.00</u>	<u>-908,099.00</u>	
<b>Net Other Income</b>		<u>908,099.00</u>	<u>-908,099.00</u>	
<b>Net Income</b>	<u><u>1,525.80</u></u>	<u><u>40,174.24</u></u>	<u><u>-38,648.44</u></u>	<u><u>3.8%</u></u>

**CARSON WTR SUBCONSERVANCY DIST - ACQUISITION/CONSTRUCTION**  
**Profit & Loss YTD Comparison**  
**September 2020**

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	<u>Sep 20</u>	<u>Jul - Sep 20</u>
Ordinary Income/Expense		
Income		
5032-01 · Interest Income - LGIP Res.	424.57	1,525.80
Total Income	424.57	1,525.80
Net Ordinary Income	424.57	1,525.80
Net Income	<u>424.57</u>	<u>1,525.80</u>

Floodplain Management Fund  
**Balance Sheet**  
As of September 30, 2020

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	<u>Sep 30, 20</u>
<b>ASSETS</b>	
Current Assets	
Checking/Savings	
1013-03 · LGIP - Floodplain	405,918.16
Total Checking/Savings	405,918.16
Total Current Assets	405,918.16
<b>TOTAL ASSETS</b>	<b><u>405,918.16</u></b>
<b>LIABILITIES &amp; EQUITY</b>	
Equity	
32000 · Retained Earnings	405,127.18
Net Income	790.98
Total Equity	405,918.16
<b>TOTAL LIABILITIES &amp; EQUITY</b>	<b><u>405,918.16</u></b>

## Floodplain Management Fund Profit & Loss Budget vs. Actual July through September 2020

	Jul - Sep 20	Budget	\$ Over Budget	% of Budget
<b>Ordinary Income/Expense</b>				
<b>Income</b>				
5032-03 · Int. Inc.-LGIP-Floodplain	790.98	3,025.06	-2,234.08	26.1%
<b>Total Income</b>	790.98	3,025.06	-2,234.08	26.1%
<b>Expense</b>				
8009-01 · Reg. Flood Preliminary Planning	0.00	300,000.00	-300,000.00	0.0%
8009-02 · Flood Project Along SR88-Minden	0.00	40,000.00	-40,000.00	0.0%
8009-03 · CVCD- 2017 Flood Permit/Repairs	0.00	0.00	0.00	0.0%
8009-04 · DVCD -2017 Flood Permit/Repairs	0.00	0.00	0.00	0.0%
8009-06 · TCID Flood Project	0.00	35,000.00	-35,000.00	0.0%
<b>Total Expense</b>	0.00	375,000.00	-375,000.00	0.0%
<b>Net Ordinary Income</b>	790.98	-371,974.94	372,765.92	-0.2%
<b>Other Income/Expense</b>				
<b>Other Income</b>				
8000-03 · Beginning Equity	0.00	403,341.00	-403,341.00	0.0%
8001-03 · Trans. In- General Fund	0.00	0.00	0.00	0.0%
<b>Total Other Income</b>	0.00	403,341.00	-403,341.00	0.0%
<b>Other Expense</b>				
8002-03 · Trans.Out-General Fund	0.00	0.00	0.00	0.0%
<b>Total Other Expense</b>	0.00	0.00	0.00	0.0%
<b>Net Other Income</b>	0.00	403,341.00	-403,341.00	0.0%
<b>Net Income</b>	<b>790.98</b>	<b>31,366.06</b>	<b>-30,575.08</b>	<b>2.5%</b>

Floodplain Management Fund  
Profit & Loss YTD Comparison  
September 2020

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	<u>Sep 20</u>	<u>Jul - Sep 20</u>
Ordinary Income/Expense		
Income		
5032-03 · Int. Inc.-LGIP-Floodplain	220.10	790.98
Total Income	220.10	790.98
Net Ordinary Income	220.10	790.98
Net Income	<u>220.10</u>	<u>790.98</u>

**AGENDA ITEM #8**

**PAYMENT OF BILLS**

1:40 PM

CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND

10/10/20

Transaction Detail by Account

Cash Basis

September 2020

Type	Date	Num	Name	Memo	Paid Amount	Balance
<b>1013-00 · Cash in Checking - U. S. Bank</b>						
Check	09/05/2020	10072	Carson City	CWSD Payroll #18	-23,314.52	-23,314.52
Check	09/05/2020	10073	Konica Minolta Business Solutions U...	Acct#3091 8/1/20-8/31/20	-86.28	-23,400.80
Check	09/05/2020	10074	Euronev, Ltd.	September 2020 Rent	-3,146.00	-26,546.80
Check	09/05/2020	10075	JE Fuller Hydrology & Geomorpholog...	Inv.#P3247.01-9 & P3121.01-21	-20,340.81	-46,887.61
Check	09/05/2020	10076	Dayton Valley Conservation District	Lyon County Weed Abatement (FY19/20)	-14,999.95	-61,887.56
Deposit	09/12/2020			Deposit	10,897.74	-50,989.82
Check	09/12/2020	10077	King & Russo, Ltd.	Professional Services August 2020	-2,000.00	-52,989.82
Check	09/12/2020	10078	HDR Engineering, Inc.	Inv. #1200291488/Inv.#1200291490	-6,985.74	-59,975.56
Check	09/12/2020	10079	Kimley-Horn & Associates, Inc.	Inv.#17254923 Project #291417000.1	-15,396.00	-75,371.56
Deposit	09/19/2020			Deposit	179,096.73	103,725.17
Check	09/19/2020	10080	Michael Baker International, Inc.	Inv#1094141 NCC ADMP	-1,300.00	102,425.17
Check	09/19/2020	10081	Office Depot Business Credit	Acct #6011 5685 11775 7761	-65.78	102,359.39
Check	09/19/2020	10082	Charter Communications	Acct#8354110010917880	-309.94	102,049.45
Check	09/19/2020	10083	Carson City	CWSD Payroll #19	-22,238.43	79,811.02
Check	09/19/2020	ACH	U.S. Geological Survey	Inv#90842061 Qtrly Pymt JFA #19ZJFA00128	-4,222.50	75,588.52
Check	09/19/2020	ACH	U.S. Geological Survey	Inv#90842060 Qtrly Pymt JFA #18WSNV00134	-1,465.00	74,123.52
Check	09/19/2020	ACH	U.S. Geological Survey	Inv#90842062 Qtrly Pymt JFA #19ZJFA00127	-19,601.00	54,522.52
Check	09/26/2020	10084	NEON Agency	Inv#1420	-4,500.00	50,022.52
Check	09/26/2020	10085	Lumos & Assoc., Inc.	Inv#105941 Proj#9834	-6,214.75	43,807.77
Check	09/26/2020	10086	HDR Engineering, Inc.	Inv. #1200296147	-9,339.70	34,468.07
Check	09/26/2020	10087	Bank of America	SEPT 2020; Acct. #4024 4910 0003 3949	-393.69	34,074.38
Deposit	09/28/2020			Deposit	50,271.87	84,346.25
Check	09/30/2020	10089	Loren Secor	3rd Qtr Mileage Reimbursement	-14.95	84,331.30
Check	09/30/2020	10090	Catrina Schambra	3rd Qtr. Mileage Reimbursement	-12.13	84,319.17
Check	09/30/2020	10091	Brenda Hunt	3rd Qtr Mileage Reimbursement	-104.08	84,215.09
Check	09/30/2020	10092	Shane Fryer	3rd Qtr Mileage Reimbursement	-215.63	83,999.46
Check	09/30/2020	10093	Edwin James	3rd Qtr Mileage Reimbursement	-379.51	83,619.95
Total 1013-00 · Cash in Checking - U. S. Bank					83,619.95	83,619.95
<b>1014-00 · Local Gov't Inv. Pool-Regular</b>						
Deposit	09/01/2020			Interest	317.41	317.41
Total 1014-00 · Local Gov't Inv. Pool-Regular					317.41	317.41
<b>3307-00 · CC Payroll Due</b>						
General Jo...	09/05/2020			Payroll #18 (8/14/2020-8/27/2020)	-23,314.52	-23,314.52
Check	09/05/2020	10072	Carson City	Payroll #18 (8/14/20-8/27/20)	23,314.52	
Check	09/19/2020	10083	Carson City	Payroll #19 (8/28/20-9/10/20)	22,238.43	22,238.43
General Jo...	09/19/2020			Payroll #19 (8/28/2020-9/10/2020)	-22,238.43	
Total 3307-00 · CC Payroll Due						
<b>5008-00 · Alpine Co. Joint Powers contrib</b>						
Deposit	09/12/2020	266305	Alpine County	FY 2020-21 Annual Contribution	-10,897.74	-10,897.74
Total 5008-00 · Alpine Co. Joint Powers contrib					-10,897.74	-10,897.74
<b>5011-00 · Douglas County Ad Valorem</b>						
Deposit	09/19/2020	708834	Douglas County	August Ad Valorem Taxes	-179,096.73	-179,096.73
Total 5011-00 · Douglas County Ad Valorem					-179,096.73	-179,096.73
<b>5031-00 · Interest Income-LGIP Reg.</b>						
Deposit	09/01/2020			Interest	-317.41	-317.41
Total 5031-00 · Interest Income-LGIP Reg.					-317.41	-317.41
<b>6003-00 · FEMA-MAS #9</b>						
Deposit	09/28/2020		FEMA	Draw 19	-12,751.49	-12,751.49
Total 6003-00 · FEMA-MAS #9					-12,751.49	-12,751.49
<b>6005-00 · FEMA - MAS # 10</b>						
Deposit	09/28/2020		FEMA	Draw 10	-37,520.38	-37,520.38
Total 6005-00 · FEMA - MAS # 10					-37,520.38	-37,520.38
<b>7015-00 · Salaries &amp; Wages</b>						
General Jo...	09/05/2020			Salary Payroll #18 Fryer	3,098.05	3,098.05
General Jo...	09/05/2020			Salary Payroll #18 Hunt	2,774.96	5,873.01
General Jo...	09/05/2020			Salary Payroll #18 James	5,643.70	11,516.71
General Jo...	09/05/2020			Salary Payroll #18 Neddenriep	2,046.08	13,562.79
General Jo...	09/05/2020			Salary Payroll #18 Schambra	2,432.72	15,995.51
General Jo...	09/19/2020			Salary Payroll #19 Fryer	3,078.89	19,074.40
General Jo...	09/19/2020			Salary Payroll #19 Hunt	2,808.97	21,883.37
General Jo...	09/19/2020			Salary Payroll #19 James	5,643.70	27,527.07
General Jo...	09/19/2020			Salary Payroll #19 Neddenriep	2,013.10	29,540.17
General Jo...	09/19/2020			Salary Payroll #19 Schambra	2,432.73	31,972.90

Type	Date	Num	Name	Memo	Paid Amount	Balance
Total 7015-00 · Salaries & Wages					31,972.90	31,972.90
<b>7020-00 · Employee Benefits</b>						
General Jo...	09/05/2020			Benies Payroll #18 Fryer	495.07	495.07
General Jo...	09/05/2020			Benies Payroll #18 Hunt	1,396.10	1,891.17
General Jo...	09/05/2020			Benies Payroll #18 James	2,295.28	4,186.45
General Jo...	09/05/2020			Benies Payroll #18 Neddenriep	1,030.93	5,217.38
General Jo...	09/05/2020			Benies Payroll #18 Schambra	1,046.55	6,263.93
General Jo...	09/19/2020			Benies Payroll #19 Fryer	491.87	6,755.80
General Jo...	09/19/2020			Benies Payroll #19 Hunt	1,406.53	8,162.33
General Jo...	09/19/2020			Benies Payroll #19 James	2,295.28	10,457.61
General Jo...	09/19/2020			Benies Payroll #19 Neddenriep	1,020.81	11,478.42
General Jo...	09/19/2020			Benies Payroll #19 Schambra	1,046.55	12,524.97
Total 7020-00 · Employee Benefits					12,524.97	12,524.97
<b>7101-00 · Director's Fees</b>						
<b>7101-01 · Director Benefits</b>						
General Jo...	09/05/2020			Director Benies Payroll #18 Bonkowski	2.32	2.32
General Jo...	09/05/2020			Director Benies Payroll #18 Erquiaga	2.32	4.64
General Jo...	09/05/2020			Director Benies Payroll #18 Giomi	1.16	5.80
General Jo...	09/05/2020			Director Benies Payroll #18 Gray	1.16	6.96
General Jo...	09/05/2020			Director Benies Payroll #18 Jacobs	2.32	9.28
General Jo...	09/05/2020			Director Benies Payroll #18 Penzel	1.16	10.44
General Jo...	09/05/2020			Director Benies Payroll #18 Schank		10.44
General Jo...	09/05/2020			Director Benies Payroll #18 Stodieck		10.44
General Jo...	09/05/2020			Director Benies Payroll #18 Thaler	1.16	11.60
General Jo...	09/05/2020			Director Benies Payroll #18 Walsh	1.16	12.76
General Jo...	09/05/2020			Director Benies Payroll #18 Workman	2.32	15.08
General Jo...	09/19/2020			Director Benies Payroll #19 Bonkowski		15.08
General Jo...	09/19/2020			Director Benies Payroll #19 Erquiaga		15.08
General Jo...	09/19/2020			Director Benies Payroll #19 Giomi		15.08
General Jo...	09/19/2020			Director Benies Payroll #19 Gray		15.08
General Jo...	09/19/2020			Director Benies Payroll #19 Jacobs		15.08
General Jo...	09/19/2020			Director Benies Payroll #19 Penzel		15.08
General Jo...	09/19/2020			Director Benies Payroll #19 Schank		15.08
General Jo...	09/19/2020			Director Benies Payroll #19 Stodieck		15.08
General Jo...	09/19/2020			Director Benies Payroll #19 Thaler		15.08
General Jo...	09/19/2020			Director Benies Payroll #19 Walsh		15.08
General Jo...	09/19/2020			Director Benies Payroll #19 Workman		15.08
Total 7101-01 · Director Benefits					15.08	15.08
<b>7101-00 · Director's Fees - Other</b>						
General Jo...	09/05/2020			Director Fee Payroll #18 Bonkowski	160.00	160.00
General Jo...	09/05/2020			Director Fee Payroll #18 Erquiaga	160.00	320.00
General Jo...	09/05/2020			Director Fee Payroll #18 Giomi	80.00	400.00
General Jo...	09/05/2020			Director Fee Payroll #18 Gray	80.00	480.00
General Jo...	09/05/2020			Director Fee Payroll #18 Jacobs	160.00	640.00
General Jo...	09/05/2020			Director Fee Payroll #18 Penzel	80.00	720.00
General Jo...	09/05/2020			Director Fee Payroll #18 Schank		720.00
General Jo...	09/05/2020			Director Fee Payroll #18 Stodieck		720.00
General Jo...	09/05/2020			Director Fee Payroll #18 Thaler	80.00	800.00
General Jo...	09/05/2020			Director Fee Payroll #18 Walsh	80.00	880.00
General Jo...	09/05/2020			Director Fee Payroll #18 Workman	160.00	1,040.00
General Jo...	09/19/2020			Director Fee Payroll #19 Bonkowski		1,040.00
General Jo...	09/19/2020			Director Fee Payroll #19 Erquiaga		1,040.00
General Jo...	09/19/2020			Director Fee Payroll #19 Giomi		1,040.00
General Jo...	09/19/2020			Director Fee Payroll #19 Gray		1,040.00
General Jo...	09/19/2020			Director Fee Payroll #19 Jacobs		1,040.00
General Jo...	09/19/2020			Director Fee Payroll #19 Penzel		1,040.00
General Jo...	09/19/2020			Director Fee Payroll #19 Schank		1,040.00
General Jo...	09/19/2020			Director Fee Payroll #19 Stodieck		1,040.00
General Jo...	09/19/2020			Director Fee Payroll #19 Thaler		1,040.00
General Jo...	09/19/2020			Director Fee Payroll #19 Walsh		1,040.00
General Jo...	09/19/2020			Director Fee Payroll #19 Workman		1,040.00
Total 7101-00 · Director's Fees - Other					1,040.00	1,040.00
Total 7101-00 · Director's Fees					1,055.08	1,055.08
<b>7103-00 · Office Supplies</b>						
Check	09/05/2020	10073	Konica Minolta Business Solutions U...	August Copies	86.28	86.28
Check	09/19/2020	10081	Office Depot Business Credit	flash drives & copier paper	65.78	152.06
General Jo...	09/30/2020			September Copies	-35.84	116.22
Total 7103-00 · Office Supplies					116.22	116.22
<b>7104-00 · Postage</b>						
Check	09/26/2020	10087	Bank of America	SEPT-Postage	85.25	85.25

Type	Date	Num	Name	Memo	Paid Amount	Balance
Total 7104-00 · Postage					85.25	85.25
<b>7105-00 · Rent</b>						
Check	09/05/2020	10074	Euronev, Ltd.	September 2020 Rent	3,146.00	3,146.00
Total 7105-00 · Rent					3,146.00	3,146.00
<b>7106-00 · Telephone/Internet</b>						
Check	09/19/2020	10082	Charter Communications	SEPT Phone/Internet Svcs.	309.94	309.94
Check	09/26/2020	10087	Bank of America	SEPT ZOOM.US	14.99	324.93
Check	09/26/2020	10087	Bank of America	SEPT-Microsoft Internet	5.00	329.93
Check	09/26/2020	10087	Bank of America	SEPT- Microsoft 365	62.50	392.43
Check	09/26/2020	10087	Bank of America	Website software upgrade	41.00	433.43
Total 7106-00 · Telephone/Internet					433.43	433.43
<b>7107-00 · Travel-transport/meals/lodging</b>						
<b>7107-02 Staff Indirect Mileage</b>						
Check	09/30/2020	10090	Catrina Schambra	3rd Qtr. Mileage Reimbursement	12.13	12.13
Check	09/30/2020	10093	Edwin James	3rd Qtr Mileage Reimbursement	110.40	122.53
Total 7107-02 Staff Indirect Mileage					122.53	122.53
<b>7107-01 · Car Allowance</b>						
General Jo...	09/05/2020			Car Allowance Payroll #18 James		
General Jo...	09/19/2020			Car Allowance Payroll #19 James		
Total 7107-01 · Car Allowance						
<b>7107-00 · Travel-transport/meals/lodging - Other</b>						
Check	09/30/2020	10093	Edwin James	3rd Qtr Mileage Reimbursement	103.50	103.50
Total 7107-00 · Travel-transport/meals/lodging - Other					103.50	103.50
Total 7107-00 · Travel-transport/meals/lodging					226.03	226.03
<b>7111-00 · Office Equipment</b>						
Check	09/26/2020	10087	Bank of America	4 webcams/1 headset	184.95	184.95
Total 7111-00 · Office Equipment					184.95	184.95
<b>7116-00 · Legal</b>						
Check	09/12/2020	10077	King & Russo, Ltd.	Professional Services August 2020	2,000.00	2,000.00
Total 7116-00 · Legal					2,000.00	2,000.00
<b>7120-00 · Integrated Watershed Programs</b>						
<b>7120-33 · Watershed Coord IV 2019-22</b>						
<b>7120-34 · WS Coord Grant MATCH 2019-21</b>						
<b>7120-35 · WS COORD MATCH - Travel</b>						
Check	09/30/2020	10091	Brenda Hunt	3rd Qtr Mileage Reimbursement	62.10	62.10
Total 7120-35 · WS COORD MATCH - Travel					62.10	62.10
Total 7120-34 · WS Coord Grant MATCH 2019-21					62.10	62.10
<b>7120-38 · WS COORD-REIMBURSABLE</b>						
<b>7120-43 · WS COORD REIMB- NEON</b>						
Check	09/26/2020	10084	NEON Agency	WS Moments Campaign	4,500.00	4,500.00
Total 7120-43 · WS COORD REIMB- NEON					4,500.00	4,500.00
Total 7120-38 · WS COORD-REIMBURSABLE					4,500.00	4,500.00
<b>7120-33 · Watershed Coord IV 2019-22 - Other</b>						
General Jo...	09/30/2020			September Copies	8.79	8.79
Total 7120-33 · Watershed Coord IV 2019-22 - Other					8.79	8.79
Total 7120-33 · Watershed Coord IV 2019-22					4,570.89	4,570.89
Total 7120-00 · Integrated Watershed Programs					4,570.89	4,570.89
<b>7126-00 · NDEP Drone Sub-Grant 2020</b>						
Check	09/30/2020	10089	Loren Secor	3rd Qtr. Mileage Reimbursement	14.95	14.95
Check	09/30/2020	10091	Brenda Hunt	3rd Qtr Mileage Reimbursement	41.98	56.93
Check	09/30/2020	10092	Shane Fryer	3rd Qtr Mileage Reimbursement	215.63	272.56
Check	09/30/2020	10093	Edwin James	3rd Qtr Mileage Reimbursement	92.58	365.14
Total 7126-00 · NDEP Drone Sub-Grant 2020					365.14	365.14
<b>7404-00 · Noxious Weeds Control-CR Wtrshd</b>						
<b>7404-04 · Noxious Weed Control-Lyon Co.</b>						
Check	09/05/2020	10076	Dayton Valley Conservation District	Inv#1 -1/1/2020-3/31/2020 (FY 19/20)	2,278.70	2,278.70

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## CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND

10/10/20

## Transaction Detail by Account

Cash Basis

September 2020

Type	Date	Num	Name	Memo	Paid Amount	Balance
Check	09/05/2020	10076	Dayton Valley Conservation District	Inv# 1 - 4/1/2020-6/30/2020 (FY 19/20) FINAL/CLO...	12,721.25	14,999.95
			Total 7404-04 · Noxious Weed Control-Lyon Co.		14,999.95	14,999.95
			Total 7404-00 · Noxious Weeds Control-CR Wtrshd		14,999.95	14,999.95
			<b>7437-00 · FEMA MAS #9</b>			
			<b>7437-01 · South Dayton Valley ADMP(JEF)</b>			
Check	09/05/2020	10075	JE Fuller Hydrology & Geomorpholog...	South Dayton ADMP 8/1/20-8/31/20	2,773.36	2,773.36
			Total 7437-01 · South Dayton Valley ADMP(JEF)		2,773.36	2,773.36
			<b>7437-02 · North CC ADMP (MB)</b>			
Check	09/19/2020	10080	Michael Baker International, Inc.	NCC ADMP thru 8/30/2020	1,300.00	1,300.00
			Total 7437-02 · North CC ADMP (MB)		1,300.00	1,300.00
			<b>7437-03 · Pinenut Cr. Restudy-Remap.(HDR)</b>			
Check	09/12/2020	10078	HDR Engineering, Inc.	Pinenut Creek LOMR 8/2/20-8/29/20	6,626.80	6,626.80
			Total 7437-03 · Pinenut Cr. Restudy-Remap.(HDR)		6,626.80	6,626.80
			<b>7437-00 · FEMA MAS #9 - Other</b>			
Check	09/30/2020	10093	Edwin James	3rd Qtr Mileage Reimbursement	73.03	73.03
General Jo...	09/30/2020			September Copies	8.12	81.15
			Total 7437-00 · FEMA MAS #9 - Other		81.15	81.15
			Total 7437-00 · FEMA MAS #9		10,781.31	10,781.31
			<b>7438-00 · BOR WaterSMART Market Program</b>			
			<b>7438-01 · Water Mktg Study-LUMOS 2019-21</b>			
Check	09/26/2020	10085	Lumos & Assoc., Inc.	Professional Services 8/8/20-9/4/20	6,214.75	6,214.75
			Total 7438-01 · Water Mktg Study-LUMOS 2019-21		6,214.75	6,214.75
			Total 7438-00 · BOR WaterSMART Market Program		6,214.75	6,214.75
			<b>7439-00 · FEMA MAS #10</b>			
			<b>7439-01 · Carson Valley Flood Model (HDR)</b>			
Check	09/12/2020	10078	HDR Engineering, Inc.	CV Model Response 8/2/20-8/29/20	358.94	358.94
			Total 7439-01 · Carson Valley Flood Model (HDR)		358.94	358.94
			<b>7439-02 · West CC Study (Kimley-Horn)</b>			
Check	09/12/2020	10079	Kimley-Horn & Associates, Inc.	FEMA 10-West CC ADP- Svcs thru August 31, 2020	15,396.00	15,396.00
			Total 7439-02 · West CC Study (Kimley-Horn)		15,396.00	15,396.00
			<b>7439-03 · RuhenStroth ADMP (Fuller)</b>			
Check	09/05/2020	10075	JE Fuller Hydrology & Geomorpholog...	Ruhenstroth ADMP 8/1/20-8/31/20	17,567.45	17,567.45
			Total 7439-03 · RuhenStroth ADMP (Fuller)		17,567.45	17,567.45
			<b>7439-05 · Ch Cty Flood Maps (HDR)</b>			
Check	09/26/2020	10086	HDR Engineering, Inc.	ChCty Map Revision 8/2/20-8/29/20	9,339.70	9,339.70
			Total 7439-05 · Ch Cty Flood Maps (HDR)		9,339.70	9,339.70
			<b>7439-00 · FEMA MAS #10 - Other</b>			
General Jo...	09/30/2020			September Copies	10.87	10.87
			Total 7439-00 · FEMA MAS #10 - Other		10.87	10.87
			Total 7439-00 · FEMA MAS #10		42,672.96	42,672.96
			<b>7440-00 · FEMA - MAS #11</b>			
General Jo...	09/30/2020			September Copies	8.06	8.06
			Total 7440-00 · FEMA - MAS #11		8.06	8.06
			<b>7500-00 · USGS Stream Gage Contract</b>			
			<b>7500-03 · USGS Stream Flow Gauges 2019-21</b>			
Check	09/19/2020	ACH	U.S. Geological Survey	Qtrly Pymt JFA #19ZJJFA00127	19,601.00	19,601.00
			Total 7500-03 · USGS Stream Flow Gauges 2019-21		19,601.00	19,601.00
			Total 7500-00 · USGS Stream Gage Contract		19,601.00	19,601.00
			<b>7508-00 · USGS Do.Co.WQ &amp; GW Monitoring</b>			
			<b>7508-03 · DoCo WQ/GW Mon. 2019-21</b>			
Check	09/19/2020	ACH	U.S. Geological Survey	Qtrly Pymt JFA #19ZJJFA00128	4,222.50	4,222.50
			Total 7508-03 · DoCo WQ/GW Mon. 2019-21		4,222.50	4,222.50

For internal &amp; discussion purposes only.

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10/10/20  
Cash Basis

CARSON WATER SUBCONSERVANCY DISTRICT - GENERAL FUND  
Transaction Detail by Account  
September 2020

Type	Date	Num	Name	Memo	Paid Amount	Balance
Total 7508-00 · USGS Do.Co.WQ & GW Monitoring					4,222.50	4,222.50
7524-00 · USGS-GW Lvl & WQ in Ch.Co.						
7524-02 · USGS-GW Lvl & WQ-ChCo 2018-22						
Check	09/19/2020	ACH	U.S. Geological Survey	Qtrly Pymt JFA #18WSNV00134	1,465.00	1,465.00
Total 7524-02 · USGS-GW Lvl & WQ-ChCo 2018-22					1,465.00	1,465.00
Total 7524-00 · USGS-GW Lvl & WQ in Ch.Co.					1,465.00	1,465.00
<b>TOTAL</b>						

## **AGENDA ITEM #9**

# CARSON WATER SUBCONSERVANCY DISTRICT

**TO:** BOARD OF DIRECTORS

**FROM:** EDWIN D. JAMES

**DATE:** October 21, 2020

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**SUBJECT:** Agenda Item # 9– For Possible Action: Approval of Contract #2020-15  
CARDNO - Clear Creek Floodplain Restudy and Remap in an amount not to exceed \$161,360.

**DISCUSSION:** Attached is a contract with Cardno to conduct a Restudy and Remap of the Clear Creek Floodplain. This project is being funded by a grant that CWSD received from FEMA's Cooperating Technical Partner (CTP) program. The Scope of Work, Schedule, and costs are shown in Exhibit A.

**STAFF RECOMMENDATION:** Authorize the General Manager to sign the attached agreement.



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# Agreement

Carson Water Subconservancy District (hereinafter "CWSD") and Cardno (hereinafter "CARDNO") hereby enter into an agreement whereby **CARDNO** will conduct **Clear Creek Restudy and Remap Project** in accordance with and subject to the following terms and conditions:

1) **ASSIGNMENT**

CARDNO's assignment shall relate to the following product(s) or service(s):

**Clear Creek Restudy and Remap Project**, which is further identified and described in attached Exhibits A, B & C. The compensation paid to CARDNO for the **Clear Creek Restudy and Remap Project** shall not exceed \$161,360.

2) **INDEMNITIES**

(a) To the fullest extent permitted by law CARDNO shall indemnify, hold harmless and defend, not excluding the CWSD's right to participate, the CWSD from and against all liability, claims, actions, damages, losses, and expenses, including, without limitation, reasonable attorneys' fees and costs, arising out of any alleged negligent or willful acts or omissions of CARDNO, its officers, employees and agents.

(b) CWSD will indemnify and hold CARDNO harmless with respect to any claims or actions instituted by third parties which result from the use by CARDNO of material furnished by CWSD or where material created by CARDNO is substantially changed by CWSD. Information or data obtained by CARDNO from CWSD to substantiate claims made in advertising shall be deemed to be "materials furnished by CWSD."

(c) In the event of any proceeding against CWSD by any regulatory agency or in the event of any court action or self-regulatory action challenging any advertising prepared by CARDNO, CARDNO shall assist in the preparation of the defense of such action or proceeding and cooperate with CWSD and CWSD's attorneys. CWSD will reimburse CARDNO any out-of-pocket costs CARDNO may incur in connection with any such action or proceeding.

(d) Neither party waives any right or defense to indemnification that may exist in law or equity.

3) **INSURANCE**

Unless otherwise required in this Agreement, the CWSD and CARDNO shall, during the performance of the services as provided herein, maintain insurance of the types and amounts specified, and with insurers satisfactory to the other party as follows:

(a) Comprehensive General Liability including \$1,000,000 per occurrence for bodily injury and property damage; \$1,000,000 Products/Completed Operations Aggregate; \$1,000,000 General Aggregate over all interests.

(b) Comprehensive Automobile Liability including coverage for owned, non-owned, and hired vehicles: \$1,000,000 Bodily Injury, \$1,000,000 Property Damage.

(c) CARDNO shall name CWSD as an additional insured and deliver a certificate to CWSD.

4) **TERM OF AGREEMENT**

(a) The term of this Agreement will commence on the date of the last signature executed hereon and will continue in full force and effect until 7/22/2022, unless extended by written agreement of the parties.

(b) CARDNO will submit monthly invoices with a description of activities performed.

(c) In the event of termination of this Agreement, the rights, duties, and responsibilities of CARDNO shall continue in full force during the period of notice.

(d) If circumstances arise that require a time extension to complete the project, the CWSD Board



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grants the General Manager authority to do so in a written notice to CARDNO.

5) **PERFORMANCE**

Should CARDNO fail to perform any of the services provided for in Exhibit "A", CWSD shall notify CARDNO of such non-performance and allow thirty (30) days for CARDNO to remedy the performance. If the performance has not been satisfied within thirty days, CWSD may withhold payment only for the services not performed in accordance with this Agreement.

6) **SUPPLEMENTS TO AGREEMENT**

The following Exhibits are an integral part of this Agreement:

- (a) Exhibit A CARDNO Scope of Work
- (b) Exhibit B CARDNO Budget
- (c) Exhibit C CARDNO Proposed Schedule

7) **INDEPENDENT CONTRACTOR**

CARDNO acknowledges that it is furnishing the services contemplated by this Agreement hereto as an independent contractor, and not as an employee, or agent of CWSD or any of its affiliates.

8) **OWNERSHIP**

Any reports, histories, studies, tests, manuals, instructions, photographs, negatives, blue prints, plans, maps, data, system designs, computer code (which are intended to be considered under this Agreement), or any other documents or drawings, prepared, or in the course of preparation, by CARDNO (or its subcontractors) in performance of its obligations under this Agreement shall be the exclusive property of CWSD and all such materials shall be delivered into CWSD's possession by CARDNO upon completion, termination, or cancellation of this Agreement. CARDNO shall not use, willingly allow, or cause to have such materials used for any purpose other than performance of CARDNO's obligations under this Agreement without the prior written consent of CWSD.

9) **AGREEMENT TERMINATION**

- (a) Termination Without Cause. Any discretionary or vested right of renewal notwithstanding, this Agreement may be terminated upon written notice by mutual consent of both parties or unilaterally by either party without cause.
- (b) Cause Termination for Default or Breach. A default or breach may be declared with or without termination. This Agreement may be terminated by either party upon written notice of default or breach to the other party as follows:
  - 1) If CARDNO fails to provide or satisfactorily perform any of the conditions, work, deliverables, goods, or services called for by this Agreement within the time requirements specified in this Agreement or within any granted extension of those time requirements; or
  - 2) If any State, county, city, or federal license, authorization, waiver, permit, qualification or certification required by statute, ordinance, law, or regulation to be held by CARDNO to provide the goods or services required by this Agreement is for any reason denied, revoked, debarred, excluded, terminated, suspended, lapsed, or not renewed; or
  - 3) If CARDNO becomes insolvent, subject to receivership, or becomes voluntarily or involuntarily subject to the jurisdiction of the bankruptcy court; or
  - 4) If CWSD materially breaches any material duty under this Agreement and any such breach impairs CARDNO's ability to perform; or
- (c) Time to Correct. Termination upon declared default or breach may be exercised only after service of formal written notice and the subsequent failure of the defaulting party within thirty (30) calendar days of receipt of that notice to provide evidence, satisfactory to the aggrieved party, showing that the declared default or breach has been corrected.



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(d) Winding Up Affairs Upon Termination. In the event of termination of this Agreement for any reason, the parties agree that the provisions of this Section survive termination:

- 1) The parties shall account for and properly present to each other all claims for fees and expenses and pay those which are undisputed and otherwise not subject to set off under this Agreement. Neither party may withhold performance of winding up provisions solely based on nonpayment of fees or expenses accrued up to the time of termination;
- 2) CARDNO shall satisfactorily complete work in progress at the agreed rate (or a pro rata basis if necessary) if so requested by the CWSD;
- 3) CARDNO shall execute any documents and take any actions necessary to effectuate an assignment of this Agreement if so requested by the CWSD; and
- 4) CARDNO shall preserve, protect, and promptly deliver into CWSD possession all information in accordance with Section 8, Ownership.

10) **RIGHTS UPON TERMINATION**

Upon termination of this Agreement, CARDNO shall transfer, assign and make available to CWSD or CWSD's representative, all property and materials in their possession or control belonging to and paid for by CWSD, subject, however, to any rights of third parties of which CARDNO has informed CWSD.

11) **BREACH REMEDIES.**

Failure of either party to perform any obligation of this Agreement shall be deemed a breach. Except as otherwise provided for by law or this Agreement, the rights and remedies of the parties shall not be exclusive and are in addition to any other rights and remedies provided by law or equity, including but not limited to actual damages. If the court awards reasonable attorney's fees to the prevailing party, in an amount to be determined by the Court.

The parties acknowledge or agree that the contract was written and agreed by both parties.

Prior to the initiation of any litigation the parties agree to mediate.

12) **PUBLIC RECORDS**

Pursuant to NRS 239.010, information or documents received from CARDNO may be open to public inspection and copying. CWSD has a legal obligation to disclose such information unless a particular record is made confidential by law. CARDNO may label specific parts of an individual document as a "trade secret" or "confidential" in accordance with NRS 333.333, provided that CARDNO thereby agrees to indemnify and defend CWSD for honoring such a designation. The failure to so label any document that is released by CWSD shall constitute a complete waiver of any and all claims for damages caused by any release of the records.

13) **NOTICES**

Any notice pursuant to this Agreement will be addressed to the following parties:

**Attn.: Edwin James**  
**Carson Watershed Subconservancy District**  
**777 E William Street, Suite 110 A**  
**Carson City, NV 89701**

**Attn.: Coleen Shade**  
**Cardno**  
**2890 Gateway Oaks Drive Suite 200**  
**Sacramento, California 95833**

14) **FORCE MAJEURE**

Neither party shall be held responsible for any delay or failure in performance of any part of this Agreement to the extent such delay or failure is caused by fire, flood, explosion, war, embargo, government requirement, civil or military authority, act of God, pandemic or other similar causes beyond its control and without the fault or negligence of the delayed or non-performing party. The affected party will notify the other party in writing within ten (10) days after the beginning of any such





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## EXHIBIT A – Scope of Work

This document summarizes the scope of services that Cardno will provide for the Restudy and Remap Clear Creek Project. The Project consist of restudy and remapping flood hazards in Clear Creek and a portion of Prison Hill watersheds (see Figure 1). This drainage area consists of approximately 14,821 acres and is in the southern portion of Carson City and northern Douglas County. Restudy and remapping will be performed for Clear Creek and Prison Hill watershed areas within Carson City and Douglas County.

Coleen Shade, a natural resources and land use planner with over 30 years of diverse project management experience, will be managing the project and leading coordination with CWSD, Carson City, Douglas County, and FEMA. Mark Gookin, PE, CFM, who has over 30 years of FEMA floodplain experience in the region will be the technical advisor. Andrea Jacobsma, PE, CFM, who managed the adjacent Voltaire and Saliman Restudy and Remap, will be the technical lead on the Project. The following key staff will support Project efforts:

- Brandon Wong, CFM – Deputy Project Manager, hydrologic and hydraulic modeling, and floodplain mapping
- Claire Archer, PhD – hydrologic and hydraulic modeling and floodplain mapping
- Taylor Adams, EIT – hydrologic and hydraulic modeling, and floodplain mapping

Our scope of work is presented below (Exhibit A). Our budget is attached as Exhibit B and our schedule is attached as Exhibit C.

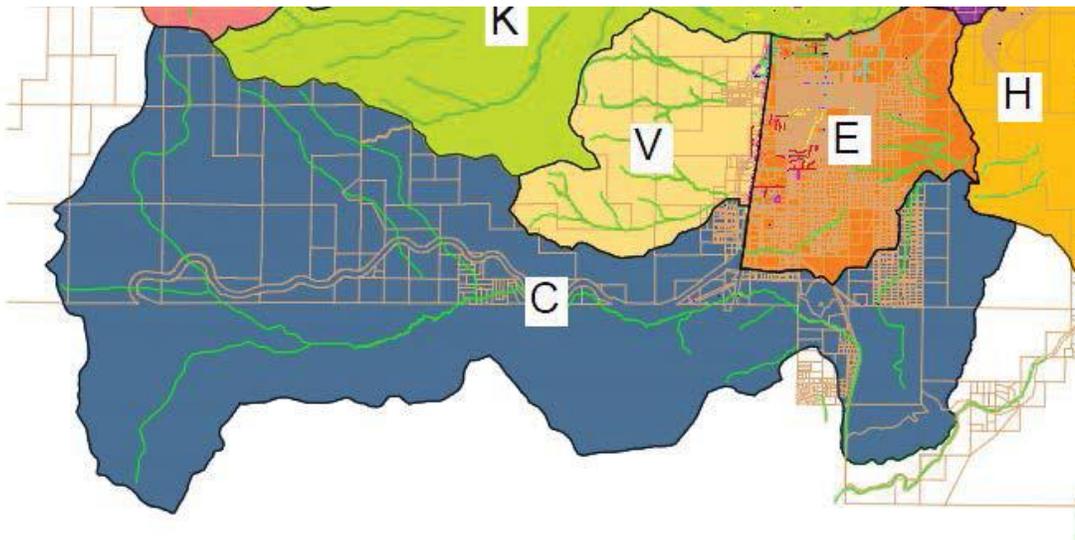


Figure 1. Clear Creek & a portion of Prison Hill (in blue)

The services requested include the following tasks:

- Survey Data Capture
- Develop topographic data



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- Develop hydrologic data
- Develop hydraulic data
- Perform floodplain mapping

Project management will be incorporated into each task as described below.

## Project Management

Effective communication is fundamental to good project management. First and foremost is the regular communication between the CWSD and its partners, Carson City and Douglas County, and the Cardno team. As previously mentioned, Coleen Shade will be the project manager and primary point of contact. As project manager, Coleen will maintain responsibility for client service, contract terms, commitment of staff resources, and scheduling. She will be supported by Mark Gookin, PE, CFM, our principal-in-charge, who will provide strategic oversight and technical guidance to the team, as well as quality control for the overall contract. Andrea Jacobsma, PE, CFM, the projects technical lead, will be responsible for the gathering of pertinent data and the production and delivery of all technical data leading up to and including the new floodplain mapping. In addition to assisting Andrea, deputy project manager Brandon Wong will assist with deliverable tracking and status, communications, and final report production.

- Progress reports
  - The project coordinator will provide monthly invoices and progress reports to CWSD by the 15<sup>th</sup> of every month in contract.
- Virtual meetings
  - Kickoff Meeting (1)
    - After receiving a notice to proceed, the project manager, deputy project manager, and technical lead will participate in a virtual kickoff meeting with CWSD, Carson City, and Douglas County representatives.
  - Progress Update Meeting (1)
    - Prior to performing floodplain mapping, the project manager, deputy project manager, and technical lead will participate in a virtual meeting with CWSD, Carson City, and Douglas County representatives to review hydrologic and hydraulic model results.

### **Deliverables:**

- Monthly invoices and progress reports in digital format
- Agendas (2) and meeting summaries (2) for kickoff meeting and progress update meeting in digital format
- PowerPoint presentation for progress update meeting showing hydrologic and hydraulic model results.



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## Survey Data Capture

Cardno will use existing LiDAR data collected by the USGS in 2017 for all Project topography. Cardno will request as-built plans of hydraulic structures within the study area from the Nevada Department of Transportation, Carson City, and Douglas County for incorporation into the hydraulic model. Cardno will generate a GIS database of existing hydraulic structures within the study area and determine if additional structures may exist where no as-built data is available. In this case, Cardno will generate a KMZ file depicting requested survey locations.

### Assumptions:

- The extents of additional field survey necessary is unknown at this time. Cardno has allocated \$7,500 for additional field survey in our budget. Should the necessary survey efforts exceed this amount, then an augmentation to our budget will be necessary.
- Hydraulic structures are assumed to exist where roads or trails cross the Clear Creek and Prison Hill drainage corridors or as otherwise visible within the study area floodplain using open-source satellite aerial imagery.

### Deliverables:

- KMZ file of requested survey locations (if applicable)

Cardno will upload the following digital data to the MIP in accordance with current Data Capture Standards

- Task Documentation
  - Project Narrative – Word
  - Certification of Completeness – .PDF
  - Survey Metadata – .XML
- Correspondence
  - Letters; transmittals; memoranda; general status reports and queries; SPRs; technical issues; direction by FEMA; and internal communications, routing slips, and notes – Word/.PDF
- Photos
  - Digital Photographs – .JPEG/.TIFF/.BMP
- Sketches
  - Digital Sketches – .JPEG/.TIFF/.BMP/.PDF
- Survey Data
  - Survey Files – .MDB/.PGDB/.fgDB/.XLS/.XLSX/.DBF/.ASCII/.CSV
- Supplemental Data
  - Any additional Survey data collected for use in the preparation of this Flood Risk Project (e.g., survey notebooks, etc.) – Format as received
- As-Built



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- As-Built Data – Format as received
- Validation
  - Any review documents and/or checklists used during the validation of Survey Data
  - Capture submittals – Word/.XLS/.XLSX/.PDF

## Develop Topographic Data

Cardno will use existing LiDAR data collected by the USGS in 2017 for all Project topography.

### Assumptions:

- Additional topographic survey will not be required and is not included in this scope of work.
- Mapping Information Platform (MIP) access will be granted to Cardno prior to their uploading digital data to the MIP (all tasks).
- MIP deliverables will not be uploaded until the LOMR request is approved by FEMA (all tasks).
- Topographic Data Capture deliverables may need to be submitted on media if they exceed MIP upload capacity.
- The Data Capture Technical Reference (FEMA 2019) states that if existing elevation data are used, Mapping Partners only need to submit the bare earth data used for the Flood Risk Project and documentation for the data; therefore, deliverables have been modified to reflect this requirement.

### Deliverables:

Cardno will upload the following digital data to the MIP in accordance with current Data Capture Standards.

- Correspondence
  - Documentation of LiDAR data
- Source
  - Bare\_Earth\_DEM
    - DEMs – Esri grid/GeoTIFF/ASCII grid
    - DEM Tile Index – .SHP/.PGDB/.fgDB

## Develop Hydrologic Data

The methodology to be used to develop hydrologic data has been agreed upon by Carson City and is as follows. For Clear Creek, gage data from USGS Gage 10310500 will be used for a stream gage analysis in accordance with USGS Bulletin 17C to determine hydrology upstream of the gage. Downstream of USGS Gage 10310500, hydrology will be determined by weighting results from the regional regression equation based on the difference in drainage area between the gaging station and the ungaged segment of Clear Creek (downstream of the gage to the confluence with the Carson River). For Prison Hill, an XPSWMM hydrologic model will be developed to determine hydrology within the Prison Hill



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watershed. Cardno will develop Flood discharge rates for the 10%, 4%, 2%, 1%, “1% plus” and 0.2% annual chance events.

## Assumptions:

- Spatial files not included in deliverables because development of a FIRM Database is not required for this Project.
- Independent QA/QC is not included in deliverables because FEMA is the responsible mapping partner for this effort.

## Deliverables

Cardno will upload the following digital data to the MIP in accordance with current Data Capture Standards

- Task Documentation
  - Hydrology Report – Word and .PDF
  - Draft FIS Section 5.1 – Word and .PDF
  - Project Narrative – Word
  - Certification of Completeness – .PDF
  - Hydrology Metadata – .XML
- Correspondence
  - Letters; transmittals; memoranda; general status reports and queries; SPRs; technical issues; direction by FEMA; and internal communications, routing slips, and notes – Word/.PDF
- Watershed\_Name
  - Simulations
    - Model input and output files – Native format
    - Readme file explaining contents of each named file – .TXT
  - Supplemental\_Data
    - Database file(s) and/or spatial files such as data and analyses for stream and rainfall gages and computations for regional regression equations such as output from USGS PeakFQ, NFF or NSS computer programs – Native format
    - Any additional Hydrology data collected for use in the preparation of this Flood Risk Project – Format as received
- Validation
  - Any review documents and/or checklists used during the validation of Hydrology Data Capture submittals – Word/.XLS/.XLSX/.PDF

## Develop Hydraulic Data



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Cardno will develop a HEC-RAS model for Clear Creek and the Prison Hill drainage. Cardno will consult with FEMA regarding model methodology (1D and/or 2D) and will select the methodology for floodway analysis and mapping based on direction from FEMA. Cardno will perform a floodway analysis, generate a digital work map of the preliminary draft regulatory floodway boundaries, and conduct a virtual review meeting with Carson City to review the digital work map. After the meeting, Cardno will revise the preliminary draft regulatory floodway boundaries as necessary per Carson City's comments and generate a digital work map with the draft regulatory floodway boundaries for which Cardno will receive approval from Carson City prior to submitting the LOMR request to FEMA.

## Assumptions:

- No revisions to the floodway will be made upstream of Bigelow Drive.
- Spatial files not included in deliverables because development of a FIRM Database is not required for this Project.
- Independent QA/QC is not included in deliverables because FEMA is the responsible mapping partner for this effort.

## Deliverables:

- Digital work map of preliminary regulatory floodway (preliminary draft and draft)
- Virtual meeting to review floodway with Carson City

Cardno will upload the following digital data to the MIP in accordance with current Data Capture Standards.

- Task Documentation
  - Hydraulics Report – Word and .PDF
  - Draft FIS Section 5.2 – Word and .PDF
  - Project Narrative – Word
  - Certification of Completeness – .PDF
  - Hydraulics Metadata – .XML
- Correspondence
  - Letters; transmittals; memoranda; general status reports and queries; SPRs; technical issues; direction by FEMA; and internal communications, routing slips, and notes – Word/.PDF
- Stream\_Name (Station)
  - Simulations
    - Model input and output files for the 10%, 4%, 2%, 1%, "1% plus" and 0.2% annual chance events – Native format
    - Readme file explaining contents of each named file – .TXT
- Profiles
  - Profiles MDB/.DXF/.DWG



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- FWDT
  - Floodway Data Tables – .MDB/.XLS/.XLSX/.DBF
  - Flood Hazard Data Tables – .MDB/.XLS/.XLSX/.DBF
- Supplemental\_Data
  - Any additional Hydraulics data collected for use in the preparation of this Flood Risk Project – Format as received
- Validation
  - - Any review documents and/or checklists used during the validation of Hydraulics Data Capture submittals – Word/.XLS/.XLSX/.PDF

## Perform Floodplain Mapping

Cardno will delineate the 1% and 0.2% annual chance floodplain boundaries and the regulatory floodway boundaries downstream of Bigelow Drive. Cardno will generate a KMZ of the preliminary draft floodplain mapping (extents and zones) showing no change, increase, and decrease from current mapping and conduct a virtual review meeting with Carson City. Cardno will revise the preliminary draft revised floodplain mapping per Carson City's comments and generate a KMZ of the draft floodplain mapping for which Cardno will receive approval from Carson City prior to submitting the LOMR request. Cardno will submit an MT-2 Application for Letters of Map Revision to FEMA.

### Assumptions:

- The existing floodway configuration will be maintained and no revisions to the floodway will be made upstream of Bigelow Drive.
- Spatial files are not included in deliverables because development of a FIRM Database is not required for this Project.
- Independent QA/QC is not included in deliverables because FEMA is the responsible mapping partner for this effort.
- Application fee (if applicable) is not included in the budget (Exhibit X)
- Cardno will revise the application based on comments from FEMA and re-submit the MT-2 Application for Letters of Map Revision to FEMA and will repeat this process until all comments have been addressed.

### Deliverables:

- KMZ of revised floodplain mapping showing no change, increase, and decrease from current mapping for review with Carson City (preliminary draft and draft)
- Virtual floodplain review meeting with Carson City

Cardno will upload the following digital data to the MIP in accordance with current Data Capture Standards.

- Task Documentation
  - Draft FIS Report – Word and .PDF



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- FIS Tables – .MDB/.XLS/.XLSX/.DBF
- FIS text overflow for Principal Flood Problems and Special Considerations (if necessary) – .TXT
- Project Narrative – Word
- Certification of Completeness – .PDF
- Floodplain/Redelineation Metadata – .XML
- Correspondence
  - Letters; transmittals; memoranda; general status reports and queries; SPRs; technical issues; direction by FEMA; and internal communications, routing slips, and notes – Word/.PDF
- Validation
  - Any review documents and/or checklists used during the validation of Floodplain Mapping Data Capture submittals – Word/.XLS/.XLSX/.PDF

Cardno will submit an MT-2 Application for Letters of Map Revision to FEMA including the following:

- Narrative on project and submittal
- Hydrologic computations along with digital files of computer models used
- Hydraulic computations along with digital files of computer models used
- Certified topographic work map with floodplain and regulatory floodway boundary delineations
- Annotated FIRM
- As-built plans or survey for all hydraulic structures within the revised floodplain
- Floodway Notice
- Property Owner Notification
- Form 1 – Overview & Concurrence Form
- Form 2 – Riverine Hydrology and Hydraulics Form
- Form 3 – Riverine Structures Form



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# EXHIBIT B – Budget

Cardno’s estimated budget is \$159,040 and is estimated budgets for each task are presented below. Cardno anticipates that some tasks may take more effort than anticipated while other tasks may take less and that CWSD manage the project against the overall budget. Should external factors result in the need for efforts which would exceed the overall budget, Cardno will notify CWSD as soon as such situation becomes apparent so that both Cardno and CWSD can come to a mutual agreement on the best approach to moving forward.

	Cardno Staff								Total Cardno Labor	Subconsultants/Affiliates (at cost)	TOTAL SUBCONSULTANTS & AFFILIATES (w/markup)	TOTALS
	Shade, Coleen L. Sr. Consultant 1	Jacobson, Andrea L. Sr. Project Scientist 2	Wong, Brandon Sr. Staff Engineer 1	Adams, Taylor Staff Engineer (Discounted)	Archer, Carey C. Sr. Staff Engineer 1	Browning, Lori A. Senior Project Coordinator	Eschen, Iris Production Specialist	Senior Consultant Sr. Consultant 2		Manhard Surveyor		
<b>Remap and Restudy Clear Creek</b>												
<i>Hourly Billing Rate, Markup, or Unit Cost:</i>	\$ 200	\$ 175	\$ 125	\$ 90	\$ 125	\$ 105	\$ 150	\$ 220		0%		
<b>Phase 1 - Survey Data Capture</b>												
<b>TOTAL - Phase 1</b>	12	10	20	38	0	4	0	0	\$ 10,490	\$ 7,500	\$ 7,500	\$ 17,990
<b>Phase 2 - Topographic Data Capture</b>												
<b>TOTAL - Phase 2</b>	8	2	14	6	0	4	0	0	\$ 4,660	\$ -	\$ -	\$ 4,660
<b>Phase 3 - Develop Hydrologic Data</b>												
<b>TOTAL - Phase 3</b>	8	52	92	4	240	4	4	0	\$ 53,580	\$ -	\$ -	\$ 53,580
<b>Phase 4 - Develop Hydraulic Data</b>												
<b>TOTAL - Phase 4</b>	10	78	292	0	4	4	4	8	\$ 55,430	\$ -	\$ -	\$ 55,430
<b>Phase 5 - Perform Floodplain Mapping</b>												
<b>TOTAL - Phase 5</b>	8	20	104	70	32	4	0	4	\$ 29,700	\$ -	\$ -	\$ 29,700
<b>Total Hours or Amounts</b>	46	162	522	118	276	20	8	12	1,164.0	\$ 7,500	\$ 7,500	
<b>TOTAL PROJECT COST</b>									\$ 153,860		\$ 7,500	\$ 161,360



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# EXHIBIT C – Schedule

ID	Task Name	Duration	Start
1	<b>Survey Data Capture</b>	<b>457 days</b>	<b>Sun 11/1/20</b>
2	NTP	1 day	Sun 11/1/20
3	<b>Kickoff meeting</b>	1 day	Thu 11/12/20
4	Survey request	10 days	Mon 11/2/20
5	Structure survey	3 days	Mon 11/23/20
6	MIP deliverables	5 days	Thu 11/26/20
7	<b>MIP uploads</b>	30 days	Wed 6/22/22
8	<b>Develop Topographic Data</b>	<b>447 days</b>	<b>Mon 11/16/20</b>
9	MIP deliverables	10 days	Mon 11/16/20
10	<b>MIP uploads</b>	30 days	Wed 6/22/22
11	<b>Develop Hydrologic Data</b>	<b>448 days</b>	<b>Fri 11/13/20</b>
12	Develop Clear Creek hydrology	20 days	Fri 11/13/20
13	Develop Prison Hill hydrologic model	75 days	Fri 11/13/20
14	MIP deliverables	30 days	Fri 2/26/21
15	<b>MIP uploads</b>	30 days	Wed 6/22/22
16	<b>Develop Hydraulic Data</b>	<b>373 days</b>	<b>Fri 2/26/21</b>
17	Develop HEC-RAS model	50 days	Fri 2/26/21
18	Perform floodway analysis	20 days	Fri 5/7/21
19	<b>Carson City Review</b>	1 day	Fri 6/4/21
20	Refine model/floodway	10 days	Mon 6/7/21
21	<b>Progress update meeting</b>	1 day	Mon 6/14/21
22	MIP deliverables	30 days	Tue 6/15/21
23	<b>MIP uploads</b>	30 days	Wed 6/22/22
24	<b>Floodplain Mapping</b>	<b>296 days</b>	<b>Tue 6/15/21</b>
25	Perform floodplain mapping	20 days	Tue 6/15/21
26	<b>Carson City Review</b>	1 day	Tue 7/13/21
27	Refine floodplain mapping	10 days	Wed 7/14/21
28	MT-2 Application #1	20 days	Wed 7/14/21
29	<b>FEMA Review #1</b>	90 days	Wed 8/11/21
30	MT-2 Application #2	45 days	Wed 12/15/21
31	<b>FEMA Review #2</b>	90 days	Mon 2/28/22
32	<b>FEMA Approval</b>	90 days	Wed 2/16/22
33	MIP deliverables	30 days	Wed 6/22/22

## **AGENDA ITEM #10**

# CARSON WATER SUBCONSERVANCY DISTRICT

**TO:** BOARD OF DIRECTORS

**FROM:** EDWIN D. JAMES

**DATE:** October 21, 2020

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**SUBJECT:** Agenda Item # 10– For Possible Action: Approval of Contract #2020-16 JE FULLER - Ruhenstroth ADMP Phase 2 in an amount not to exceed \$89,284.

**DISCUSSION:** Attached is a contract with JE Fuller to complete the Area Drainage Master Plan (ADMP) for the Ruhenstroth area. This project is being funded by a grant that CWSD received from FEMA's Cooperating Technical Partner (CTP) program. The Scope of Work, Schedule, and costs are shown in Exhibit A.

**STAFF RECOMMENDATION:** Authorize the General Manager to sign the attached agreement.

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# Agreement

Carson Water Subconservancy District (hereinafter "CWSD") and JE Fuller/Hydrology & Geomorphology, Inc. (hereinafter "JE FULLER") hereby enter into an agreement whereby JE FULLER will **complete Ruhenstroth Area Drainage Masterplan Phase 2 Project** in accordance with and subject to the following terms and conditions:

1) **ASSIGNMENT**

JE FULLER's assignment shall relate to the following product(s) or service(s):

Ruhenstroth Area Drainage Masterplan Phase 2 Project, which is further identified and described in attached Exhibits A, B & C. The compensation paid to JE FULLER for the Ruhenstroth Area Drainage Masterplan Phase 2 Project shall not exceed **\$89,284.**

2) **INDEMNITIES**

- (a) To the fullest extent permitted by law JE FULLER shall indemnify, hold harmless and defend, not excluding the CWSD's right to participate, the CWSD from and against all liability, claims, actions, damages, losses, and expenses, including, without limitation, reasonable attorneys' fees and costs, arising out of any alleged negligent or willful acts or omissions of JE FULLER, its officers, employees and agents.
- (b) CWSD will indemnify and hold JE FULLER harmless with respect to any claims or actions instituted by third parties which result from the use by JE FULLER of material furnished by CWSD or where material created by JE FULLER is substantially changed by CWSD. Information or data obtained by JE FULLER from CWSD to substantiate claims made in advertising shall be deemed to be "materials furnished by CWSD."
- (c) In the event of any proceeding against CWSD by any regulatory agency or in the event of any court action or self-regulatory action challenging any advertising prepared by JE FULLER, JE FULLER shall assist in the preparation of the defense of such action or proceeding and cooperate with CWSD and CWSD's attorneys. CWSD will reimburse JE FULLER any out-of-pocket costs JE FULLER may incur in connection with any such action or proceeding.
- (d) Neither party waives any right or defense to indemnification that may exist in law or equity.

3) **INSURANCE**

Unless otherwise required in this Agreement, the CWSD and JE FULLER shall, during the performance of the services as provided herein, maintain insurance of the types and amounts specified, and with insurers satisfactory to the other party as follows:

- a) Comprehensive General Liability including \$1,000,000 per occurrence for bodily injury and property damage; \$1,000,000 Products/Completed Operations Aggregate; \$1,000,000 General Aggregate over all interests.
- b) Comprehensive Automobile Liability including coverage for owned, non-owned, and hired vehicles: \$1,000,000 Bodily Injury, \$1,000,000 Property Damage.
- c) JE FULLER shall name CWSD as an additional insured and deliver a certificate to CWSD.

4) **TERM OF AGREEMENT**

- a) The term of this Agreement will commence on the date of the last signature executed hereon and will continue in full force and effect until **5/31/2021**, unless extended by written agreement of the parties.
- b) JE FULLER will submit monthly invoices with a description of activities performed.
- c) In the event of termination of this Agreement, the rights, duties, and responsibilities of JE FULLER shall continue in full force during the period of notice.
- d) If circumstances arise that require a time extension to complete the project, the CWSD Board grants the General Manager authority to do so in a written notice to JE FULLER.



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5) **PERFORMANCE**

Should JE FULLER fail to perform any of the services provided for in Exhibit "A", CWSD shall notify JE FULLER of such non-performance and allow thirty (30) days for JE FULLER to remedy the performance. If the performance has not been satisfied within thirty days, CWSD may withhold payment only for the services not performed in accordance with this Agreement.

6) **SUPPLEMENTS TO AGREEMENT**

The following Exhibits are an integral part of this Agreement:

- (a) Exhibit A JE FULLER Scope of Work
- (b) Exhibit B JE FULLER Project Schedule
- (c) Exhibit C JE FULLER Fee Table

7) **INDEPENDENT CONTRACTOR**

JE FULLER acknowledges that it is furnishing the services contemplated by this Agreement hereto as an independent contractor, and not as an employee, or agent of CWSD or any of its affiliates.

8) **OWNERSHIP**

Any reports, histories, studies, tests, manuals, instructions, photographs, negatives, blue prints, plans, maps, data, system designs, computer code (which are intended to be considered under this Agreement), or any other documents or drawings, prepared, or in the course of preparation, by JE FULLER (or its subcontractors) in performance of its obligations under this Agreement shall be the exclusive property of CWSD and all such materials shall be delivered into CWSD's possession by JE FULLER upon completion, termination, or cancellation of this Agreement. JE FULLER shall not use, willingly allow, or cause to have such materials used for any purpose other than performance of JE FULLER's obligations under this Agreement without the prior written consent of CWSD.

9) **AGREEMENT TERMINATION**

- (a) Termination Without Cause. Any discretionary or vested right of renewal notwithstanding, this Agreement may be terminated upon written notice by mutual consent of both parties or unilaterally by either party without cause.
- (b) Cause Termination for Default or Breach. A default or breach may be declared with or without termination. This Agreement may be terminated by either party upon written notice of default or breach to the other party as follows:
  - (1) If JE FULLER fails to provide or satisfactorily perform any of the conditions, work, deliverables, goods, or services called for by this Agreement within the time requirements specified in this Agreement or within any granted extension of those time requirements; or
  - (2) If any State, county, city, or federal license, authorization, waiver, permit, qualification or certification required by statute, ordinance, law, or regulation to be held by JE FULLER to provide the goods or services required by this Agreement is for any reason denied, revoked, debarred, excluded, terminated, suspended, lapsed, or not renewed; or
  - (3) If JE FULLER becomes insolvent, subject to receivership, or becomes voluntarily or involuntarily subject to the jurisdiction of the bankruptcy court; or
  - (4) If CWSD materially breaches any material duty under this Agreement and any such breach impairs JE FULLER's ability to perform; or
- (c) Time to Correct. Termination upon declared default or breach may be exercised only after service of formal written notice and the subsequent failure of the defaulting party within thirty (30) calendar days of receipt of that notice to provide evidence, satisfactory to the aggrieved party, showing that the declared default or breach has been corrected.
- (d) Winding Up Affairs Upon Termination. In the event of termination of this Agreement for any reason, the parties agree that the provisions of this Section survive termination:



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- (1) The parties shall account for and properly present to each other all claims for fees and expenses and pay those which are undisputed and otherwise not subject to set off under this Agreement. Neither party may withhold performance of winding up provisions solely based on nonpayment of fees or expenses accrued up to the time of termination;
- (2) **JE FULLER shall satisfactorily complete work in progress at the agreed rate (or a pro rata basis if necessary) if so requested by the CWSD;**
- (3) **JE FULLER shall execute any documents and take any actions necessary to effectuate an assignment of this Agreement if so requested by the CWSD; and**
- (4) **JE FULLER shall preserve, protect, and promptly deliver into CWSD possession all information in accordance with Section 8, Ownership.**

10) **RIGHTS UPON TERMINATION**

Upon termination of this Agreement, JE FULLER shall transfer, assign and make available to CWSD or CWSD's representative, all property and materials in their possession or control belonging to and paid for by CWSD, subject, however, to any rights of third parties of which JE FULLER has informed CWSD.

11) **BREACH REMEDIES.**

Failure of either party to perform any obligation of this Agreement shall be deemed a breach. Except as otherwise provided for by law or this Agreement, the rights and remedies of the parties shall not be exclusive and are in addition to any other rights and remedies provided by law or equity, including but not limited to actual damages. If the court awards reasonable attorney's fees to the prevailing party, in an amount to be determined by the Court.

The parties acknowledge or agree that the contract was written and agreed by both parties.

Prior to the initiation of any litigation the parties agree to mediate.

12) **PUBLIC RECORDS**

Pursuant to NRS 239.010, information or documents received from JE FULLER may be open to public inspection and copying. CWSD has a legal obligation to disclose such information unless a particular record is made confidential by law. JE FULLER may label specific parts of an individual document as a "trade secret" or "confidential" in accordance with NRS 333.333, provided that JE FULLER thereby agrees to indemnify and defend CWSD for honoring such a designation. The failure to so label any document that is released by CWSD shall constitute a complete waiver of any and all claims for damages caused by any release of the records.

13) **NOTICES**

Any notice pursuant to this Agreement will be addressed to the following parties:

**Attn.: Edwin James**  
**Carson Watershed Subconservancy District**  
**777 E William Street, Suite 110 A**  
**Carson City, NV 89701**

**Attn.: Mike Kellogg**  
**JE Fuller/Hydrology & Geomorphology, Inc.**  
**8400 S. Kyrene Rd., Ste. 201**  
**Tempe AZ 85284**

14) **FORCE MAJEURE**

Neither party shall be held responsible for any delay or failure in performance of any part of this Agreement to the extent such delay or failure is caused by fire, flood, explosion, war, embargo, government requirement, civil or military authority, act of God, pandemic or other similar causes beyond its control and without the fault or negligence of the delayed or non-performing party. The affected party will notify the other party in writing within ten (10) days after the beginning of any such cause that would affect its performance. Notwithstanding, if a party's performance is delayed for a period exceeding thirty (30) days from the date the other party receives notice under this paragraph, the non-affected party will have the right, without any liability to the other party, to terminate this agreement.



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## Exhibit A

### JE FULLER Scope of Work:

The following is a Scope of Work (SOW) for the **Ruhenstroth Area Drainage Master Plan Phase 2 (RADMP)**. It is the project team's understanding that the overall vision for the project is to identify and quantify the flood hazard risk within the Ruhenstroth community and develop flood risk mitigation alternatives. Residents and stakeholders will be informed of the project and have the opportunity to engage and provide input throughout the project through a public outreach process that is defined in the SOW. The major task headings in this SOW were selected to be in compliance with the FEMA Mapping Information Platform (MIP) format.

#### Project Goals

- Identify flood hazard mitigation alternatives: ○ For or both the 25-year, and 100-year storms to minimize the impact of flooding to the community in general.
- Develop concept-level designs for the preferred alternatives
- Community outreach

#### Deliverables

All Deliverables and Submittals for the RADMP will be provided to the Client Team in digital format. Draft submittals for each task will be provided to the Client Team for review and approval and will include supporting digital data.

#### Study Area

The Ruhenstroth ADMP watershed area is 18 square miles and is located on the western slopes of the Pine Nut Mountains, approximately 16 miles south of Carson City (Figure 1). The study area is located entirely within Douglas County about 6 miles southeast of the Minden-Gardnerville area. The primary focus area of the RADMP is the lower watershed area downstream of the mountains, also shown on Figure 1.

There are many individual watercourses that impact the study area, all of which originate from the Pine Nut Mountain range.

The Ruhenstroth Area Drainage Master Plan Phase 1 study was completed previously and included all prerequisite tasks necessary to complete this Phase 2 study.



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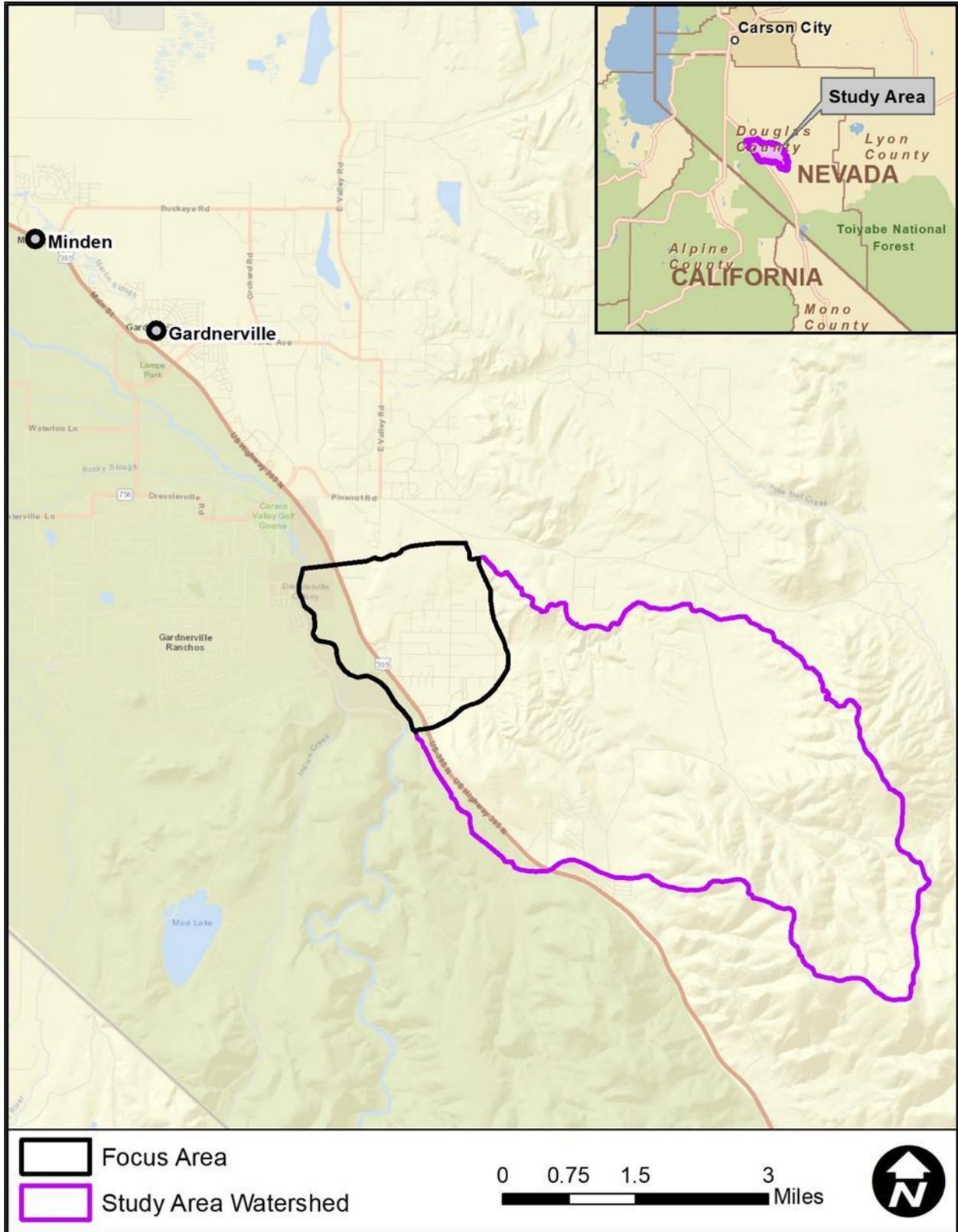


Figure 1. Project study area



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## Consultant Team

The Consultant Team is comprised of: JE Fuller/Hydrology & Geomorphology (JEF) who will serve as Prime and Lumos and Associates (LA) as Subconsultant. Each Task outlined in the SOW will identify the primary responsible party.

- Project Manager: Mike Kellogg (JEF) (480) 222-5712
- Project Engineer: Richard Waskowsky (JEF) (480) 222-5702

## Client Team

The Client Team is comprised of Lyon County and the Carson Water Subconservancy District. Lead contacts are listed below.

- Carson Water Subconservancy District: Ed James (775) 887-7456
- Douglas County: Courtney Walker (775) 782-6215

## PROJECT MANAGEMENT

**Project Manager.** The JEF Project Manager will be the official point of contact between the Client Team and the Consultant Team for all issues related to the project.

**Project Coordination Meetings.** The Consultant Team will participate in project coordination meetings with the Client Team via teleconference and Zoom meetings if requested.

**Contract Type.** The project contract type will be lump-sum.

**Invoicing.** JEF will invoice the Carson Water Subconservancy District monthly with a percent complete estimate for each task. The invoice will include a brief progress report per task.

**Project Schedule.** The project will be completed by May 31, 2021. A project schedule is included with this SOW as Attachment A.

**Project Fee.** A project fee table is included with the SOW as Attachment B.

**Mapping Information Platform (MIP) Data Preparation and Upload.** At the conclusion of the project, JEF will prepare the final digital data deliverable for compliance with FEMA MIP standards and upload the data to the MIP platform.

## Task 6.0 FLOOD RISK PRODUCTS DATA CAPTURE

6.3 **25-Year Flood Mitigation Alternative.** The Consultant Team will develop a series of alternatives for areas (up to 6) with significant flood and sedimentation risk. This Task will include a priority list of projects to reduce flood risk.

6.4 **100-Year Flood Mitigation Alternative.** The Consultant Team will develop a series of alternatives for areas (up to 6) with significant flood and sedimentation risk. This Task will include a priority list of projects to reduce flood risk.



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- 6.5 **Phasing Assessment Alternative.** JEF will assess the results from Tasks 6.3 and 6.4 and develop a recommended phasing plan for the alternatives. Up to three additional 2D models may be created to aid in developing the recommended phasing plan.
- 6.6 **Off-Site 15% Design Plans.** LA will prepare 15% preliminary engineering drawings for alternatives concepts developed under Tasks 6.3 and 6.4.

Per coordination discussions, LA anticipates that for each of these washes we will need to develop 15% schematic grading designs and cost estimates for both the 25-year, 24-hour storm event and the 100-year peak storm (or volume) event to allow Douglas County the ability to decide the level of protection they want to achieve and the cost to reach that level of protection. These improvements would be sited to retain/detain off site flows and sediment to mitigate downstream impacts to the developed areas.

The schematic plans will include:

- The drawings will be prepared on 11"x17" format sheets at a standard engineering scale.
- Plan view grading plans for basins
- Development of preliminary grading quantity estimates
- Plan view layout of piping
- Plan and profile concepts for channels to understand grading impacts

This task includes review meetings with JEF and the Client Team. It is assumed that there will be one round of comments between the Client Team and the Consultant Team.

- 6.7 **Life Cycle Cost Estimates.** LA will prepare life cycle cost estimates for the facilities to account for annual maintenance and future replacement costs of the proposed facilities, based upon the 15% design plans. LA will provide these for all conceptual designs.
- 6.8 **Final Report.** A FINAL technical report will be submitted. The FINAL report will be comprised of all previously submitted and approved DRAFT chapters and digital data.
- 6.9 **Executive Summary.** A separate Executive Summary report will be submitted.

## Task 7.0 PUBLIC EVENTS

- 7.1 **Informational Public Meeting.** LA will prepare for and implement a public meeting designed to educate and gather initial input and concerns regarding the RADMP. JEF will lead the public meeting by presenting project information and results. The meeting will be held in Douglas County (if possible) near the conclusion of the study. Online meetings may be necessary if in-person meetings are not feasible. The Consultant Team will work with the Client Team to complete the following:
- Location research, availability, confirmation and set-up
  - Development and review of speaker and content order



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- Development of Boards
- Public input reporting
- Advertising (assuming some assistance by the County)
- Press Release development and distribution (assuming majority of this will be conducted by the County)

7.2 **Board Meetings.** The Consultant Team will present at two agency board meetings (in-person or online, depending on circumstances) at the end of the study to present the study results to:

- Carson Water Subconservancy District Board (meets monthly every 3<sup>rd</sup> Wednesday)
- Douglas County Board of Commissioners (meets bimonthly on the 1<sup>st</sup> and 3<sup>rd</sup> Thursday)

## EXCLUSIONS, LIMITATIONS, AND ASSUMPTIONS

The following are exclusions, limitations, and assumptions associated with this scope of work:

- Preparation of FEMA submittals are not included
- All data will be available at no cost
- A geotechnical report is not included
- Environmental Permitting is not included
- Storm Water Pollution Prevention Plan is not included
- Final construction plans are not included
- Landscape Plans are not included
- The Client Team will assist in locating documentation regarding existing easements and property information



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## Exhibit B JE FULLER Project Schedule:

TIMELINE		Wed 10/21/20 - Mon 5/31/21			
	Task Name	Duration	Start	Finish	
1	<b>▲ TASK 6.0 FLOOD RISK PRODUCTS DATA CAPTURE</b>	<b>159 days</b>	<b>Wed 10/21/20</b>	<b>Mon 5/31/21</b>	
2	Draft TSDN Submittal	0 days	Fri 3/26/21	Fri 3/26/21	
3	Final TSDN Submittal	0 days	Fri 4/23/21	Fri 4/23/21	
4	<b>▲ TASK 7.0 PUBLIC EVENTS</b>	<b>12 days</b>	<b>Tue 5/4/21</b>	<b>Thu 5/20/21</b>	
5	Public Meeting	0 days	Tue 5/4/21	Tue 5/4/21	
6	CWSD Board Meeting	0 days	Wed 5/19/21	Wed 5/19/21	
7	Douglas County Board Meeting	0 days	Thu 5/20/21	Thu 5/20/21	



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**Exhibit C: JE FULLER Fee Table**

RUHENSTROTH AREA DRAINAGE MASTER PLAN		JE FULLER							LUMOS AND ASSOCIATES									Team Total With Expenses
Task	TASK DESCRIPTION	Project Manager	Project Principal	Sr. Project Engineer	Project Engineer	Admin	JEF Labor Total	JEF Direct Expenses	Group Manager	Project Manager	Survey Manager	Project Engineer	Project Designer	2- Person Survey Crew	Project Coordinator	Lumos Labor Total	Lumos Direct Expenses	
		\$134.00	\$167.00	\$152.00	\$130.00	\$94.00			\$215.00	\$175.00	\$175.00	\$145.00	\$120.00	\$215.00	\$115.00			
6.0	FLOOD RISK PRODUCTS DATA CAPTURE	84	12	12	218	4	\$ 43,800.00	\$ -	2	0	0	120	80	0	0	\$ 27,430.00	\$ -	\$ 71,230.00
6.3	25-Year Flood Mitigation Alternative	4	4	4	60		\$ 9,612.00									\$ -		
6.4	100-Year Flood Mitigation Alternative	4	4	4	60		\$ 9,612.00									\$ -		
6.5	Phasing Assessment Alternative	4			12		\$ 2,096.00									\$ -		
6.6	Off-Site 15% Design Plans	10	4	4	20		\$ 5,216.00		1			80	40			\$ 16,615.00		
6.7	Life Cycle Cost Estimates	2			4		\$ 788.00		1			40	40			\$ 10,815.00		
6.8	Final Report	40			60	4	\$ 13,536.00									\$ -		
6.9	Executive Summary	20			2		\$ 2,940.00									\$ -		
7.0	PUBLIC EVENTS	56	0	0	30	0	\$ 11,404.00	\$ 1,400.00	0	4	0	0	0	0	30	\$ 4,150.00	\$ 1,100.00	\$ 18,054.00
7.1	Public Meeting	20			10		\$ 3,980.00			4					30	\$ 4,150.00	\$ 1,100.00	
7.2	Agency Board Meetings (2)	36			20		\$ 7,424.00	\$ 1,400.00								\$ -		
<b>TOTALS</b>		<b>140</b>	<b>12</b>	<b>12</b>	<b>248</b>	<b>4</b>	<b>\$ 55,204.00</b>	<b>\$ 1,400.00</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>120</b>	<b>80</b>	<b>0</b>	<b>30</b>	<b>\$ 31,580.00</b>	<b>\$ 1,100.00</b>	<b>PROJECT TOTAL</b>
																		<b>\$ 89,284.00</b>

# **AGENDA ITEM #11**

## CARSON WATER SUBCONSERVANCY DISTRICT

**TO:** BOARD OF DIRECTORS

**FROM:** EDWIN D. JAMES

**DATE:** October 21, 2020

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**SUBJECT:** Agenda Item # 11– For Possible Action: Approval of Contract #2020-17 NHC - Smelter Creek LOMR study in an amount not to exceed \$59,930.

**DISCUSSION:** Attached is a contract with NHC to conduct a restudy and remapping of the Smelter Creek floodplain. This project is being funded by a grant that CWSD received from FEMA's Cooperating Technical Partner (CTP) program. The Scope of Work, Schedule, and costs are shown in Exhibit A.

**STAFF RECOMMENDATION:** Authorize the General Manager to sign the attached agreement.

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# Agreement

Carson Water Subconservancy District (hereinafter "CWSD") and Northwest Hydraulic Consultants Inc. (hereinafter "NHC") hereby enter into an agreement whereby NHC will complete the **Smelter Creek LOMR Project** in accordance with and subject to the following terms and conditions:

1) **ASSIGNMENT**

NHC's assignment shall relate to the following product(s) or service(s):

Complete the **Smelter Creek LOMR Project** which is further identified and described in Exhibit "A," and the compensation paid to NHC for the Smelter Creek LOMR Project shall not exceed **\$59,930**.

2) **INDEMNITIES**

(a) To the fullest extent permitted by law NHC shall indemnify and hold harmless the CWSD from and against all liability, claims, actions, damages, losses, and expenses, including, without limitation, reasonable attorneys' fees and costs, to the extent arising out of any alleged negligent or willful acts or omissions of NHC, its officers, employees and agents.

(b) CWSD will indemnify and hold NHC harmless with respect to any claims or actions instituted by third parties which result from the use by NHC of material furnished by CWSD or where material created by NHC is substantially changed by CWSD. Information or data obtained by NHC from CWSD to substantiate claims made in advertising shall be deemed to be "materials furnished by CWSD."

(c) In the event of any proceeding against CWSD by any regulatory agency or in the event of any court action or self-regulatory action challenging any advertising prepared by NHC, NHC shall assist in the preparation of the defense of such action or proceeding and cooperate with CWSD and CWSD's attorneys. CWSD will reimburse NHC any out-of-pocket costs NHC may incur in connection with any such action or proceeding.

(d) Neither party waives any right or defense to indemnification that may exist in law or equity.

3) **INSURANCE**

Unless otherwise required in this Agreement, the CWSD and NHC shall, during the performance of the services as provided herein, maintain insurance of the types and amounts specified, and with insurers satisfactory to the other party as follows:

a) Comprehensive General Liability including \$1,000,000 per occurrence for bodily injury and property damage; \$1,000,000 Products/Completed Operations Aggregate; \$1,000,000 General Aggregate over all interests.

b) Comprehensive Automobile Liability including coverage for owned, non-owned, and hired vehicles: \$1,000,000 Bodily Injury, \$1,000,000 Property Damage.

c) NHC shall name CWSD as an additional insured and deliver a certificate to CWSD.

4) **TERM OF AGREEMENT**

a) The term of this Agreement will commence on the date of the last signature executed hereon and will continue in full force and effect until **12/31/2021**, unless extended by written agreement of the parties.

b) NHC will submit monthly invoices with a description of activities preformed.

c) In the event of termination of this Agreement, the rights, duties, and responsibilities of NHC shall continue in full force during the period of notice.

d) If circumstances arise that require a time extension to complete the project, the CWSD Board grants the General Manager authority to do so in a written notice to NHC.

5) **PERFORMANCE**

Should NHC fail to perform any of the services provided for in Exhibit "A", CWSD shall notify NHC of such non-performance and allow thirty (30) days for NHC to remedy the performance. If the performance has



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not been satisfied within thirty days, CWSD may withhold payment only for the services not performed in accordance with this Agreement.

6) **SUPPLEMENTS TO AGREEMENT**

The following Exhibits are an integral part of this Agreement:

(a) **Exhibit A NHC Scope of Work**

7) **INDEPENDENT CONTRACTOR**

NHC acknowledges that it is furnishing the services contemplated by this Agreement hereto as an independent contractor, and not as an employee, or agent of CWSD or any of its affiliates.

8) **OWNERSHIP**

Any reports, histories, studies, tests, manuals, instructions, photographs, negatives, blue prints, plans, maps, data, system designs, computer code (which are intended to be considered under this Agreement), or any other documents or drawings, prepared, or in the course of preparation, by NHC (or its subcontractors) in performance of its obligations under this Agreement shall be the exclusive property of CWSD and all such materials shall be delivered into CWSD's possession by NHC upon completion, termination, or cancellation of this Agreement. NHC shall not use, willingly allow, or cause to have such materials used for any purpose other than performance of NHC's obligations under this Agreement without the prior written consent of CWSD.

9) **AGREEMENT TERMINATION**

(a) **Termination Without Cause.** Any discretionary or vested right of renewal notwithstanding, this Agreement may be terminated upon written notice by mutual consent of both parties or unilaterally by either party without cause.

(b) **Cause Termination for Default or Breach.** A default or breach may be declared with or without termination. This Agreement may be terminated by either party upon written notice of default or breach to the other party as follows:

- (1) If NHC fails to provide or satisfactorily perform any of the conditions, work, deliverables, goods, or services called for by this Agreement within the time requirements specified in this Agreement or within any granted extension of those time requirements; or
- (2) If any State, county, city, or federal license, authorization, waiver, permit, qualification or certification required by statute, ordinance, law, or regulation to be held by NHC to provide the goods or services required by this Agreement is for any reason denied, revoked, debarred, excluded, terminated, suspended, lapsed, or not renewed; or
- (3) If NHC becomes insolvent, subject to receivership, or becomes voluntarily or involuntarily subject to the jurisdiction of the bankruptcy court; or
- (4) If CWSD materially breaches any material duty under this Agreement and any such breach impairs NHC's ability to perform; or

(c) **Time to Correct.** Termination upon declared default or breach may be exercised only after service of formal written notice and the subsequent failure of the defaulting party within thirty (30) calendar days of receipt of that notice to provide evidence, satisfactory to the aggrieved party, showing that the declared default or breach has been corrected.

(d) **Winding Up Affairs Upon Termination.** In the event of termination of this Agreement for any reason, the parties agree that the provisions of this Section survive termination:

- (1) The parties shall account for and properly present to each other all claims for fees and expenses and pay those which are undisputed and otherwise not subject to set off under this Agreement. Neither party may withhold performance of winding up provisions solely based on nonpayment of fees or expenses accrued up to the time of termination.
- (2) NHC shall satisfactorily complete work in progress at the agreed rate (or a pro rata basis if necessary) if so requested by the CWSD.



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- (3) NHC shall execute any documents and take any actions necessary to effectuate an assignment of this Agreement if so requested by the CWSD; and
- (4) NHC shall preserve, protect, and promptly deliver into CWSD possession all information in accordance with Section 8, Ownership.

10) **RIGHTS UPON TERMINATION**

Upon termination of this Agreement, NHC shall transfer, assign and make available to CWSD or CWSD's representative, all property and materials in their possession or control belonging to and paid for by CWSD, subject, however, to any rights of third parties of which NHC has informed CWSD.

11) **BREACH REMEDIES.**

Failure of either party to perform any obligation of this Agreement shall be deemed a breach. Except as otherwise provided for by law or this Agreement, the rights and remedies of the parties shall not be exclusive and are in addition to any other rights and remedies provided by law or equity, including but not limited to actual damages. If the court awards reasonable attorney's fees to the prevailing party, in an amount to be determined by the Court.

The parties acknowledge or agree that the contract was written and agreed by both parties.

Prior to the initiation of any litigation the parties agree to mediate.

12) **PUBLIC RECORDS**

Pursuant to NRS 239.010, information or documents received from NHC may be open to public inspection and copying. CWSD has a legal obligation to disclose such information unless a particular record is made confidential by law. NHC may label specific parts of an individual document as a "trade secret" or "confidential" in accordance with NRS 333.333, provided that NHC thereby agrees to indemnify and defend CWSD for honoring such a designation. The failure to so label any document that is released by CWSD shall constitute a complete waiver of any and all claims for damages caused by any release of the records.

13) **NOTICES**

Any notice pursuant to this Agreement will be addressed to the following parties:

**Attn.: Edwin James**  
**Carson Watershed Subconservancy District**  
**777 E William Street, Suite 110 A**  
**Carson City, NV 89701**

**Attn.: Brady McDaniel**  
**Northwest Hydraulic Consultants**  
**2600 Capitol Blvd., Suite 140**  
**Sacramento, CA 95816**

14) **FORCE MAJEURE**

Neither party shall be held responsible for any delay or failure in performance of any part of this Agreement to the extent such delay or failure is caused by fire, flood, explosion, war, embargo, government requirement, civil or military authority, act of God, pandemic or other similar causes beyond its control and without the fault or negligence of the delayed or non-performing party. The affected party will notify the other party in writing within ten (10) days after the beginning of any such cause that would affect its performance. Notwithstanding, if a party's performance is delayed for a period exceeding thirty (30) days from the date the other party receives notice under this paragraph, the non-affected party will have the right, without any liability to the other party, to terminate this agreement.

15) **HEADINGS**

Headings in this Agreement are for convenience only and are not intended to be used in interpreting or construing the terms, covenants, and conditions of this Agreement.

16) **ENTIRE AGREEMENT**

This Agreement constitutes the whole agreement between the parties with respect to the subject matter contained herein, and there are no terms other than those contained herein. No





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# Exhibit A

## Scope of Work for Smelter Creek LOMR Analysis and Submittal Northwest Hydraulic Consultants

### Background

Carson Water Subconservancy District (CWSD) has tasked Northwest Hydraulic Consultants (NHC) with developing a scope of work to complete a Letter of Map Revision (LOMR) for Smelter Creek and the community of Ruhenstroth. This work will continue Douglas Counties ongoing efforts to restudy and remap approximate Zone A Floodplains throughout the Carson Valley.

Douglas County would like to restudy and remap the Smelter Creek Area to determine base flood elevation and more precise floodplain limits for the area. The goal of the floodplain remapping project is to restudy the Smelter Creek floodplain. There are many properties that are mapped in an unnumbered A flood zone and could likely be removed through a detailed study. Many of these properties in A Zone Floodplains in Ruhenstroth area are several feet above the base flood elevation of Smelter Creek when a detailed study is produced for a building permit and elevation certificate. The updated study and flood hazards will provide valuable information for residents and for floodplain administrators.

### Objectives

The objective of this project is to perform a LOMR for Smelter Creek for the project area extends from the outlet of the foothills to Highway 395. This reach corresponds with the lettered cross sections A through V on the existing FIRM Panel. This scope of work will include the necessary technical analysis and coordination with FEMA, Douglas County and CWSD to complete this task.

### Description of Work and Services

Table 1 summarizes the tasks proposed for this project. Further details are provided below.

Table 1: Proposed Tasks

Task	Description
1	Review of Existing Information
2	Site Visit and Survey
3	Hydrologic and Hydraulic Analysis
3A	(Optional) Floodway Determination
4	FEMA Mapping, Forms and Data Transfer
5	Project Management and Meetings

### Task 1: Review of Existing Information

Under this task, NHC will gather and review existing information on the system. Existing reports shall include the effective Flood Insurance Study (FIS), effective models and other FEMA data; the JE Fuller Ruhenstroth Area Drainage Master Plan draft reports and modeling; available topographic information; and any other reports that Douglas County provides.

**Assumptions:** Existing studies, effective models and supporting FIS data from FEMA will need to be requested. Any fees associated with data requests will be covered by CWSD.



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## Task 2: Site Visit and Survey

A site visit will be conducted to obtain additional necessary information. During the site visit, NHC staff will survey culverts (and degree of sediment blockage) along the mainstem of Smelter Creek and the berm that directs flow as Smelter Creek enters Ruhenstroth. This information will supplement the available LiDAR data and used in the hydraulic model. A secondary purpose of the site visit will be to assess the geomorphic conditions of the creek and floodplain to ascertain whether there appears to be an alluvial fan hazard. The USACE previously identified this area as a potential alluvial fan hazard area. However, preliminary review of topographic data and historic imagery, and the existing FEMA study suggest that alluvial fan hazards are unlikely to impact the study. The field visit will help to resolve this question. The survey data and notes will be used in development of the hydraulic model.

**Assumptions:** We assume that the LiDAR available is of reasonable quality for use as a basemap in model development and mapping for FEMA. The survey will focus on hydraulic structures within the study area, not basemap topography.

## Task 3: Hydrologic and Hydraulic Analysis

NHC will use available hydrology on the project. This may include either the peak discharges established in the FIS or by other completed studies of the region provided by Douglas County. Preliminary review of the effective FIS indicates that there are currently no peak discharge estimates for the 10-, 50-, or 500-year events. No new hydrology is proposed for this study. Updates to the shaded Zone X will be made as appropriate.

HEC-RAS is a widely used and accepted hydraulic modeling software for floodplain studies. The current version of HEC-RAS has the capability of modeling a riverine system using one dimensional (1D) steady state, 1D unsteady state, and two dimensional (2D) unsteady state. 2D models offer the most detail of the three and are particularly useful in regions of flat topography and split flowpaths, as preliminary 2D modeling by others shows to be the case here.

FEMA currently lacks official guidance and regulations for 2D models (these are expected to be issued in November 2020), but NHC has experience developing floodplains and floodways with 2D models and having those accepted by FEMA. The approval process is more complicated than with 1D models and will likely continue to vary among FEMA staff/regions until the formal guidance is released later this fall.

Due to the current state of flux regarding 2D models for FEMA work, we are proposing to remain flexible on the decision between traditional 1D modeling and a 2D model during the early stages of the project. After the site visit, we will have a better idea of the unique challenges of the site; additionally, FEMA will have issued or will be issuing shortly the formal guidance for 2D modeling. This optionality significantly reduces the uncertainty risk of the project with little impact on overall project schedule. The selection of the preferred modeling plan will be done in consultation with the client after the available data has been reviewed and summarized.

Once the model method is selected in consultation with Douglas County, the new HEC-RAS model will be created. This model will use the current effective model water surface elevation as the downstream boundary, and hydrology as noted above for the upstream inflow boundary. The model will include culverts along the mainstem of the creek and be calibrated to the extent practicable. To the best of our knowledge, calibration data may be limited or nonexistent due to lack of gages and other extreme storm data in the Smelter Creek basin. The existing effective models may provide the only water level data to check model results.

If a 1D model is pursued, it is expected that a Duplicate Effective Model will be required, followed by a Corrected Effective Model (if necessary) and an Existing Conditions Model. Modified steps would be required for the 2D model to ensure that the updated modeling will tie into the existing hazards. The potential effects of sediment on flood hazards will be considered, due to the high concentration of fine grain sediment previously

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documented in the system, and options such as flow bulking or blocking of culverts may be considered within the hydraulic analysis.

**Assumptions:** The extents of the mapped reach will be approximately from Highway 395 (FIS Cross-Section A) to the base of the foothills about a mile upstream of Mustang Lane (FIS Cross-Section V). The Floodway analysis is not included in this task. The existing hydrology will be adequate for this analysis. The high ground at the mount of the foothills, is either a certified structure or is not considered a levee. No mapping of a without levee condition or levee breach condition will be required. Alluvial fan modeling and mapping will not be required.

### **Task 3A: (Optional) Floodway Delineation**

After discussion with Douglas County it is uncertain at this time whether a floodway should be defined and would be beneficial for this study. Defining a floodway may relieve some property owners from performing “zero-rise” analyses of their projects but may burden other property owners with more demanding regulations. Additionally, the FEMA procedures for a floodway on a 2D model have not been finalized, which can create additional iterations for approval.

We propose delaying the decision on whether or not to include a floodway until preliminary model results are available, and more information is known on the number of properties affected. Preliminary information can be provided by NHC to help with this decision once initial model results are available.

### **Task 4: FEMA Mapping, Forms and Data Transfer**

All data submittals for this project will be in close adherence to FEMA guidelines as outlined in Standards for Flood Risk Analysis and Mapping (FEMA 2019), and CWSD standards. As indicated in FEMA 2019, data and work products as part of this LOMR will follow the MT-2 process as documented in the FEMA MT-2 document instructions, revised in 2018. All final submittals and responses will follow the guidance of CWSD as to what is needed to support the MIP process.

Work products that will be provided or produced by NHC in this task for the initial submittal package are as follows:

- A LOMR narrative will be produced to document the project background and scope as well as the methodologies used for the engineering analysis.
- Completion of the required sections of the MT-2 Forms
- An annotated FIRM map will be produced that shows the revised boundary delineation of the base (1-percent annual-chance) floodplain, and regulatory floodway (if applicable) and how it ties into the boundary delineation shown on the effective FIRM at the downstream and upstream ends of the revised reach. Includes re-mapping of lettered cross-sections, if required.
- A certified topographic workmap with floodplain and regulatory floodway (if applicable) boundary delineations will be produced. This will consist of primarily data from the available LiDAR supplemented by the culvert survey.
- The electronic files for the HEC-RAS model will be provided.
- Electronic GIS shapefiles
- As-built plans and/or survey data used to create the model will be provided



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This task provides time to address one round of FEMA comments on the LOMR materials. This task has been scoped to provide support during the LOMR processing and coordination to address FEMA comments and request for additional information created from review of the initial submittal.

**Assumptions:** Endangered Species Act documentation is not required. Property owner notifications will be completed by CWSD or others. No new hydrology data will be submitted. Since this is a LOMR based on new and improved data, there may be no FEMA review fee. If a fee is required, it will be paid by CWSD. No alluvial fan hazards will be defined.

### **Task 5: Project Management and Meetings**

This task provides time for management of the project and meetings with the client throughout the process. NHC will develop and present a PowerPoint Presentation that summarizes the study, major findings, and mapping impacts for Douglas County and CWSD.

**Assumptions:** We have budgeted for one in person meeting (if concurrent with site visit), and three meetings online. It is expected that the client will use the information from the developed PowerPoint for public outreach without NHC's involvement.

### **Schedule**

We anticipate completing Task 1 through 4 within three months of notice to proceed. This will be followed by review from the client and public outreach, which we estimate will take up to two months. The time frame for completing the LOMR processing and coordination (Task 4) will be dependent on FEMA correspondence. Currently FEMA has a maximum of 90 days to review a LOMR study and MT-2 application and an additional maximum of 90 days to review any resubmittals. Based on this, we estimate the LOMR will be accepted within 12 months of notice to proceed, with the majority of that time allocated to FEMA for review.

### **Estimated Costs**

Table 2 provides a cost estimate for the work described above with hourly rates for the proposed NHC staff, estimated hours to complete the tasks, and an estimate of disbursements. Disbursements are for mileage, copying, printing, and distributing reports and other documents.

### **Key Staff**

Key staff for NHC includes Alex Anderson, PE as project manager and technical lead; Bryce Cruey as QA/QC and Engineer of Record; and Brady McDaniel as Principal in Charge.



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**Northwest Hydraulic Consultants  
Table 2: Smelter Creek LOMR Analysis and  
Submittal Cost Estimate**

BM, AA  
28-Sep-20

Jan 2020 Rates		Northwest Hydraulic Consultants										
		Hours by Classification							Costs			
		Principal	SE1	SE2	Engr 1	Engr 2	Jr Engr	GIS Analyst 1	GIS Analyst 2	Labor	Direct - Travel, Equipment, Lab Analysis	Sum
Task	Description	255.00	190.00	165.00	145.00	125.00	115.00	145.00	110.00			
										\$0		\$0
1	Review of Existing Information	2	2	12			8			\$3,780		\$3,780
2	Site Visit and Survey			20	24					\$6,780	\$1,140	\$7,920
3	Hydrologic and Hydraulic Analysis	2	6	20			80		8	\$15,030		\$15,030
3A	(Optional) Floodway Delineation	2	2	16			60		10	\$11,530		\$11,530
5	FEMA Mapping, Forms and Data Transfer	6	24	16			30		40	\$16,580		\$16,580
6	Project Management and Meetings	4	4	20						\$5,080		\$5,080
										\$0		\$0
										\$0		\$0
										\$0		\$0
										\$0		\$0
	TOTAL (Base)	14	36	88	24	0	118	0	48	\$47,260	\$1,140	\$48,400
	TOTAL (with Optional)	16	38	104	24	0	178	0	58	\$58,790	\$1,140	\$59,930

## **AGENDA ITEM #12**

## CARSON WATER SUBCONSERVANCY DISTRICT

**TO:** BOARD OF DIRECTORS

**FROM:** EDWIN D. JAMES

**DATE:** October 21, 2020

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**SUBJECT:** Agenda Item # 12– For Possible Action: Approval of Contract #2020-18 HDR - Emergency Response Modeling Project for the Carson Valley in an amount not to exceed \$44,683.

**DISCUSSION:** Attached is a contract with HDR to modify the Carson Valley Floodplain model so it can predict flooding inundation areas using the National Weather Service River Forecast Center (RFC) data. This will allow emergency managers to know where they need to station personnel and what roads need to be closed. This project is being funded by a grant that CWSD received from FEMA's Cooperating Technical Partner (CTP) program. The Scope of Work, Schedule, and costs are shown in Exhibit A.

**STAFF RECOMMENDATION:** Authorize the General Manager to sign the attached agreement.

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# Agreement

Carson Water Subconservancy District (hereinafter "**CWSD**") and HDR ENGINEERING, INC., (hereinafter "**HDR**") hereby enter into an agreement whereby HDR will complete **Emergency Response Modeling Project** in accordance with and subject to the following terms and conditions:

1) **ASSIGNMENT**

HDR's assignment shall relate to the following product(s) or service(s):

Complete Emergency Response Modeling Project which is further identified and described in Exhibit "A," the compensation paid to HDR in amount not to exceed **\$44,683**.

2) **INDEMNITIES**

- To the fullest extent permitted by law HDR shall indemnify, hold harmless and defend, not excluding the CWSD's right to participate, the CWSD from and against all liability, claims, actions, damages, losses, and expenses, including, without limitation, reasonable attorneys' fees and costs, arising out of any alleged negligent or willful acts or omissions of HDR, its officers, employees and agents.
- CWSD will indemnify and hold HDR harmless with respect to any claims or actions instituted by third parties which result from the use by HDR of material furnished by CWSD or where material created by HDR is substantially changed by CWSD. Information or data obtained by HDR from CWSD to substantiate claims made in advertising shall be deemed to be "materials furnished by CWSD."
- In the event of any proceeding against CWSD by any regulatory agency or in the event of any court action or self-regulatory action challenging any advertising prepared by HDR, HDR shall assist in the preparation of the defense of such action or proceeding and cooperate with CWSD and CWSD's attorneys. CWSD will reimburse HDR any out-of-pocket costs HDR may incur in connection with any such action or proceeding.
- Neither party waives any right or defense to indemnification that may exist in law or equity.

3) **INSURANCE**

Unless otherwise required in this Agreement, the CWSD and HDR shall, during the performance of the services as provided herein, maintain insurance of the types and amounts specified, and with insurers satisfactory to the other party as follows:

- a) Comprehensive General Liability including \$1,000,000 per occurrence for bodily injury and property damage; \$1,000,000 Products/Completed Operations Aggregate; \$1,000,000 General Aggregate over all interests.
- b) Comprehensive Automobile Liability including coverage for owned, non-owned, and hired vehicles: \$1,000,000 Bodily Injury, \$1,000,000 Property Damage.
- c) HDR shall name CWSD as an additional insured and deliver a certificate to CWSD.

4) **TERM OF AGREEMENT**

- a) The term of this Agreement will commence on the date of the last signature executed hereon and will continue in full force and effect until **12/31/2021**, unless extended by written agreement of the parties.
- b) HDR will submit monthly invoices with a description of activities performed.
- c) In the event of termination of this Agreement, the rights, duties, and responsibilities of HDR shall continue in full force during the period of notice.
- d) If circumstances arise that require a time extension to complete the project, the CWSD Board grants the General Manager authority to do so in a written notice to HDR.

5) **PERFORMANCE**

Should HDR fail to perform any of the services provided for in Exhibit "A", CWSD shall notify HDR of such non-performance and allow thirty (30) days for HDR to remedy the performance. If the performance has



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not been satisfied within thirty days, CWSD may withhold payment only for the services not performed in accordance with this Agreement.

6) **SUPPLEMENTS TO AGREEMENT**

The following Exhibits are an integral part of this Agreement:

(a) **Exhibit A HDR Scope of Work**

7) **INDEPENDENT CONTRACTOR**

HDR acknowledges that it is furnishing the services contemplated by this Agreement hereto as an independent contractor, and not as an employee, or agent of CWSD or any of its affiliates.

8) **OWNERSHIP**

Any reports, histories, studies, tests, manuals, instructions, photographs, negatives, blue prints, plans, maps, data, system designs, computer code (which are intended to be considered under this Agreement), or any other documents or drawings, prepared, or in the course of preparation, by HDR (or its subcontractors) in performance of its obligations under this Agreement shall be the exclusive property of CWSD and all such materials shall be delivered into CWSD's possession by HDR upon completion, termination, or cancellation of this Agreement. HDR shall not use, willingly allow, or cause to have such materials used for any purpose other than performance of HDR's obligations under this Agreement without the prior written consent of CWSD.

9) **AGREEMENT TERMINATION**

- (a) Termination Without Cause. Any discretionary or vested right of renewal notwithstanding, this Agreement may be terminated upon written notice by mutual consent of both parties or unilaterally by either party without cause.
- (b) Cause Termination for Default or Breach. A default or breach may be declared with or without termination. This Agreement may be terminated by either party upon written notice of default or breach to the other party as follows:
  - (1) If HDR fails to provide or satisfactorily perform any of the conditions, work, deliverables, goods, or services called for by this Agreement within the time requirements specified in this Agreement or within any granted extension of those time requirements; or
  - (2) If any State, county, city, or federal license, authorization, waiver, permit, qualification or certification required by statute, ordinance, law, or regulation to be held by HDR to provide the goods or services required by this Agreement is for any reason denied, revoked, debarred, excluded, terminated, suspended, lapsed, or not renewed; or
  - (3) If HDR becomes insolvent, subject to receivership, or becomes voluntarily or involuntarily subject to the jurisdiction of the bankruptcy court; or
  - (4) If CWSD materially breaches any material duty under this Agreement and any such breach impairs HDR's ability to perform; or
- (c) Time to Correct. Termination upon declared default or breach may be exercised only after service of formal written notice and the subsequent failure of the defaulting party within thirty (30) calendar days of receipt of that notice to provide evidence, satisfactory to the aggrieved party, showing that the declared default or breach has been corrected.
- (d) Winding Up Affairs Upon Termination. In the event of termination of this Agreement for any reason, the parties agree that the provisions of this Section survive termination:
  - (1) The parties shall account for and properly present to each other all claims for fees and expenses and pay those which are undisputed and otherwise not subject to set off under this Agreement. Neither party may withhold performance of winding up provisions solely based on nonpayment of fees or expenses accrued up to the time of termination;
  - (2) HDR shall satisfactorily complete work in progress at the agreed rate (or a pro rata basis if necessary) if so requested by the CWSD;



# DRAFT

- (3) HDR shall execute any documents and take any actions necessary to effectuate an assignment of this Agreement if so requested by the CWSD; and
- (4) HDR shall preserve, protect, and promptly deliver into CWSD possession all information in accordance with Section 8, Ownership.

10) **RIGHTS UPON TERMINATION**

Upon termination of this Agreement, HDR shall transfer, assign and make available to CWSD or CWSD's representative, all property and materials in their possession or control belonging to and paid for by CWSD, subject, however, to any rights of third parties of which HDR has informed CWSD.

11) **BREACH REMEDIES.**

Failure of either party to perform any obligation of this Agreement shall be deemed a breach. Except as otherwise provided for by law or this Agreement, the rights and remedies of the parties shall not be exclusive and are in addition to any other rights and remedies provided by law or equity, including but not limited to actual damages. If the court awards reasonable attorney's fees to the prevailing party, in an amount to be determined by the Court.

The parties acknowledge or agree that the contract was written and agreed by both parties.

Prior to the initiation of any litigation the parties agree to mediate.

12) **PUBLIC RECORDS**

Pursuant to NRS 239.010, information or documents received from HDR may be open to public inspection and copying. CWSD has a legal obligation to disclose such information unless a particular record is made confidential by law. HDR may label specific parts of an individual document as a "trade secret" or "confidential" in accordance with NRS 333.333, provided that HDR thereby agrees to indemnify and defend CWSD for honoring such a designation. The failure to so label any document that is released by CWSD shall constitute a complete waiver of any and all claims for damages caused by any release of the records.

13) **NOTICES**

Any notice pursuant to this Agreement will be addressed to the following parties:

**Attn.: Edwin James**  
**Carson Watershed Subconservancy District**  
**777 E William Street, Suite 110 A**  
**Carson City, NV 89701**

**Attn.: Mitchell Blum**  
**HDR Engineering, Inc.**  
**9805 Double R Blvd., Ste. 101**  
**Reno, NV 89502**

14) **FORCE MAJEURE**

Neither party shall be held responsible for any delay or failure in performance of any part of this Agreement to the extent such delay or failure is caused by fire, flood, explosion, war, embargo, government requirement, civil or military authority, act of God, pandemic or other similar causes beyond its control and without the fault or negligence of the delayed or non-performing party. The affected party will notify the other party in writing within ten (10) days after the beginning of any such cause that would affect its performance. Notwithstanding, if a party's performance is delayed for a period exceeding thirty (30) days from the date the other party receives notice under this paragraph, the non-affected party will have the right, without any liability to the other party, to terminate this agreement.

15) **HEADINGS**

Headings in this Agreement are for convenience only and are not intended to be used in interpreting or construing the terms, covenants, and conditions of this Agreement.

16) **ENTIRE AGREEMENT**

This Agreement constitutes the whole agreement between the parties with respect to the



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## Exhibit A

### Scope of Services

Carson River Regional Flood Forecasting  
Hydraulic Model

### Project Understanding

The availability of river forecasts from the National Weather Service River Forecast Center (RFC) provides extremely valuable information for emergency response purposes. However, the forecast points are at limited locations and are predominantly limited to forecasted stages at USGS gages. Current technology allows the use of hydraulic models informed by the RFC data to simulate the extents of flooding associated with these forecasted flows. In larger watershed systems there is sufficient warning time afforded by these forecasts to provide emergency responders sufficient time to close roadways, conduct evacuations, and protect infrastructure in the areas forecasted to be impacted. This information is capable of saving lives and significantly reducing flood damages, and also reduces the losses associated with business disruption when flooding can be prevented. A secondary benefit of these efforts is an increase in public awareness and confidence in hazard mapping used for flood planning and flood insurance purposes.

In January and February of 2017 the Carson River watershed experienced two Atmospheric River events causing varying degrees of regional and localized flooding and damages. Several roadways including US-395 in Douglas County, NV were closed due to flooding.

The USGS stream gage (10311000), "Carson River near Carson City" peaked at 8,550 cfs on January 10<sup>th</sup> and at 10,100 cfs on February 11<sup>th</sup>. Although these events were in the 10-percent-annual-chance range, there were some moderate to severe impacts to affected communities.

The National Weather Service's (NWS) Advance Hydrologic Prediction Services maintains flood forecasting at the East Fork of the Carson River at Markleeville, CA (USGS Gage 10308200), West Fork of the Carson River at Woodfords, CA (USGS Gage 10310000), and the Carson River at Carson City, NV (USGS Gage 10311000). These forecasts include observed flow at each location in addition to an estimated "forecast" hydrograph for approximately 5 days.

During the January 2017 events HDR Engineering Inc. worked with the NWS data and Douglas County Staff to incorporate these forecasted hydrographs into the Carson River Regional HEC-RAS model to estimate maximum flood inundations for a given forecast. The maps were then used by emergency responders to plan for flood impacts.

During the January 2017 event, there were several challenges with the use of the HECRAS model for updated forecasts. The NWS updated the forecasted storm hydrograph approximately every six hours with some updates resulting in relatively significant changes to the peak estimates. The model runtimes for the current configuration of the model are in the range of 25 to 35 hours making the use of this model for updated predictions during an event difficult.

The model also uses 18 tributary inflow locations to add volume to the system to account for runoff from the Sierra Nevada and Virginia Range drainages. There are currently no estimates from the NWS for these tributary inputs. Estimating these volumes is challenging and time consuming during a flood event.

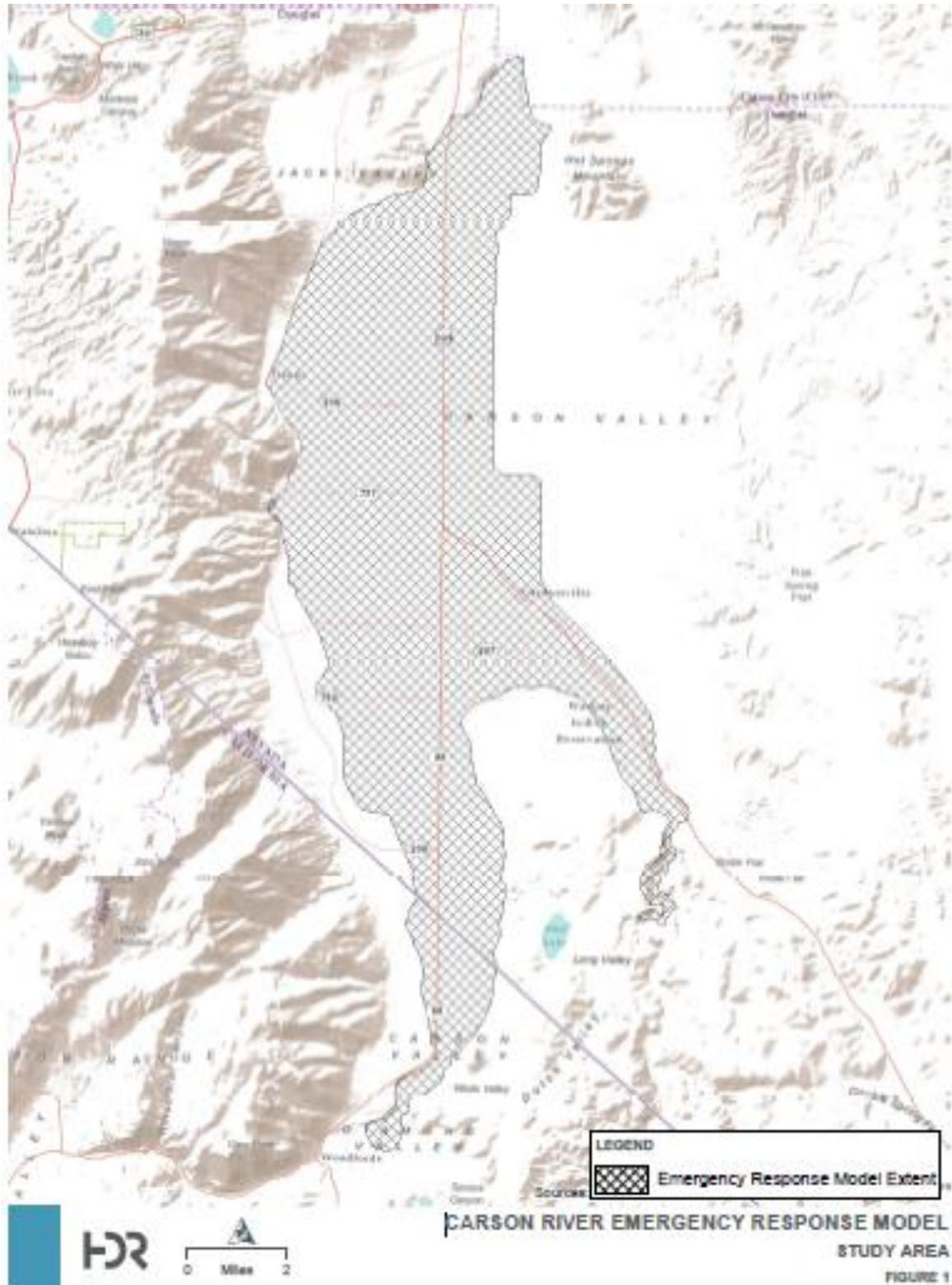
The current Carson River Regional HEC-RAS model was developed to support a FEMA Physical Map Revision (PMR) for the Carson River Corridor which necessitated adequate detail to support a detailed study of Flood Hazard Zone extents and Base Flood Elevations. It is this complexity in the model that is driving longer runtimes. The CWSD is therefore proposing to develop a Regional Flood Forecasting HEC-RAS



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Model (Flood Forecast Model) which can be run with reasonable accuracy in a matter of 1-3 hours for emergency response purposes.

The below proposal outlines the tasks necessary to develop a revised version of the PMR model for use in future flood forecasting efforts. The extents of the model will be the Douglas County, NV MAS 3 area (Figure 1).





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## Project Management

HDR personnel will provide project management activities in support of the Carson River Flood Forecasting Model project. HDR project management activities include project initiation, invoices, project tracking, internal resources review, client coordination, and project coordination. These activities will be conducted to consistently monitor project progress, anticipate project needs, and implement action plans to maintain scope, fee, and schedule to the extent possible.

## Project Initiation

Upon approval of the agreement, HDR personnel will conduct management activities related to the initiation of the project. These will include contract initiation, preliminary project review, and electronic project setup.

## Invoicing and Progress Tracking

Schedule and budget progress will be reported through submission of monthly invoices. Monthly invoices will include summary of tasks worked on in that period, cost to date, and funds remaining for the project to assist the CWSD project manager track progress and project spending.

## Project Coordination

HDR's Project Manager will work with CWSD staff to facilitate regular communication and transfer of information with the project team. Internal and client project meetings will be held as necessary via conference call or in-office meetings at the CWSD offices.

## Assumptions:

- Project management tasks are estimated based upon anticipated project duration of 12 months.
- CWSD personnel will be responsible for assembling non-HDR members for meetings and for developing meeting notes.

## Deliverables:

Status reports to accompany monthly invoices.

## Data Collection

There are a number of datasets that will be obtained and reviewed in order to gain a better understanding of the hydrologic and hydraulic behavior of the study area. These data will help refine the final hydraulic model.

## Hydrologic Data

Although the 2017 event was a relatively frequent event, statistically, it was significant enough to cause regional damages and road closures. Because this was a relatively typical Atmospheric River event for the Carson River, the hydrologic and hydraulic dynamics can be used to refine the Regional Forecast Model.

Unlike some of the other historic flood events in the region, many of the USGS gaged watersheds in the study area have complete hydrologic data for the 2017 event. These datasets will help refine model hydrograph inputs and modeling parameterization. It is anticipated the following USGS stream gages will be reviewed and data processed for this effort:

- West Fork of the Carson River at Woodfords 10310000
- East Fork of the Carson River Below Markleeville Creek near Markleeville 10308200



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- Bryant Creek Near Gardnerville 10308800
- East Fork of the Carson River Near Garnerville 10309000
- Daggett Creek Near Genoa 10310400
- East Fork of the Carson River Near Muller Lane 385733119471504
- Clear Creek Near Carson City 10310500

## Photographic Data

During the 2017 events a number of agencies and organizations mobilized to take photos of flooding throughout the watershed. HDR staff will compile and review various flood photos, as available, from the CWSD, Douglas County, Carson City, and Lyon County, NV. These photos will be reviewed to ascertain their utility in helping with the validation of the Regional Forecast Model.

## National Weather Service Coordination

In order for this model to work as a predictive tool, it is imperative that the tributary inflow hydrographs be available and derived from the NWS hydrologic model predicted storm hydrographs. HDR staff will coordinate with the NWS to explore the option of adding locations to their forecasting model to provide inputs necessary for the HEC-RAS Regional Forecasting Model.

## Assumptions

- Real time data is available from the USGS website for the above described stream gages.
- Rating curve information exists and is up to date for these locations.
- Stream gage datums are available and correct.
- NWS forecasted hydrographs will be available at appropriate locations to support modeling efforts.

## Deliverables

None

## Terrain Development

It is anticipated that the previously developed terrain for the MAS #4 Carson River PMR will be used for this effort. For the Douglas County, NV and Alpine County, CA portions of the model, HDR derived the project terrain from a set of mass point bare earth data collected for the Carson Valley in Douglas County, Nevada and Alpine County, California. GeoDigital International Corporation acquired airborne LiDAR mass points along the Carson River Corridor in September 2012 during drought conditions.

There may be minimal processing of the terrain to make updates in areas which have changed. HDR will coordinate with Douglas County staff to add detail to the terrain in hydraulically relevant areas that have changed since the 2012 data was collected.

## Assumptions

- Existing terrain datasets will be adequate for this modeling effort.
- Only minimal processing or editing of the data will be necessary to update the terrains.
- This task will be limited to 16 hours processing time. Any additional effort will be a potential change order and will be coordinated with CWSD.
- Terrain dataset projection will be in NAD83 State Plane Feet Nevada West.



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- Vertical datum will be NAVD 88.

## Deliverables

- Revised terrain dataset in GeoTiff format.

## Model Development

It is the goal of the CWSD to develop a quick running complete hydraulic model for the entire Carson PMR area for use in Flood Forecasting. It is important that this model be able to simulate potential flood hazards for the study area with reasonable accuracy given the limitations on run times and study area size. This model is conceptualized to be a 2D only model for hydraulic connectivity and ease of use. HDR staff developed a simple 2D test model for the project area and determined that there is the potential to have a model for the entire area with adequate grid cell resolution that can run in 3-4 hours.

## Manning's n values

Manning's n value polygons have been developed for the Douglas County and Alpine County portion of the MAS #4 model. These shapefiles can be used to generate a composite Manning's n value layer in HEC-RAS. HDR staff will review the previous work done for the PMR study and make any slight modifications necessary for the data's use in the emergency response modeling.

## Model Geometry

It is anticipated that the Regional Flood Forecast Model will be a full 2D model for ease of run, connectivity and consistency of approach. The model domain will be developed in GIS as a polygon layer. This layer will be based on the extents of the previous models and the 0.2-percent-annual chance (500-year) floodplain limits. The model domain will incorporate breakline data from the Douglas County study.

After the model domain geometry has been completed, inflow locations will be determined from previous modeling efforts and availability of tributary inflow data. It is assumed that the NWS will work with the CWSD to add as many tributary inflow "nodes" to their predictive model as possible for this effort.

Currently, HEC-RAS does not have the capability to model bridges in the 2D domain. Major structures that impact hydraulic behavior will be added to the model as culverts or areas of high roughness. The next version of HEC-RAS V 6.0 will have the capability to model pressure flow bridges in a 2D area. If this version is available in time for this study HDR will incorporate the bridges from the 1D rea pf the MAS #4 model.

If the Version 6.0 is not available, the model will be run to determine hydraulic performance of the structures so that they can be compared to the performance of their counterparts in the 1D models. "Bridge" culverts will then be modified to approximate the hydraulic behavior of the bridges.

## Model Run

After model geometry and inflow has been developed the model will be run with the following events to determine model run times:

- 1-percent-annual chance
- 2017 January event
- 2017 February event



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Adjustments will then be made to the geometry to refine the mesh to produce a model with useable run times for emergency response purposes.

## Model Validation

After the model has been run with the various events and the 2D grids have been refined, HDR staff will make adjustments to the model n values and geometry to get a reasonable approximation for various USGS hydrographs in the study area (as appropriate) and flood extents from the validation photos. If rating curves are available and appropriate HDR staff will look at rating curve fits as well and adjust modeling parameters as needed.

## Assumptions

The level of accuracy for this model will be for forecasting and planning purposes only. This model will not be adequate for flood mapping or base flood elevation determination.

- Model complexity will be limited to produce model run times in the 3-5 hr. range.
- Significant bridge structures will be approximated with culverts in the model domain unless HEC-RAS V 6.0 is available as a public release version.
- Model will be run in diffusion wave mode for faster run times.
- RFC hydrologic simulation archives of the 2017 flood events will be available to provide inflow hydrographs for tributary inflow points.
- Model stabilization and debugging will be limited to 40 hrs.
- Model validation will be limited to 40 hrs.

## Deliverables

Regional Flood Forecasting model in HEC-RAS 5.0.7 or higher.

## Technical Memorandum

HDR staff will prepare a technical memorandum describing the development of the terrain, model, and validation process. It is anticipated that this will be a basic document with enough detail to outline the process used to develop the model but will not be suitable for regulatory purposes. The memo will also provide sufficient guidance for an experienced HEC-RAS user to update the hydrologic inputs to the model and run simulations of forecasted flood events.

## Assumptions

- The Tech Memo will be produced in Microsoft Word and then converted to a Portable Document Format (.pdf) file. A draft Memo will be submitted and reviewed by the CWSD before finalization. CWSD will provide one set of consolidated comments on the Draft Report integrating comments.

## Deliverables

- One digital and 1 paper copy of the Memo to CWSD.

## Quality Assurance Quality Control (QA/QC)

HDR will perform internal QA/QC activities related to project initiation and management in accordance with HDR's internal policies and procedures. HDR will also perform QA/QC on products delivered to the CWSD using the aforementioned internal policies.



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## Schedule

HDR personnel will work with CWSD upon Notice to Proceed (NTP) to develop a project schedule. Project schedule will be finalized within three (3) weeks of Notice to Proceed. Initially, HDR assumes that work will be completed within 12 month of the NTP.

## Budget

Major budget items are summarized below:

**Table 1: Anticipated project budget**

1	Project Management & QA/QC	\$11,372
2	Data Collection	\$4,480
3	Terrain Development	\$1,203
4	Model Development	\$21,037
5	Technical Memorandum	\$5,405
	2021 Escalation	\$1,186
	<b>Total</b>	<b>\$44,683</b>

## **AGENDA ITEM #13**

## CARSON WATER SUBCONSERVANCY DISTRICT

**TO:** BOARD OF DIRECTORS

**FROM:** EDWIN D. JAMES

**DATE:** October 21, 2020

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**SUBJECT:** Agenda Item #13 – For Discussion Only: Update on the Carson River Watershed Virtual Workshop Webinar

**DISCUSSION:** Staff will give a brief overview of the Carson River Watershed Virtual Workshop Webinar that was held on October 14.

**STAFF RECOMMENDATION:** Receive and file.

## **AGENDA ITEM #14**

## CARSON WATER SUBCONSERVANCY DISTRICT

**TO:** BOARD OF DIRECTORS

**FROM:** EDWIN D. JAMES

**DATE:** October 21, 2020

**SUBJECT:** Agenda Item #14 – For Discussion Only: Update on the 2020 Water Year

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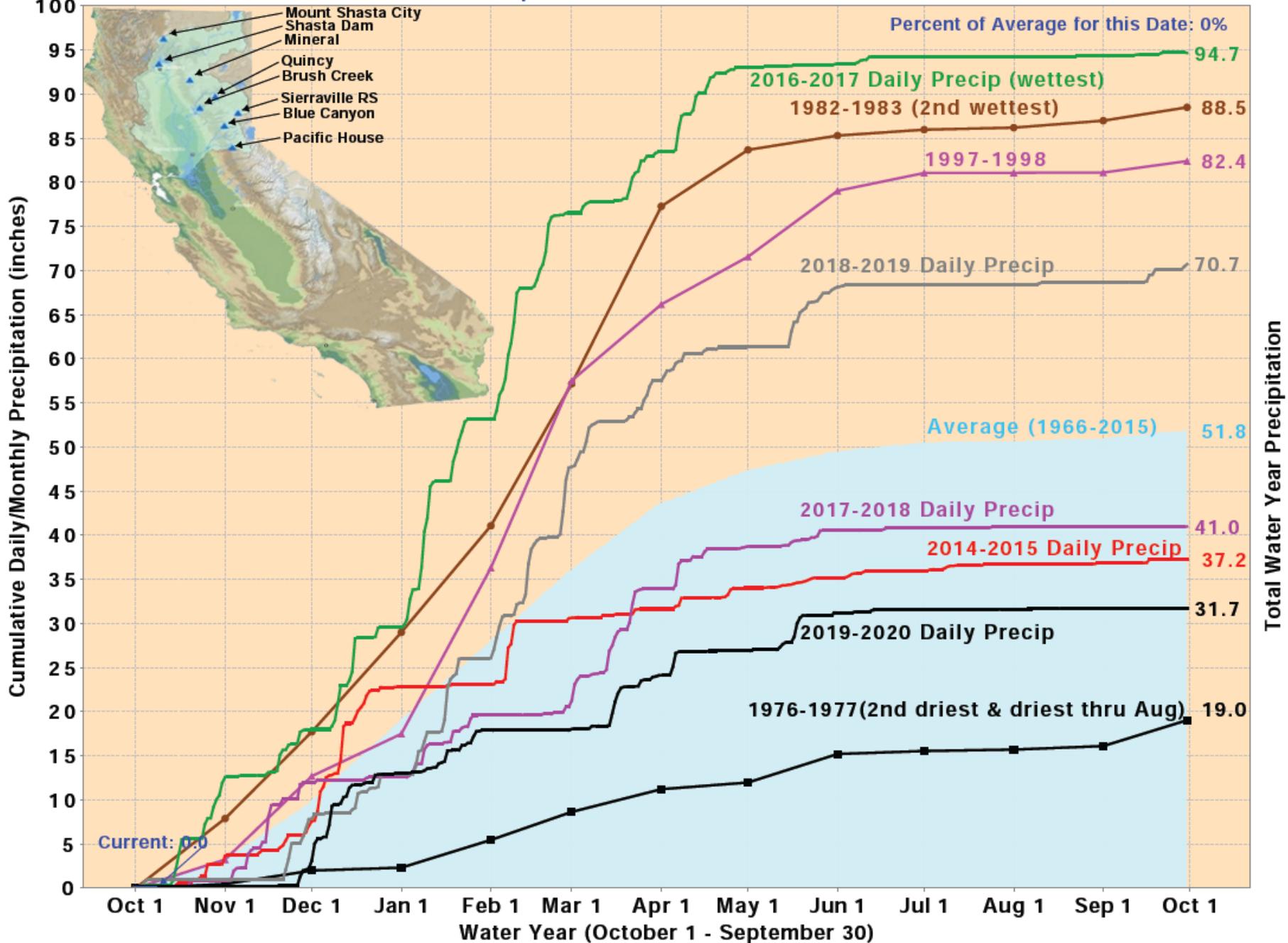
**DISCUSSION:** Attached is a brief overview the 2020 Water Year.

**STAFF RECOMMENDATION:** Receive and file.



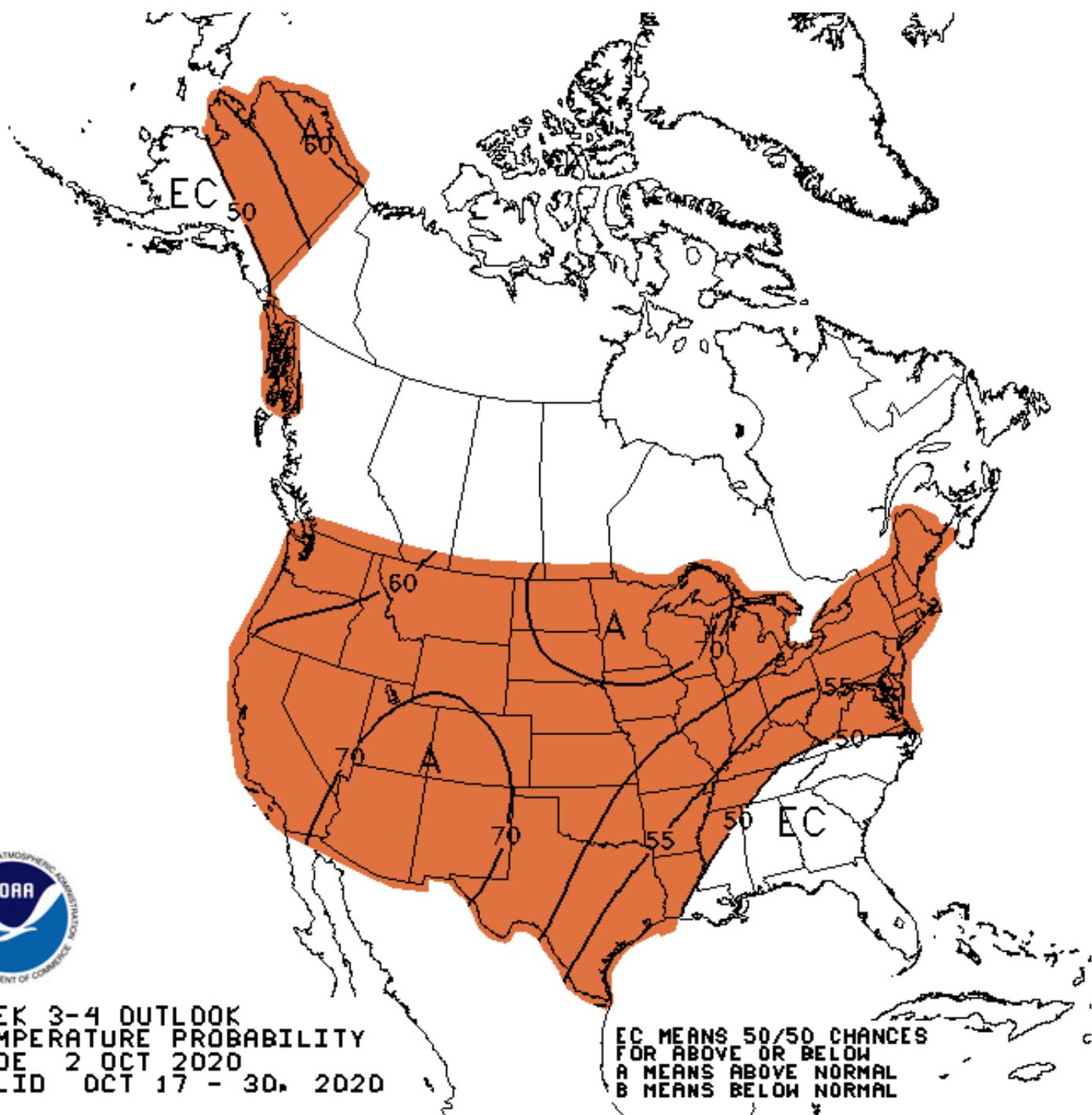
# Overview of the 2020 Water Year

# Northern Sierra Precipitation: 8-Station Index, October 08, 2020



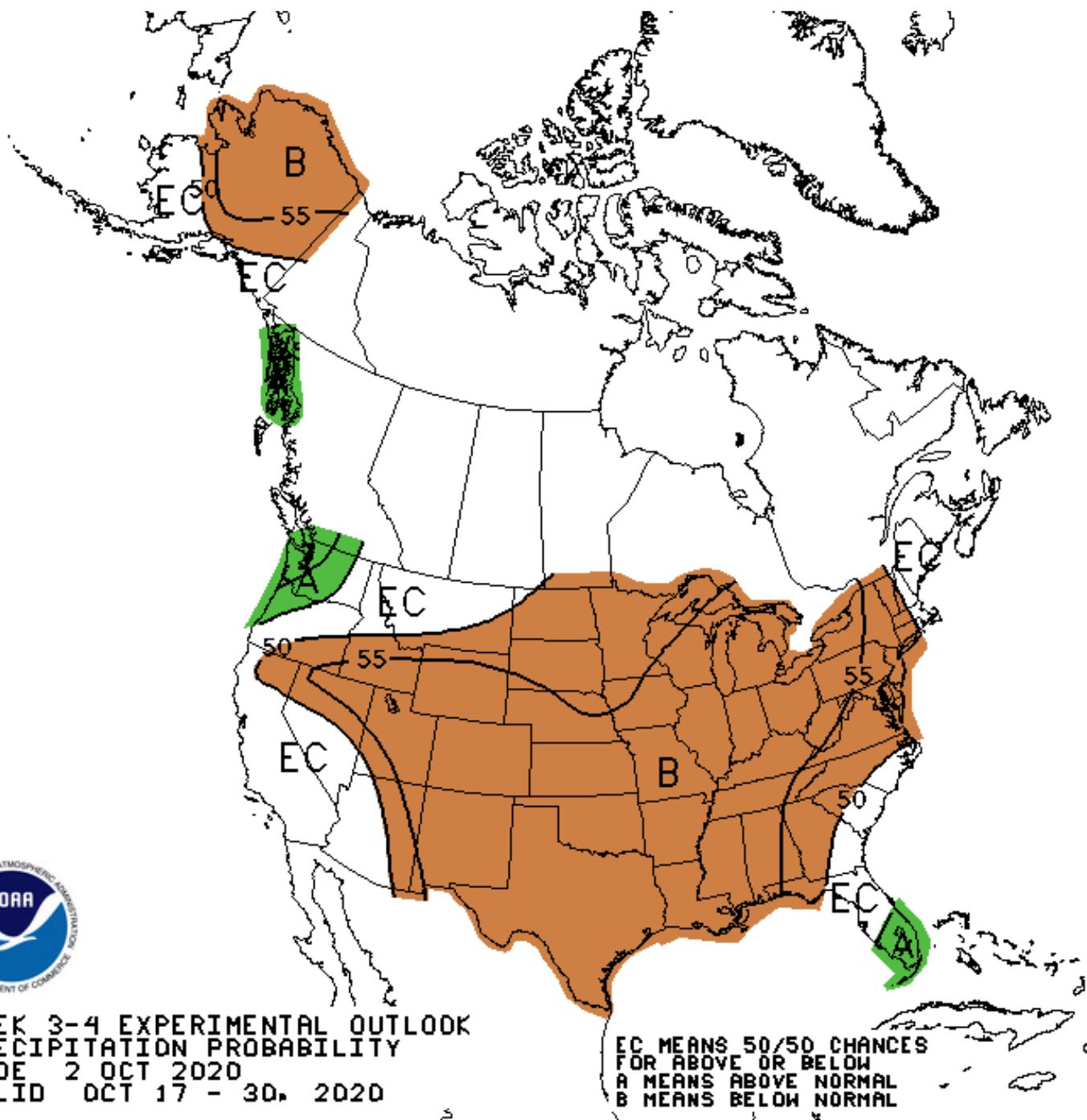
# Stream Flow Comparisons

Stream Gage	Long Term Average	Water Year 2020
	(AF)	(AF)
E. Fork Gardenville	265,627	139,918
W. Fork Woodfords	74,799	44,477
Carson City	291,873	152,973
FT Churchill	274,701	138,705
Below Lahontan Res.	341,909	299,872



WEEK 3-4 OUTLOOK  
TEMPERATURE PROBABILITY  
MADE 2 OCT 2020  
VALID OCT 17 - 30, 2020

EC MEANS 50/50 CHANCES  
FOR ABOVE OR BELOW  
A MEANS ABOVE NORMAL  
B MEANS BELOW NORMAL



WEEK 3-4 EXPERIMENTAL OUTLOOK  
 PRECIPITATION PROBABILITY  
 MADE 2 OCT 2020  
 VALID OCT 17 - 30, 2020

EC MEANS 50/50 CHANCES  
 FOR ABOVE OR BELOW  
 A MEANS ABOVE NORMAL  
 B MEANS BELOW NORMAL

# STAFF REPORTS

## CARSON WATER SUBCONSERVANCY DISTRICT

**TO:** BOARD OF DIRECTORS

**FROM:** EDWIN D. JAMES

**DATE:** October 21, 2020

**SUBJECT:** Agenda Item #15 - For Information Only: Staff Report

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**DISCUSSION:** The following is a list of meetings/activities (mostly virtual) attended by Ed James and staff since the last Board meeting on September 16, 2020:

- 9/17/20 – Ed attended meeting re: Storey County joining CWSD
- 9/17/20 - Ed and Debbie attended Smelter Creek LOMR meeting
- 9/17/20 – Brenda & Shane met w/NEON Agency regarding filming for Community Drinking Water and Watershed Moment films.
- 9/17/20 – Ed attended NWRA Board meeting
- 9/17/20 – Brenda attended Desert Terminal Lakes Restoration Fund RFP Webinar
- 9/18/20 – Ed and Brenda met re: Grant Budget
- 9/18/20 – Ed, Debbie and Shane met re: Database project
- 9/21/20-10/9/20 – Brenda on vacation
- 9/22/20 – Debbie attended DWR training
- 9/22/20 – Ed, Debbie and Catrina hosted Floodplain Managers meeting
- 9/24/20 – Ed, Debbie and Shane met re: Database project
- 9/24/20 – ALL STAFF MEETING
- 9/28/20 – Ed and Debbie met w/Douglas Cty re: Floodplain Mapping – 2D Modeling
- 9/29/20 – Ed and Catrina attended Webinar re: Robert's Rules/Difficult Boards
- 9/30/20 – Debbie attended mtg re: Carson River Story Map
- 9/30/20 – ALL STAFF MEETING (Brenda/VAC)
- 9/30/20 – Ed attended the Carson City Planning meeting re: LID ordinance adoption
- 9/30/20 – Ed, Debbie, Shane, Catrina met re: Oct. 14 Workshop Webinar planning
- 10/1/20 – Ed and Shane to Lost Lakes
- 10/2/20 – Ed and Debbie met w/Chris Utley re: Computer repair and security update
- 10/5/20 - Ed to Lost Lakes
- 10/5/20 – FY 2019-20 Audit begins
- 10/6/20 – 10/9/20 – Shane on vacation
- 10/6/20 – Ed and Debbie partner call: CA Flood Preparedness Week
- 10/7/20 – Ed attended NDWR meeting
- 10/8/20 – Debbie begins Jury Duty

- 10/9/20 - Ed to Lost Lakes
- 10/12/20 – All staff and panelists attend CR Workshop Round Table
- 10/13/20 - Ed and Debbie partner call: CA Flood Preparedness Week
- 10/13/20 – Ed attended CTWCD meeting
- 10/13/20 – Ed and Debbie attended BRIC meeting
- 10/13/20 – All staff CR Workshop Webinar practice session
- 10/14/20 – All staff host CR Workshop Webinar
- 10/15/20 – Brenda attended LID meeting
- 10/15/20 – Brenda attended meeting w/NEON
- 10/16/20 – Debbie attended meeting re: CWSD MARS reporting
- 10/19-10/22/20 – Brenda and Shane Video Filming days in field

**Meetings/activities anticipated through the end of October:**

- 10/28/20 – Ed and Brenda attend Nevada Silver Jackets meeting

**STAFF RECOMMENDATION:** Receive and file.

**NO CORRESPONDENCE**