

Eastern Sandoval County Arroyo Flood Control Authority (ESCAFCA)

NPDES Stormwater Program MS4 Annual Report 2023

Reporting Period:

July 1, 2022 – June 30, 2023

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Annual Report Format



National Pollutant Discharge Elimination System Stormwater Program MS4 Annual Report Format



Check box if you are submitting an individual Annual Report with one or more cooperative program elements. ☒

Check box if you are submitting an individual Annual Report with individual program elements only. ☐

Check box if this is a new name, address, etc. ☒

1. MS4(s) Information

Eastern Sandoval County Arroyo Flood Control Authority

Name of MS4

Troy

Martinez

Public Works Director

Name of Contact Person (First)

(Last)

(Title)

(505) 867-3311

tmartinez@townofbernalillo.org

Telephone (including area code)

E-mail

PO Box638

Mailing Address

Bernalillo

NM

87004

City

State

ZIP code

What size population does your MS4(s) serve?" 8,000

NPDES number

What is the reporting period for this report? (mm/dd/yyyy) From Jul 1, 2022 to Jun 30, 2023

2. Water Quality Priorities

A. Does your MS4(s) discharge to waters listed as impaired on a state 303(d) list? ☐ Yes ☒ No

B. If yes, identify each impaired water, the impairment, whether a TMDL has been approved by EPA for each, and whether the TMDL assigns a wasteload allocation to your MS4(s). Use a new line for each impairment, and attach additional pages as necessary.

Impaired Water	Impairment	Approved TMDL		TMDL assigns WLA to MS4	
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
		<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No

2. B. Continued

Impaired Water	Impairment	Approved TMDL		TMDL assigns WLA to MS4	
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No
<input type="text"/>	<input type="text"/>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Yes	<input type="checkbox"/> No

C. What specific sources contributing to the impairment(s) are you targeting in your stormwater program?

Pet waste, sediment, floatables, illicit discharges, oil

D. Do you discharge to any high-quality waters (e.g., Tier 2, Tier 3, outstanding natural resource waters, or other state or federal designation)? ☐ Yes ☒ No

E. Are you implementing additional specific provisions to ensure their continued integrity? ☐ Yes ☒ No

3. Public Education and Public Participation

A. Is your public education program targeting specific pollutants and sources of those pollutants? ☒ Yes ☐ No

B. If yes, what are the specific sources and/or pollutants addressed by your public education program?

Pet Waste, floatables, illicit discharges, oil

C. Note specific successful outcome(s) (e.g., quantified reduction in fertilizer use; NOT tasks, events, publications) fully or partially attributable to your public education program during this reporting period.

See Summary Report from the Middle Rio Grande Storm Team

D. Do you have an advisory committee or other body comprised of the public and other stakeholders that provides regular input on your stormwater program? ☐ Yes ☒ No

4. Construction

A. Do you have an ordinance or other regulatory mechanism stipulating:

Erosion and sediment control requirements? ☐ Yes ☒ No

Other construction waste control requirements? ☐ Yes ☒ No

Requirement to submit construction plans for review? ☐ Yes ☒ No

MS4 enforcement authority? ☐ Yes ☒ No

B. Do you have written procedures for:

Reviewing construction plans? ☐ Yes ☒ No

Performing inspections? ☒ Yes ☐ No

Responding to violations? ☐ Yes ☒ No

C. Identify the number of active construction sites ≥ 1 acre in operation in your jurisdiction at any time during the reporting period.

D. How many of the sites identified in 4.C did you inspect during this reporting period?

E. Describe, on average, the frequency with which your program conducts construction site inspections.

All ESCAFCA-owned sites are inspected by ESCAFCA personnel at a minimum weekly. Qualified contractors inspect sites Construction Sites as needed.

F. Do you prioritize certain construction sites for more frequent inspections? ☐ Yes ☒ No

If Yes, based on what criteria?

All ESCAFCA-owned sites are inspected

G. Identify which of the following types of enforcement actions you used during the reporting period for construction activities, indicate the number of actions, or note those for which you do not have authority:

☐ Yes Notice of violation 0 No Authority ☒

☐ Yes Administrative fines 0 No Authority ☒

☐ Yes Stop Work Orders 0 No Authority ☒

☐ Yes Civil penalties 0 No Authority ☒

☐ Yes Criminal actions 0 No Authority ☒

☐ Yes Administrative orders 0 No Authority ☒

☒ Yes Other Contractual Documents

H. Do you use an electronic tool (e.g., GIS, data base, spreadsheet) to track the locations, inspection results, and enforcement actions of active construction sites in your jurisdiction? ☐ Yes ☒ No

I. What are the 3 most common types of violations documented during this reporting period?

No violations occurred. ESCAFCA has Stop Work authority on ESCAFCA-owned projects.

J. How often do municipal employees receive training on the construction program? As Needed

5. Illicit Discharge Elimination

A. Have you completed a map of all outfalls and receiving waters of your storm sewer system? ☐ Yes ☒ No

B. Have you completed a map of all storm drain pipes and other conveyances in the storm sewer system? ☐ Yes ☒ No

C. Identify the number of outfalls in your storm sewer system. 0

D. Do you have documented procedures, including frequency, for screening outfalls? ☐ Yes ☒ No

E. Of the outfalls identified in 5.C, how many were screened for dry weather discharges during this reporting period?

n/a

F. Of the outfalls identified in 5.C, how many have been screened for dry weather discharges at any time since you obtained MS4 permit coverage? n/a

G. What is your frequency for screening outfalls for illicit discharges? Describe any variation based on size/type.

All ESCAFCA facilities are inspected at a minimum twice per year (pre and post monsoon) for a condition of facility assets

H. Do you have an ordinance or other regulatory mechanism that effectively prohibits illicit discharges? ☐ Yes ☒ No

I. Do you have an ordinance or other regulatory mechanism that provides authority for you to take enforcement action and/or recover costs for addressing illicit discharges? ☐ Yes ☒ No

- J. During this reporting period, how many illicit discharges/illegal connections have you discovered?
- K. Of those illicit discharges/illegal connections that have been discovered or reported, how many have been eliminated?
- L. How often do municipal employees receive training on the illicit discharge program?

6. Stormwater Management for Municipal Operations

- A. Have stormwater pollution prevention plans (or an equivalent plan) been developed for:

- | | | |
|--|------------------------------|--|
| All public parks, ball fields, other recreational facilities and other open spaces | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| All municipal construction activities, including those disturbing less than 1 acre | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| All municipal turf grass/landscape management activities | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| All municipal vehicle fueling, operation and maintenance activities | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| All municipal maintenance yards | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| All municipal waste handling and disposal areas | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

Other

- B. Are stormwater inspections conducted at these facilities? ☐ Yes ☒ No

- C. If Yes, at what frequency are inspections conducted?

- D. List activities for which operating procedures or management practices specific to stormwater management have been developed (e.g., road repairs, catch basin cleaning).

Pre and post-monsoon inspection and cleaning of flood control facilities

- E. Do you prioritize certain municipal activities and/or facilities for more frequent inspection? ☐ Yes ☒ No

- F. If Yes, which activities and/or facilities receive most frequent inspections?

n/a

- G. Do all municipal employees and contractors overseeing planning and implementation of stormwater-related activities receive comprehensive training on stormwater management? ☒ Yes ☐ No

- H. If yes, do you also provide regular updates and refreshers? ☒ Yes ☐ No

- I. If so, how frequently and/or under what circumstances?

Contracted technical staff acquires training on stormwater management practices.

7. Long-term (Post-Construction) Stormwater Measures

- A. Do you have an ordinance or other regulatory mechanism to require:

- | | | |
|--|------------------------------|--|
| Site plan reviews for stormwater/water quality of all new and re-development projects? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Long-term operation and maintenance of stormwater management controls? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |
| Retrofitting to incorporate long-term stormwater management controls? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No |

- B. If you have retrofit requirements, what are the circumstances/criteria?

For all ESCAFCA-owned projects, all site plan review includes stormwater quality evaluation and O&M evaluation

- C. What are your criteria for determining which new/re-development stormwater plans you will review (e.g., all projects, projects disturbing greater than one acre, etc.)?

All ESCAFCA-owned projects are reviewed

D. Do you require water quality or quantity design standards or performance standards, either directly or by reference to a state or other standard, be met for new development and re-development? ☒ Yes ☐ No

E. Do these performance or design standards require that pre-development hydrology be met for:

Flow volumes ☐ Yes ☒ No

Peak discharge rates ☐ Yes ☒ No

Discharge frequency ☐ Yes ☒ No

Flow duration ☐ Yes ☒ No

F. Please provide the URL/reference where all post-construction stormwater management standards can be found.

n/a

G. How many development and redevelopment project plans were reviewed during the reporting period to assess impacts to water quality and receiving stream protection?

H. How many of the plans identified in 7.G were approved?

I. How many privately owned permanent stormwater management practices/facilities were inspected during the reporting period?

J. How many of the practices/facilities identified in I were found to have inadequate maintenance?

n/a

K. How long do you give operators to remedy any operation and maintenance deficiencies identified during inspections?

L. Do you have authority to take enforcement action for failure to properly operate and maintain stormwater practices/facilities?

☐ Yes ☒ No

M. How many formal enforcement actions (i.e., more than a verbal or written warning) were taken for failure to adequately operate and/or maintain stormwater management practices?

N. Do you use an electronic tool (e.g., GIS, database, spreadsheet) to track post-construction BMPs, inspections and maintenance?

☐ Yes ☒ No

O. Do all municipal departments and/or staff (as relevant) have access to this tracking system?

☐ Yes ☒ No

P. How often do municipal employees receive training on the post-construction program?

As needed

8. Program Resources

A. What was the annual expenditure to implement MS4 permit requirements this reporting period?

\$~2,000.00

B. What is next year's budget for implementing the requirements of your MS4 NPDES permit?

\$~1,000.00

C. This year what is/are your source(s) of funding for the stormwater program, and annual revenue (amount or percentage) derived from each?

Source:

Amount \$ OR %

Source:

Amount \$ OR %

Source:

Amount \$ OR %

D. How many FTEs does your municipality devote to the stormwater program (specifically for implementing the stormwater program; not municipal employees with other primary responsibilities)?

E. Do you share program implementation responsibilities with any other entities? ☒ Yes ☐ No

Entity	Activity/Task/Responsibility	Your Oversight/Accountability Mechanism
Compliance Mon	Sampling and Monitoring Wet Weather	Signed Agreement
Stormwater Qual	Education and Outreach	Signed Agreement
Technical Advisor	Technical information Exchange	Signed Agreement

9. Evaluating/Measuring Progress

A. What indicators do you use to evaluate the overall effectiveness of your stormwater management program, how long have you been tracking them, and at what frequency? These are not measurable goals for individual management practices or tasks, but large-scale or long-term metrics for the overall program, such as macroinvertebrate community indices, measures of effective impervious cover in the watershed, indicators of in-stream hydrologic stability, etc.

Indicator	Began Tracking (year)	Frequency	Number of Locations
<i>Example: E. coli</i>	2003	Weekly April–September	20
Various (EPA approved analyte list)	2016	Qualifying Events (up to 7)	2
Various (EPA approved analyte list)	2014	Wet Season, annually	8
Others per AMAFCA website			

B. What environmental quality trends have you documented over the duration of your stormwater program? Reports or summaries can be attached electronically, or provide the URL to where they may be found on the Web.

Data collected by the Compliance Monitoring Cooperative (CMC)

10. Additional Information

Please attach any additional information on the performance of your MS4 program, including information required in Parts I.C, I.D, and III.B. If providing clarification to any of the questions above, please provide the question number (e.g., 2C) in your response.

Certification Statement and Signature

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

☒ Yes ☐ No

Federal regulations require this application to be signed as follows: **For a municipal, State, Federal, or other public facility:** by either a principal executive or ranking elected official.

Signature



Jack Torres, Mayor

Name of Certifying Official, Title

12/29/2023

Date (mm/dd/yyyy)

Courtyard I
7500 Jefferson St. NE
Albuquerque, NM
87109-4335

www.bhinc.com

voice: 505.823.1000
facsimile: 505.798.7988
toll free: 800.877.5332

MEMORANDUM

DATE: December 29, 2022

TO: Patrick Chavez, PE, AMAFCA

FROM: Sarah Ganley, PE, ENV-SP
Savannah Maynard
Emma Adams, EI

SUBJECT: CMC Wet Season, Wet Weather Stormwater Monitoring
Data Verification, Analysis Results Database, and Reporting Memo
FY 2023 Wet Season (July 1, 2022 to October 31, 2022)

Notification of In-Stream Water Quality Exceedances

For downstream notification purposes, the following parameters for in-stream samples taken in the Rio Grande for the FY 2023 wet season had results that exceeded applicable water quality standards (WQSs) for one or more samples: E. coli, polychlorinated biphenyls (PCBs), and gross alpha, adjusted. Table 1 summarizes the samples with exceedances and the applicable WQS that was exceeded. Additional details on the sampling results are provided in this memo.

**Table 1: Parameters Detected Above Applicable Water Quality Standards
CMC FY 2023 Wet Season Monitoring**

Sampling Date Location	Parameters, Applicable Water Quality Standard (WQS), and Results Exceeding Applicable WQS		
	E. coli	PCBs	Gross Alpha, Adjusted
	WQS: 88 MPN (CFU/100 mL) Pueblo of Isleta Primary Contact Ceremonial & Recreational	WQS: 0.00017 ug/L Pueblo of Isleta Human Health Criteria (based on fish consumption only)	WQS: 15 pCi/L Pueblo of Isleta and NM Domestic Water Supply & Livestock Watering Designated Uses
10/5/2022 Rio Grande North Angostura Diversion Dam Pre-Storm Sample – E. coli Only	135 MPN (CFU/100mL)	No Exceedance	No Exceedance

Table 1 (continued).

Sampling Date Location	Parameters, Applicable Water Quality Standard (WQS), and Results Exceeding Applicable WQS		
	E. coli	PCBs	Gross Alpha, Adjusted
	WQS: 88 MPN (CFU/100 mL) Pueblo of Isleta Primary Contact Ceremonial & Recreational	WQS: 0.00017 ug/L Pueblo of Isleta Human Health Criteria (based on fish consumption only)	WQS: 15 pCi/L Pueblo of Isleta and NM Domestic Water Supply & Livestock Watering Designated Uses
10/5/2022 Rio Grande at Alameda Bridge E. coli Only	No Exceedance	Not Tested	Not Tested
10/6/2022 Rio Grande South Isleta Diversion Dam	No Exceedance	0.0011 ug/L	22.98 pCi/L

Overview of Stormwater Monitoring Activity

Bohannon Huston, Inc. (BHI) has been tasked to perform water quality services for the Compliance Monitoring Cooperative (CMC) Stormwater Data Verification, Database, and Reporting for the Wet Weather Stormwater Quality Monitoring Program for Fiscal Year (FY) 2023 (July 1, 2022 to June 30, 2023). The scope of work for this task includes data verification of the stormwater laboratory analysis results, compiling the analysis results into a database, and calculating the E. coli loading to compare with the Waste Load Allocation (WLA) for the qualifying storm events. The stormwater compliance monitoring is conducted separately by Daniel B. Stephens & Associates, Inc. (DBS&A) and is not a part of this task. This task is being conducted to assist the CMC members with their comprehensive monitoring and assessment program for compliance under the 2014 Middle Rio Grande (MRG) Watershed Based Municipal Separate Storm Sewer System (MS4) Permit, NPDES Permit No. NMR04A000 ("WSB MS4 Permit").

The WSB MS4 Permit entered Administrative Continuance in December 2019 when U.S. Environmental Protection Agency (EPA) Region 6 did not issue a new MS4 Permit before the current MS4 Permit's expiration date. The MRG Technical Advisory Group (TAG) sent EPA a letter dated October 15, 2019, acknowledging Administrative Continuance after the expiration date of the 5-year Permit term. Until a new MS4 Permit is issued, there are no compliance monitoring requirements for the CMC in the Rio Grande. As identified in the CMC Monitoring Plan, the WSB MS4 Permit required a minimum of seven (7) storm events be sampled at both the Rio Grande North and Rio Grande South locations (refer to Figure 1, page 4). All Permit required samples have been obtained by the CMC, as well as two (2) samples obtained in FY 2021, one

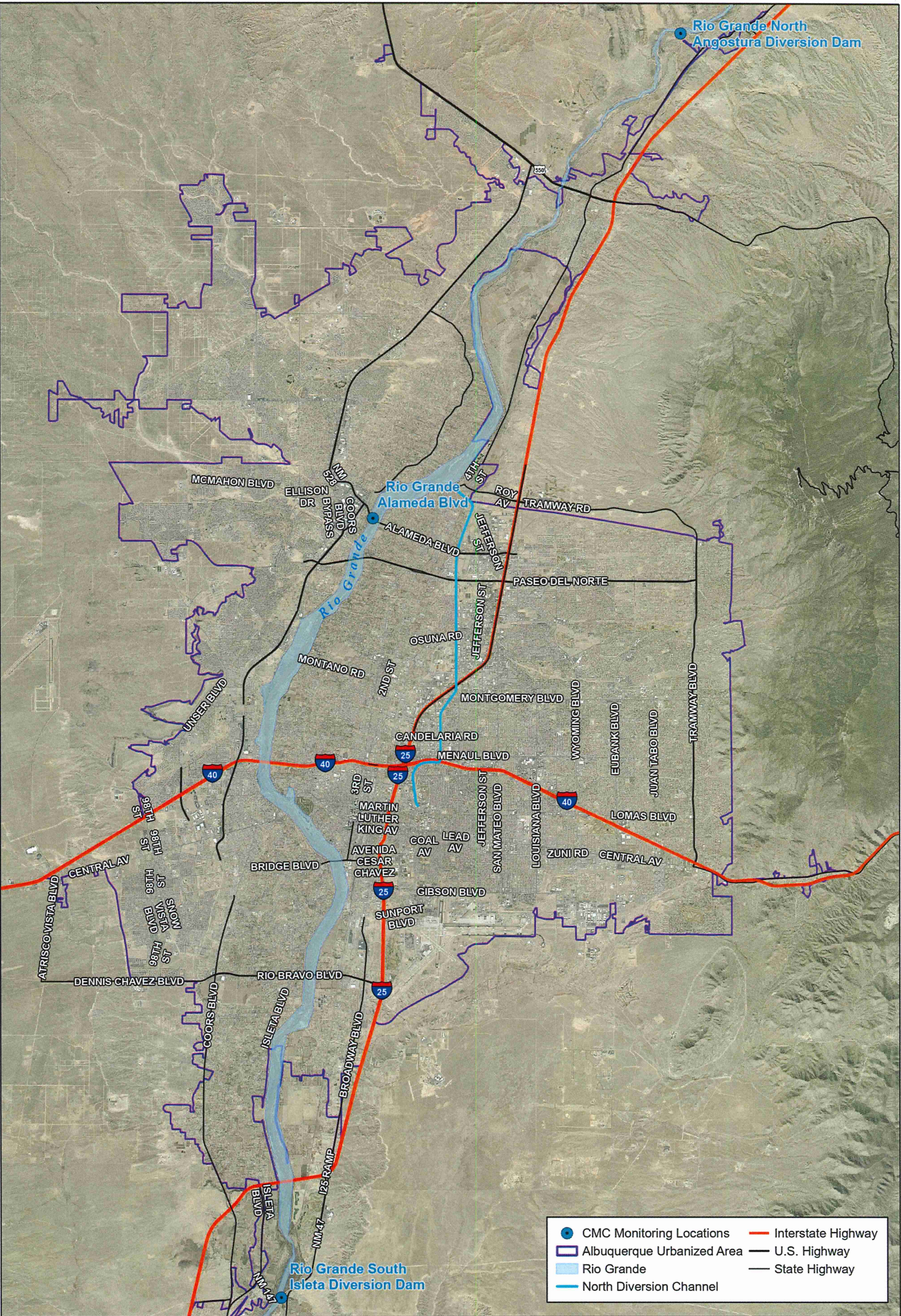
(1) sample obtained in FY 2022 wet season, and one (1) sample obtained in FY 2023 wet season during Administrative Continuance; all 11 CMC samples are summarized in Table 2 below.

**Table 2: CMC Sample Summary
Compared to WSB MS4 Permit Requirements**

No. of Storm Events Required to Sample	CMC-WSB MS4 Permit Required Samples per Season	FY (Date) Samples Obtained for CMC
1	#1 Wet Season	FY 2017 (8/10/2016)
2	#2 Wet Season	FY 2017 (9/12/2016)
3	#3 Wet Season	FY 2017 (9/21/2016)
4	#1 Dry Season	FY 2017 (11/21/2016)
5	#2 Dry Season	FY 2019 (3/13/2019)
6	Any Season	FY 2018 (Wet Season - 7/27/2017)
7	Any Season	FY 2018 (Wet Season - 9/27/2017)
Not Required	Wet Season	FY 2021 (10/28/2020)
Not Required	Dry Season	FY 2021 (4/28/2021)
Not Required	Wet Season	FY 2022 (9/1/2021)
Not Required	Wet Season	FY 2023 (10/5/2022)

During the WSB MS4 Permit Administrative Continuance, the CMC members chose to continue sampling within the Rio Grande to support their MS4 program needs and gather additional data in support of the future MS4 Permit compliance. This memo reports on the wet weather stormwater monitoring activity for the FY 2023 wet season (July 1, 2022 to October 31, 2022).

The CMC Excel database was updated with the FY 2023 wet season, wet weather monitoring data as results were received. The database contains sample location, sample date, analyses conducted, methods used, applicable surface WQSS, WSB MS4 Permit required Minimum Qualification Levels (MQL) and results.



Bohannon & Huston
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800.877.5332



0 6,000 12,000 24,000 Feet
1 inch = 12,205 feet

CMC Monitoring

Figure 1
Monitoring Locations

Summary of the CMC Sampling Plan

Sampling Parameters:

Samples from both the Rio Grande North and Rio Grande South monitoring locations were analyzed for the parameters defined in the EPA approved WSB MS4 CMC Monitoring Plan, May 5, 2016. The parameter list for both locations, which is intended to characterize stormwater discharges into the river, is as follows:

- Total Suspended Solids (TSS)
- Total Dissolved Solids (TDS)
- Chemical Oxygen Demand (COD)
- Biological Oxygen Demand – 5-day (BOD₅)
- Dissolved Oxygen (DO)
- Oil & grease (N-Hexane Extractable Material)
- E. coli
- pH
- Total Kjeldahl Nitrogen (TKN)
- Nitrate plus Nitrite
- Dissolved Phosphorus
- Ammonia plus Organic Nitrogen (Nitrogen, Ammonia and Nitrogen, Total)
- Phosphorous (Total Phosphorous)
- Polychlorinated Biphenyls (PCBs - Method 1668A)
- Gross Alpha, adjusted
- Tetrahydrofuran
- Benzo(a)pyrene
- Benzo(b)fluoranthene (3, 4 Benzofluoranthene)
- Benzo(k)fluoranthene
- Chrysene
- Indeno (1 ,2,3-cd) Pyrene
- Dieldrin
- Pentachlorophenol
- Benzidine
- Benzo(a)anthracene
- Dibenzofuran
- Dibenzo(a, h)anthracene
- Chromium VI (Hexavalent)
- Copper – Dissolved
- Lead – Dissolved
- Bis (2-ethylhexyl) phthalate
- Conductivity
- Temperature

Hardness (as CaCO₃) was added to the parameter list to allow dissolved metal results to be compared to the applicable WQSs. DO, pH, conductivity, and temperature are required by the WSB MS4 Permit to be analyzed in the field during sample collection, which was conducted by DBS&A, within 15 minutes of sample collection. All E. coli samples were submitted to the laboratory within eight (8) hours of collection in order to meet the specified hold time.

Sampling Locations:

The sampling locations are shown in Figure 1, page 4.

Rio Grande North – In-stream sampling within the Rio Grande was performed upstream of the Angostura Diversion Dam at the north end of the watershed. The location is upstream of all inputs from the Urban Area (UA) to the river and provides the background water conditions.

Rio Grande South – In-stream sampling within the Rio Grande was performed at the Isleta Bridge at the south end of the watershed. The location is downstream of all inputs from the UA to the river and provides the downstream water conditions. These locations have been accepted by EPA and the New Mexico Environment Department (NMED) to meet the WSB MS4 Permit requirements in Part III.A.

During this FY 2023 wet season, an E. coli sample was collected within the Rio Grande at Alameda Blvd. This is the location of the NMED defined stream segment divide (refer to Figure 6). This sample point was added after discussion with NMED in February 2017 regarding potential refinements to E. coli loading calculations.

Sample Collection:

As mentioned previously, sample collection for the CMC is being conducted by DBS&A (through a separate on-call contract). Since BHI was not involved in the sample collection, this task and memo do not address the details of the methodologies regarding sampling, determining if an event was a qualifying storm event, or determining the timing of the hydrograph at the Rio Grande Alameda and Rio Grande South locations.

DBS&A provided BHI their field notes and field sample data (temperature, DO, specific conductivity, and pH) for the FY 2023 wet season sampling. AMAFCA provided BHI the completed laboratory analysis reports from Hall Environmental Analysis Laboratory (HEAL) for this monitoring season.

Quality Assurance Project Plan (QAPP):

AMAFCA provided BHI with the Draft Quality Assurance Project Plan (QAPP) for the CMC dated June 14, 2016. DBS&A followed this QAPP during sample collection. BHI used this QAPP and the included standard operating procedures (SOPs) for the data verification and validation.

Monitoring Activity & Lab Analysis Summary

The list below provides a summary of the CMC comprehensive monitoring program activities completed for the FY 2023 wet season from July 2022 through October 2022. One (1) qualifying storm event was sampled and analyzed during the FY 2023 wet season.

- **October 5-6, 2022 – Qualifying Storm Event – Full Analysis of Samples.** Samples were collected at the Rio Grande North and Alameda Blvd locations beginning at 11:25 a.m. and 1:30 p.m., respectively. These samples were sent to the laboratory for an E. coli test. The CMC determined that the storm event beginning October 5 was a qualifying storm event. A Rio Grande South sample was collected beginning at 8:15 a.m. on October 6. The samples from the North (collected October 5) and South (collected October 6) locations were taken to HEAL for full parameter testing.

Stormwater Quality Database for CMC

As stated previously, there was one (1) qualifying storm event during the FY 2023 wet season, wet weather monitoring sampled by the CMC, which occurred October 5-6, 2022. DBS&A's field notes containing DO, pH, conductivity, and temperature measurements, as well as sampling comments have been received, and field results have been added to the database. Additionally, the HEAL reports for the corresponding time period have been received, added to the database, and are provided with this memo (Attachment 1). The laboratory reports attached to this memo have BHI added comments including the field parameter measurements and other relevant notes related to the laboratory report.

Database Data Entry:

The CMC Excel database was updated with the FY 2023 wet season, wet weather monitoring data. The database contains sample locations, sample date, analyses conducted, methods used, applicable surface water quality standards (WQS), WSB MS4 Permit required Minimum Quantification Levels (MQL), and analysis results. The database was updated under this Task to include the Rio Grande at Alameda sample location. Applicable surface WQSs found in New Mexico Administrative Code (NMAC) 20.6.4, as well as the Pueblo of Isleta WQSs, are entered in the Excel database for comparison purposes with testing results. There is an indicator in the database to show if the monitoring results exceed the applicable surface WQS. An exceedance is not a violation of the WSB MS4 Permit, as the Permit does not have numeric discharge limitations. These ">WQ Standard" flags simply and quickly show the CMC members where the results of the lab data exceed the applicable WQS.

Water quality data was entered into the database upon receipt of the lab reports. All data entered into the database is initially denoted with a "P" to indicate that it is provisional and has not been through the verification and validation process yet. Full parameter analyses of qualifying storm events for both Rio Grande North and Rio Grande South locations were entered respectively into the database. The E. coli only samples from the Rio Grande Alameda location were also entered into the database.

Data Verification and Validation:

The HEAL analysis reports were provided to BHI by AMAFCA. The lab reports also contain the Chain of Custody for the submitted samples. Field data was requested by and provided to BHI by DBS&A. Data verification and validation (V&V) was conducted by BHI on all field notes, lab reports, and Chain of Custody documents in accordance with the CMC WQS Operating Procedure (SOP) #2, which is part of the existing CMC QAPP, Draft June 14, 2016. These procedures are based on EPA Guidance for Environmental Data Verification and Validation (EPA, 2008).

As stated in the QAPP, the V&V process was completed by a different person than the one who entered the data into the database. The V&V process included use of the *Data Verification and Validation Worksheet* (provided in the QAPP). For this task, field data was verified first, confirming all field notes were complete. BHI handled field parameter questions directly with DBS&A. Chemical data verification began as soon as the lab reports were received, checking that all parameters were tested and looking for any obvious exceedances of WQS. Other steps listed on the *Data Verification and Validation Worksheet* were completed after all data from the laboratory was received and entered into the database. Sample blank results were reviewed to identify potential contamination during field processing or transport. Replica/duplicate samples were evaluated based on relative

percent difference (as described in more detail in the QAPP) to determine the variability of the samples.

All CMC FY 2023 wet season data met the appropriate QA/QC requirements. If there were any data that did not meet the appropriate QA/QC requirements, it would have been assigned an appropriate laboratory qualifier or validation codes. A summary of validation codes is provided in the QAPP.

Once the V&V process was completed, the worksheets were signed. Copies of the V&V worksheets are provided with this memo (Attachment 2). In the database, data that was checked during the V&V process was then changed from being denoted with a "P" for provisional to a "V" for verified, and laboratory qualifiers were added, as needed.

CMC FY 2023 Wet Season Assessment and Evaluation of Monitoring Results

The EPA approved WSB MS4 CMC Monitoring Plan, May 5, 2016, has 33 parameters to monitor at the Rio Grande North and Rio Grande South monitoring locations. Of these 33 parameters, 19 parameters were not detected in the FY 2023 wet season samples at either the Rio Grande North or South locations. Refer to Table 3 for a list of the parameters that were not detected.

**Table 3: Parameters Not Detected
CMC FY 2023 Wet Season Monitoring**

Parameters Not Detected	
Oil and Grease (N-Hexane Extractable Material)	Dieldrin
Nitrate plus Nitrite	Pentachlorophenol
Dissolved Phosphorous	Benzidine
Ammonia (mg/L as N)	Benzo(a)anthracene
Tetrahydrofuran	Dibenzofuran
Benzo(a)pyrene	Dibenzo(a,h)anthracene
Benzo(b)fluoranthene (3, 4 Benzofluoranthene)	Dissolved Lead
Benzo(k)fluoranthene	Chromium VI (Hexavalent)
Chrysene	Bis (2-ethyhexyl) Phthalate (other names: Di(2-ethylhexyl)phthalate, DEHP)
Indeno (1,2,3-cd) Pyrene	

For the remaining 14 parameters on the CMC monitoring parameter list, only three (3) parameters (E. coli, PCBs, and gross alpha, adjusted) had exceedances of the applicable surface WQS found in New Mexico Administrative Code (NMAC) 20.6.4 and the Pueblo of Isleta WQS during the FY 2023 wet season. These exceedances are summarized on Table 1, pages 1-2, and discussed below in further detail.

E. coli:

The E. coli results collected during the FY 2023 wet season are summarized in Table 4.

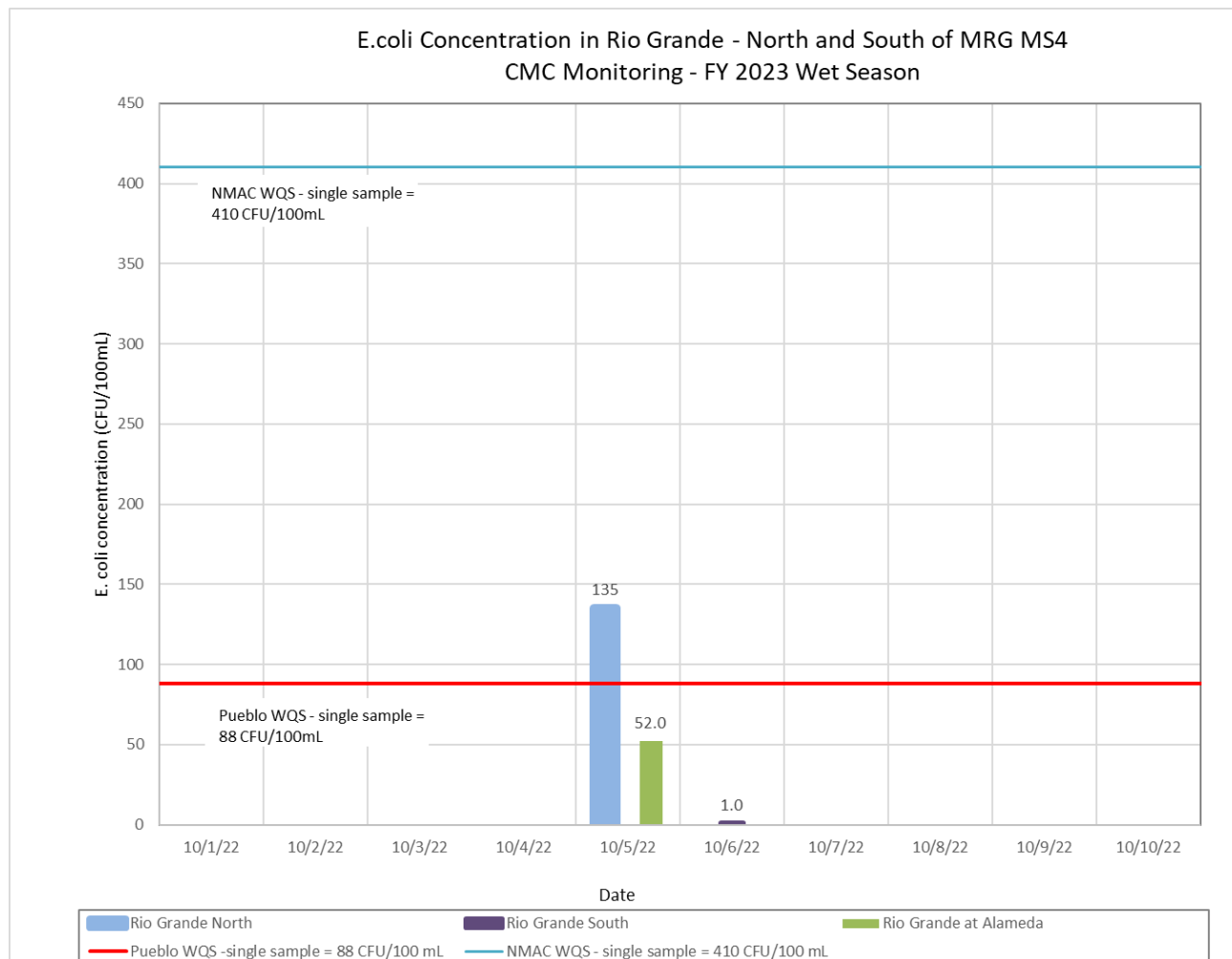
Table 4: E. coli Results
CMC FY 2023 Wet Season Monitoring

Date – Rio Grande Location	E. coli Results MPN (CFU/100 mL)
October 5, 2022 – North	135
October 5, 2022 – Alameda	52
October 6, 2022 – South	<1

At the Rio Grande North location (upstream of the Albuquerque UA, at the Angostura Diversion Dam), one (1) sample was collected and tested for E. coli. This E. coli result exceeded Pueblo of Isleta and Pueblo of Sandia's primary contact-single sample WQS of 88 CFU/100 mL. This October 5 sample was below NMAC's primary contact-single sample WQS of 410 CFU/100 mL. At the Rio Grande South location (downstream of the MS4 UA), one (1) sample was collected and tested for E. coli. This sample did not exceed any WQSs. This E. coli lab result at the Rio Grande South location is the lowest value that the CMC has seen reported in the Rio Grande at this location. AMAFCA called HEAL to discuss this result and verify that the reported result was correct.

In addition, the CMC collected one (1) E. coli sample in the Rio Grande at Alameda Blvd. during the FY 2023 wet season. The Alameda Blvd. analysis point was based on discussions with NMED in February 2017 on collecting actual E. coli data at the stream segment divide verses using an area percentage (as defined in the TMDL) for E. coli loading calculations. The lab results showed that the sample had an acceptable E. coli concentration below the primary contact-single sample Pueblo of Isleta WQS (88 CFU/100 mL) and the primary contact-single sample NMAC WQS (410 CFU/100 mL).

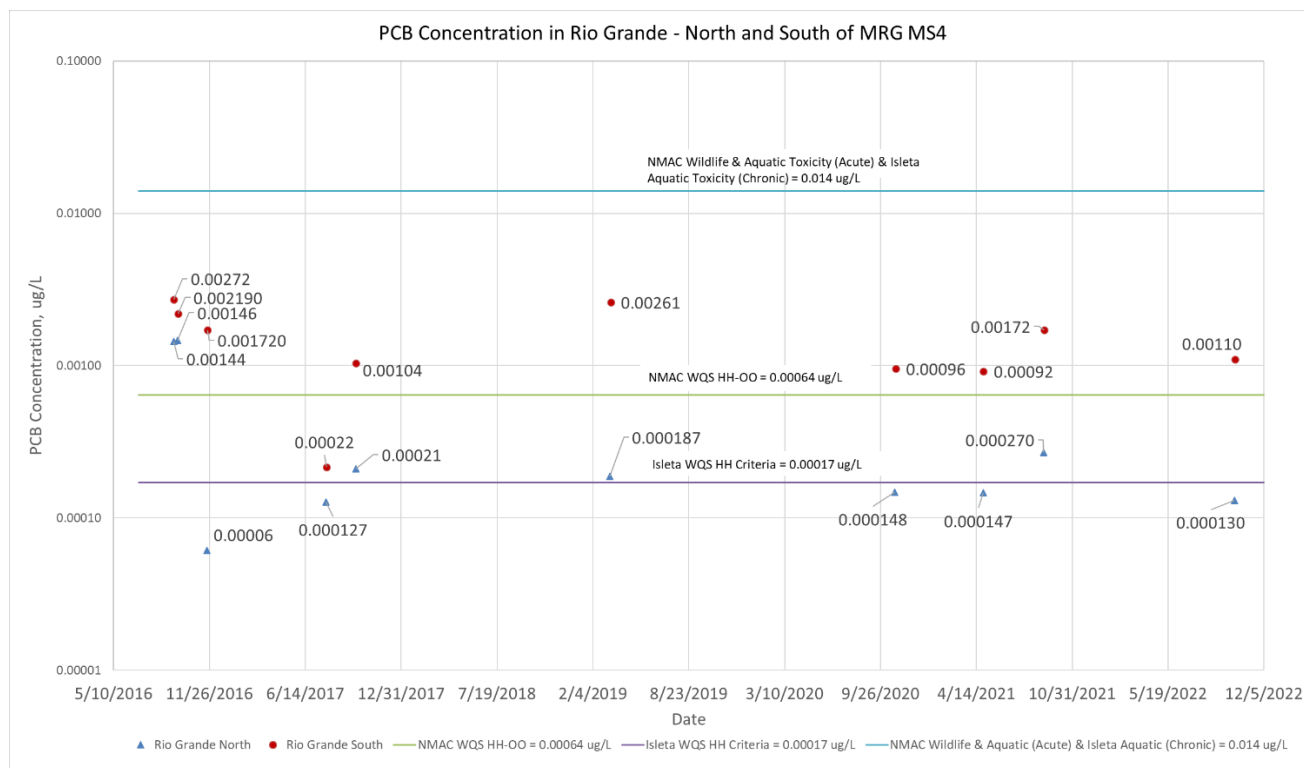
As a reminder, in January 2017 the CMC members clarified with NMED that the units MPN/100 mL and CFU/100 mL are considered to be interchangeable for the purposes of this stormwater quality monitoring reporting. The New Mexico and Pueblo WQSs for E. coli are currently in units of CFU/100 mL while the lab reports are typically in units of MPN/100mL. The graph presented in this section uses units of CFU/100 mL to be consistent with the WQS units. Refer to Figure 2 for a graphical representation of E. coli results from October 2022.



**Figure 2: E. coli Results in Rio Grande
CMC Monitoring – FY 2023 Wet Season**

PCBs:

There are multiple surface WQS values listed for PCBs in both the Pueblo of Isleta and the State of New Mexico standards for the various designated uses. The PCB results for samples collected from the Rio Grande during the FY 2023 wet season stormwater event were below the minimum quantification level (MQL) established in EPA standards for the MS4 NPDES Permit (Appendix F, 0.2 ug/L for PCBs). The PCB results for the Rio Grande North sample were also well below the New Mexico Surface WQSs and Pueblo of Isleta Surface WQSs for designated uses including drinking water (0.5 ug/L) and wildlife habitat, acute aquatic life, and chronic aquatic life (0.014 ug/L). However, the CMC sample from the Rio Grande South location was above the Pueblo of Isleta human health criteria (based on fish consumption only) WQS for surface waters. The human health-organism only criterion is based upon human consumption of fish and other aquatic life that bioaccumulate contaminants over time. The PCB results from 2016 through 2022 are shown in Figure 3 relative to several of the WQSs for PCBs.



**Figure 3: PCB Monitoring Results in Rio Grande
CMC Monitoring – 2016 - 2022**

Gross Alpha, Adjusted:

The October 6, 2022, Rio Grande South sample result exceeded the New Mexico and Pueblo of Isleta WQS for gross alpha, adjusted. The WQS for gross alpha, adjusted is the same value for both the NMAC 20.6.4 Water Quality Criterion and Pueblo of Isleta; the WQS of 15 pCi/L (“pCi/L” means picocuries per liter) is a general standard for the Pueblo of Isleta, and for New Mexico it is based on Domestic Water Supply and Livestock Watering designated uses. In surface water, the gross alpha, adjusted analyses may be affected by a high content of suspended load, particularly where sediment sources may be derived from granitic terrain; gross alpha, adjusted results may reflect the radioactivity of the natural elements in the sediment more than the surface water.

The October 6, 2022, Rio Grande South gross alpha, adjusted analytical results are detailed below; the units are in pCi/L:

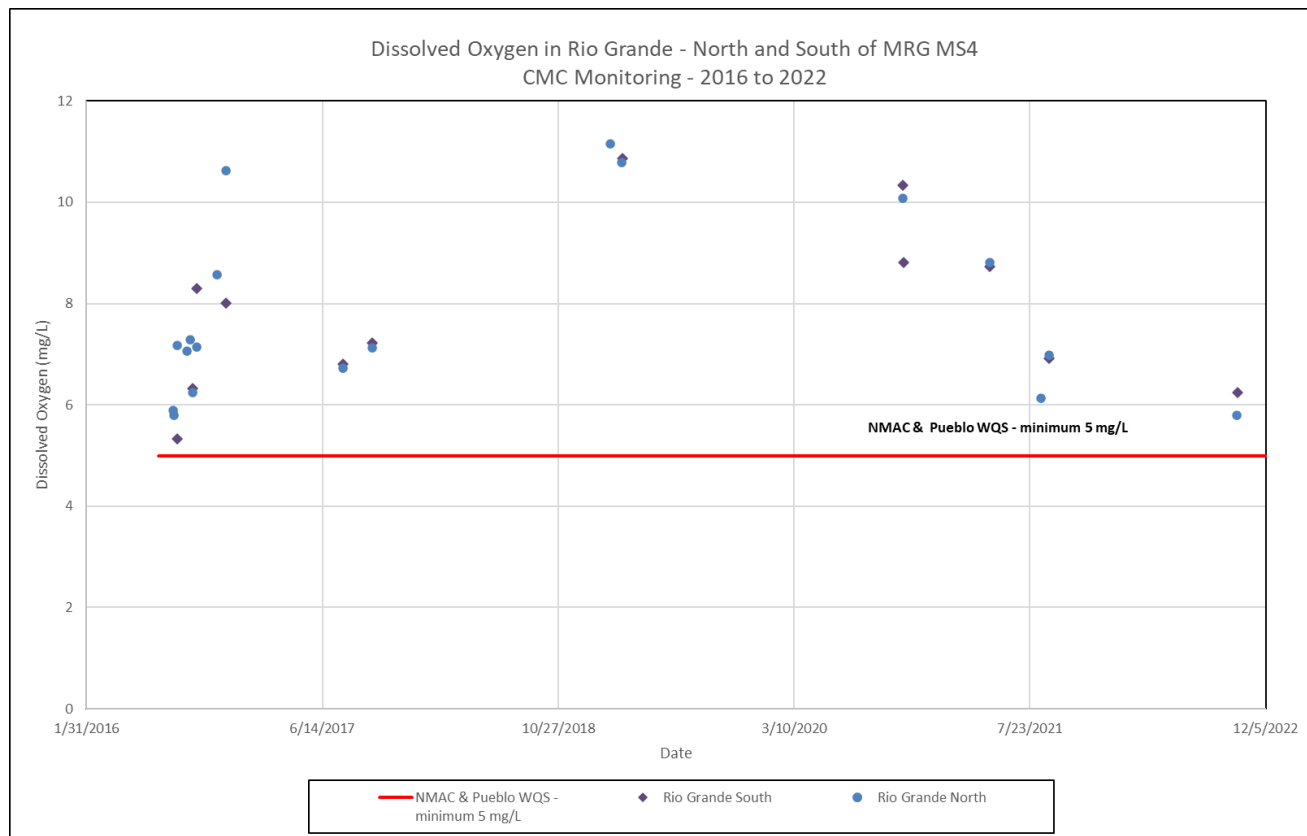
- Rio Grande South CMC sample result for gross alpha, adjusted = 22.98 pCi/L
- Gross alpha, adjusted WQS at the Rio Grande South location = 15 pCi/L (NMAC 20.6.4 Water Quality Criterion for livestock watering and domestic water supply designated uses and general standard for Pueblo of Isleta)

This is the third time since 2016 that the analytical results from a CMC sample have had an exceedance in gross alpha, adjusted. The prior exceedance was reported for the September 2, 2021, Rio Grande South sample. The CMC will continue to closely evaluate this parameter in future samples. If additional exceedances occur, the CMC will discuss the results further and may consult NMED for further guidance.

Dissolved Oxygen and Temperature:

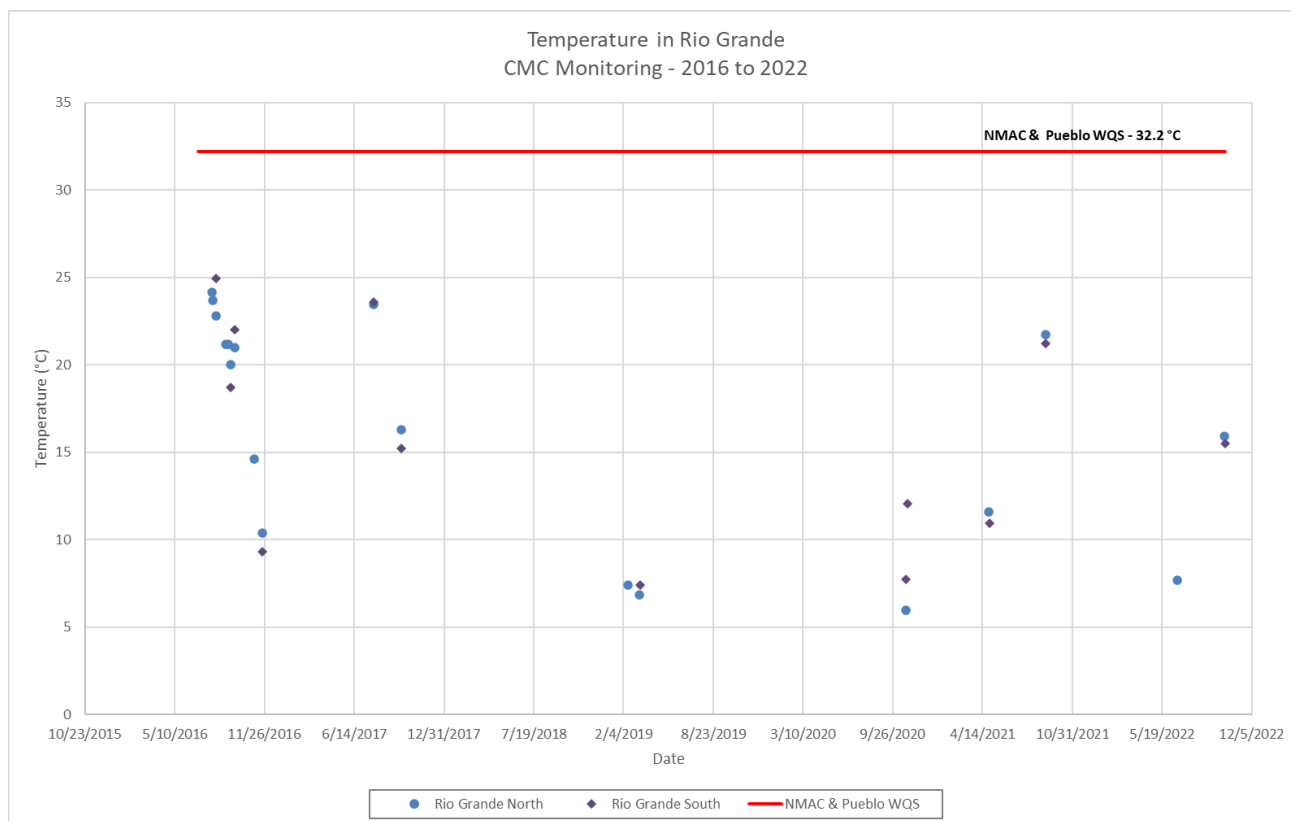
Two (2) of the water quality parameters are specifically worth mentioning in this memo because they are listed in the WSB MS4 Permit, Part I.C.1 – Special Conditions: dissolved oxygen and temperature. These parameters did not have any surface water quality exceedances during the FY 2023 wet season sampling.

Dissolved oxygen is a water quality concern in the Rio Grande if it is below 5 mg/L. None of the samples taken from the Rio Grande during the FY 2023 wet season monitoring had dissolved oxygen values below 5 mg/L. This provides the MS4s with specific monitoring data showing that stormwater did not cause or contribute to exceedances of applicable dissolved oxygen water quality standards in the Rio Grande from any of the CMC samples from 2016 to 2022. Refer to Figure 4 for CMC dissolved oxygen results and comparison to applicable WQSs.



**Figure 4: Dissolved Oxygen Results in the Rio Grande
CMC Monitoring – 2016 - 2022**

Temperature is listed in the WSB MS4 Permit as a special condition (currently only applicable to the City of Albuquerque and AMAFCA). Past data submitted to EPA and NMED by the MS4 permittees have proven that stormwater discharges into the Rio Grande are not raising the Rio Grande temperature above the WQSs. The data collected during this FY 2023 wet season monitoring also supports this conclusion. All the temperature field readings taken in the Rio Grande during the CMC FY 2023 wet season were below 32.2°C (90°F), which is the WQS for the State of New Mexico and for the Isleta and Sandia Pueblos. Refer to Figure 5 for temperature results and comparison to applicable WQSs for all CMC samples taken upstream and downstream of the MRG MS4 area from 2016 to 2022.



**Figure 5: Temperature Monitoring Results in the Rio Grande
CMC Monitoring – 2016 - 2022**

CMC FY 2023 Wet Season E. coli Loading Calculations and Waste Load Allocation (WLA)

Related to assessing the stormwater results, the E. coli loading was calculated and compared to the aggregate Total Maximum Daily Load (TMDL) Waste Load Allocation (WLA) for the CMC group. A TMDL is the maximum amount of a pollutant (E. coli in this case) that a water body (Rio Grande) can assimilate on a daily basis without violating applicable surface WQSs. The total TMDL for a stream segment consists of the multiple WLA for point sources, non-point sources, and natural sources, plus a margin of safety. The CMC MS4 allotted WLA was determined in the EPA Approved, Total Maximum Daily Load for the Middle Rio Grande Watershed, June 30, 2010, and subsequent communications with NMED. The WLA varies by flow condition in the Rio Grande and by stream segment.

E. coli loading calculations and comparison to the WLA follows the WSB MS4 Permit requirements in "Discharges to Water Quality Impaired Water Bodies with an Approved TMDL", Part I.C.2.b.(i).(c).B, Appendix B-Total Maximum Daily Loads (TMDLs) Tables of the WSB MS4 Permit, and the NMED guidance provided to the CMC. Attached to this memo is the WLA Calculation spreadsheet which steps through the E. coli loading calculations and assumptions comparing the calculated E. coli loading to the CMC aggregate WLA defined by NMED.

There are two (2) stream segments defined in the WSB MS4 Permit (Appendix B): Isleta Pueblo Boundary to Alameda Street Bridge (Stream Segment 2105_50) and Non-Pueblo Alameda Bridge to Angostura Diversion (Stream Segment 2105.1_00). These stream segments differ from NMED's current stream segments defined in the *2022-2024 State of New Mexico Clean Water Act Section 303(d)/Section 305(b) Integrated Report* (NMED, April 2022). NMED currently has four (4) stream segments instead of the two (2) WSB MS4 stream segments. These various stream segment designations are shown in Figure 6, page 16.

The *NMED 303(d)/305(b) 2020-2022 Integrated Report* tables show the most recent assessment results, and currently all segments of the Rio Grande (Isleta to Angostura Diversion) are impaired for E. coli and have a TMDL for E. coli.

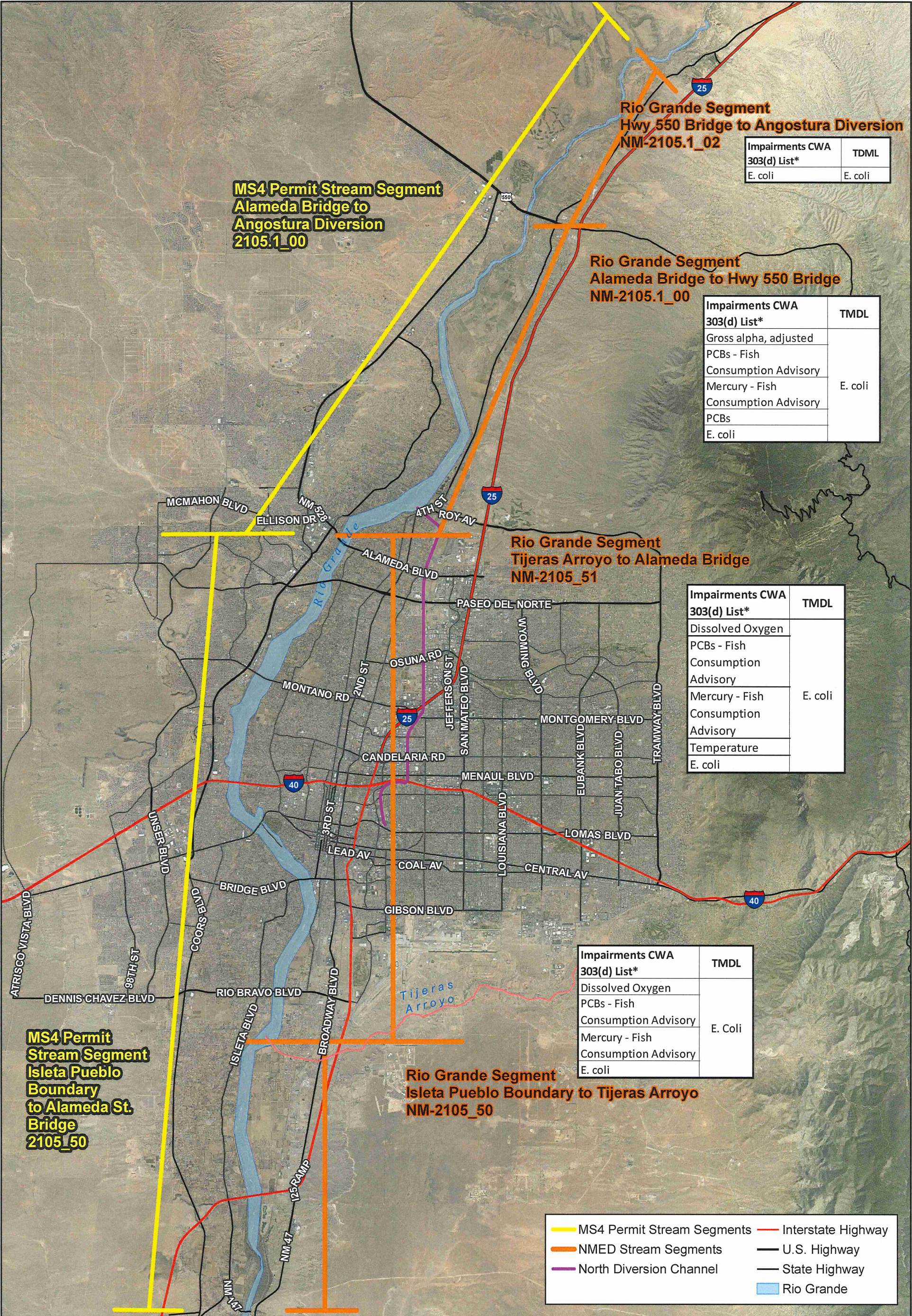
The E. coli daily loading associated with the CMC group and comparison to the NMED WLA was completed for the one (1) qualifying wet season storm event – October 5-6, 2022. For this event, the CMC obtained an E. coli sample in the Rio Grande at Alameda and used this to calculate the E. coli loading for the two (2) river segments. Refer to Table 5 for a summary of the WLA comparison results. A spreadsheet is attached to this memo that provides the detailed WLA calculations.

Table 5: Summary of CMC E. Coli Loading Compared to WLA for the CMC

Date / Stream Segment	Daily Mean Flow (cfs)	Flow Conditions (cfs) <i>range defined by NMED</i>	CMC Daily E. coli Loading (CFU/day)	NMED WLA for CMC for Stream Segment and Flow Conditions	Loading Compared to WLA Potential Exceedance or Acceptable
October 5-6, 2022 – Rio Grande North E. coli Concentration 10/5/2022 = 135 MPN (CFU/100 mL) Rio Grande at Alameda E. coli Concentration 10/5/2022 = 52 MPN (CFU/100 mL) Rio Grande South E. coli Concentration 10/6/2022 = <1 MPN (CFU/100 mL)					
Alameda to Angostura	146	Dry	0.00E+00	3.24E+10	WLA Acceptable
Isleta to Alameda	165	Dry	0.00E+00	1.57E+09	WLA Acceptable

As Table 5 illustrates, the calculated E. coli loading for the October 5-6, 2022 storm event for the northern segment (Alameda to Angostura) and the southern segment (Isleta to Alameda) of the Rio Grande was below the WLA for the CMC MS4s. This analysis used the mid-point E. coli sample result obtained in the Rio Grande at Alameda.

The WSB MS4 Permit implies that the WLA is a measurable goal for the MS4s related to E. coli. Based on extensive review of the EPA Approved, Total Maximum Daily Load (TMDL) for the Middle Rio Grande Watershed, June 30, 2010, this seems to be an unattainable goal for MS4s.



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0 12,000 24,000 Feet
1 in = 12,500 ft

CMC Monitoring

Figure 6
Rio Grande Impairments & TMDL Information

* Final 2022-2024 State of NM Clean Water Act, Section 303(d)/Section 305(b) Integrated Report

Page 40 of the 2010 TMDL Report states, "It is important to remember that the TMDL is a planning tool to be used to achieve water quality standards...Meeting the calculated TMDL may be a difficult objective." The TMDL/WLA was calculated by NMED to meet the Pueblo (Sandia and Isleta) geometric mean maximum of 47 CFU/100 ml, which was done to be "protective of downstream waters" and "to provide an implicit margin of safety (MOS)". A single grab sample E. coli result meeting this very low geometric means WQSs will be very difficult for the MS4s to obtain.

The CMC members discussed the difficulty of using the WLA as a measurable goal with NMED on February 1, 2017. NMED explained that exceeding the WLA does not trigger enforcement. However, NMED strongly encouraged the MS4s to document what they are doing once they realize the WLA is potentially exceeded. The meeting on February 1, 2017, and the CMC discussion with NMED on February 16, 2017, demonstrate CMC members are working toward understanding the WLA. In addition, the CMC members began implementing a refinement to the sampling plan discussed with NMED by obtaining an E. coli sample in the Rio Grande at Alameda effective the FY 2018 wet season, as feasible. This demonstrates that the CMC is continuing to investigate the potential exceedances and make improvements to monitor E. coli in the Rio Grande.

Data Entry for Discharge Monitoring Reports

The WSB MS4 Permit entered Administrative Continuance in December 2019 when EPA Region 6 did not issue a new MS4 Permit before the current MS4 Permit's expiration date. Until a new MS4 Permit is issued, there are no compliance monitoring requirements for the CMC in the Rio Grande. As identified in the CMC Monitoring Plan, the WSB MS4 Permit required a minimum of seven (7) storm events be sampled at both the Rio Grande North and Rio Grande South locations. All MS4 Permit required samples have been obtained by the CMC and verified stormwater quality data from these required events have been submitted to the EPA using electronic Discharge Monitoring Report (DMR) forms. Data from the DMRs are uploaded to a comprehensive nationwide database that contains discharge data for facilities and other point sources that discharge directly to receiving streams. For this Task, BHI has not completed any data entry related to the EPA DMRs for the FY 2023 wet season.

Conclusions and Planning

During the FY 2023 wet season (July 1 to October 31, 2022), one (1) qualifying stormwater sample was obtained by the CMC. Lab results were received, and this data has been entered into the CMC Excel database. The lab data entered is marked in the spreadsheet as "V" (verified), and data V&V has been completed (refer to Attachment 2).

To summarize, monitoring results and E. coli loading calculations for the FY 2023 wet season show that:

- The WSB MS4 Permit entered Administrative Continuance in December 2019 when U.S. Environmental Protection Agency (EPA) Region 6 did not issue a new MS4 Permit before the current MS4 Permit's expiration date. Until a new MS4 Permit is issued, there are no compliance monitoring requirements for the CMC in the Rio Grande. All MS4 Permit required samples have been obtained by the CMC, as well several samples collected during Administrative Continuance, including the one (1) sample obtained in the FY 2023 wet season, as reported in this memo.

- For the FY 2023 wet season, 19 of the 33 parameters tested were not detected in any of the Rio Grande North or South samples.
- Several key parameters all met the applicable WQSs, as they have for all the CMC samples to date:
 - All dissolved oxygen results were greater than 5 mg/L (minimum WQS).
 - All temperature results were less than 32.2°C (maximum WQS).
- The PCB results were below the New Mexico Surface WQSs and Pueblo of Isleta Surface WQSs for designated uses including drinking water, wildlife habitat, acute aquatic life, and chronic aquatic life. However, the Rio Grande South CMC sample from October 6, 2022, was above the Pueblo of Isleta and New Mexico human health criteria (based on fish consumption only) WQSs for surface waters.
- The October 6, 2022, Rio Grande South sample result exceeded the New Mexico Surface WQSs and Pueblo of Isleta Surface WQSs (15 pCi/L) for gross alpha, adjusted. This is the third time since 2016 that the analytical results from a CMC sample have had an exceedance in gross alpha, adjusted. The CMC will continue to closely evaluate this parameter in future samples.
- The calculated E. coli loading for the October 5-6, 2022 storm event for the northern segment (Alameda to Angostura) and the southern segment (Isleta to Alameda) of the Rio Grande was below the WLA for the CMC MS4s. This analysis used the mid-point E. coli sample result obtained in the Rio Grande at Alameda.
 - The E. coli lab result for the Rio Grande South location is the lowest value that the CMC has seen reported in the Rio Grande at this location. AMAFCA called HEAL to discuss this result and verify that the reported result was correct.
 - Sources for the E. coli loading measured in the river are not solely attributable to the CMC MS4 members; the E. coli loading calculations serve to provide a reasonable estimate of the CMC contribution to the measured E. coli loading.

For planning purposes for the CMC members, the FY 2023 dry season CMC monitoring, if a sample is obtained, will be summarized by BHI for the CMC in a dry season memo.

SG/ab

Attachments:

Attachment 1 – DBS&A Field Data & Hall Environmental Analysis Laboratory Reports with BHI Notes for FY 2023 Wet Season

Attachment 2 – FY 2023 Wet Season Completed Data Verification and Validation (V&V) Forms

Spreadsheets Included Separately:

E. coli Loading and Comparison to Waste Load Allocation (WLA) Excel Spreadsheet

Excel CMC Spreadsheet with FY 2023 Wet Season Stormwater Quality Monitoring Results

ATTACHMENT 1

**DBS&A FIELD DATA & HALL ENVIRONMENTAL ANALYSIS
LABORATORY REPORTS WITH BHI NOTES FOR
FY 2023 WET SEASON**

			Rio Grande - North				Rio Grande - South - At Isleta Dam				Rio Grande - Alameda Bridge (E. coli Only Samples)			
Parameter	Permit Required Units	Analysis Method	Provisional or Verified	2023 CMC SAMPLE - EXTRA NORTH Collection Date 10/5/2022 Wet Season Sample	Qualifier	Check compared to Water Quality Criterion	Provisional or Verified	2023 CMC SAMPLE - EXTRA SOUTH Collection Date 10/6/2022 Wet Season Sample	Qualifier	Check compared to Water Quality Criterion	Provisional or Verified	2023 CMC SAMPLE - EXTRA ALAMEDA Collection Date 10/5/22 Wet Season Sample	Qualifier	Check compared to Water Quality Criterion
Total Suspended Solids (TSS)	mg/L	SM 2540D	V	29		--	V	890	D	--				
Total Dissolved Solids (TDS)	mg/L	SM2540C MOD	V	195		OK	V	265	D	OK				
Chemical Oxygen Demand (COD)	mg/L	EPA 410.4	V	22.3		--	V	ND		--				
Biochemical Oxygen Demand (BOD ₅)	mg/L	SM5210B	--	Not provided		--	--	Not provided		--				
Dissolved Oxygen (DO)	mg/L	FIELD	V	5.79		OK	V	6.24		OK	V	5.58		OK
Oil and Grease (N-Hexane Extractable Material)	mg/L	EPA 1664A	V	ND		OK	V	ND		OK				
E. coli	MPN (CFU/100 mL)	SM 9223B Fecal Indicator	V	135		>WQ Standard	V	<1		OK	V	52		OK
pH	S.U.	FIELD	V	8.24	H	OK	V	8.02	H	OK	V	7.6		OK
Total Kjeldahl Nitrogen (TKN)	mg/L	SM 4500	V	ND		--	V	1.7		--				
Nitrate plus Nitrite	mg/L	EPA 300.0: Anions	V	ND		OK	V	ND		OK				
Dissolved Phosphorous	mg/L	EPA 365.1, filtered sample	V	ND	D	--	V	ND	D	--				
Ammonia (mg/L as N)	mg/L	SM 4500 NH3	V	ND		OK	V	ND		OK				
Total Nitrogen	mg/L	--	V	ND		OK	V	1.70		OK				
Total Phosphorous	mg/L	EPA 365.1	V	ND	D	--	V	0.97	D	--				
PCBS - 0.000064 (Method 1668A - sum of all congeners)	µg/L	EPA 1668	V	0.00013	J	OK	V	0.0011	J	>WQ Standard				
Gross Alpha, Adjusted	pCi/L	EPA 900.0	V	0.895 ± NA		OK	V	22.98 ± NA		>WQ Standard				
Tetrahydrofuran	µg/L	EPA 8260 C	V	ND		--	V	ND		--				
Benzo[a]pyrene	µg/L	EPA 625	V	ND		OK	V	ND		OK				
Benzo[b]fluoranthene (other name: 3,4-Benzofluoranthene)	µg/L	EPA 625	V	ND		OK	V	ND		OK				
Benzo[k]fluoranthene	µg/L	EPA 625	V	ND		OK	V	ND		OK				
Chrysene	µg/L	EPA 625	V	ND		OK	V	ND		OK				
Indeno[1,2,3-cd]Pyrene	µg/L	EPA 625	V	ND		OK	V	ND		OK				
Dieldrin	µg/L	EPA 608	V	ND		OK	V	ND		OK				
Pentachlorophenol	µg/L	EPA 625	V	ND		OK	V	ND		OK				
Benzidine	µg/L	EPA 625	V	ND		OK	V	ND		OK				
Benzo(a)anthracene	µg/L	EPA 625	V	ND		OK	V	ND		OK				
Dibenzofuran	µg/L	EPA 625	V	ND		--	V	ND		--				
Dibenzo(a,h)anthracene	µg/L	EPA 625	V	ND		OK	V	ND		OK				
Chromium VI (Hexavalent)	µg/L	3500Cr C-2011	V	ND		OK	V	ND		OK				
Dissolved Copper	µg/L	EPA 200.8	V	1.1		OK	V	ND		OK				
Dissolved Lead	µg/L	EPA 200.8	V	ND		OK	V	ND		OK				
Bis (2-ethylhexyl) Phthalate (other names: Di(2-ethylhexyl)phthalate, DEHP) - 2.2	µg/L	EPA 625	V	ND		OK	V	ND		OK				
Conductivity	umhos/cm	FIELD	V	290		--	V	395		--	V	275		--
Temperature	°C	FIELD	V	15.9		OK	V	15.5		OK	V	18		OK
Hardness (as CaCO ₃)	mg/L	SM2340B	V	120		--	V	280		--				
Mercury	µg/l	--												

Data Verification/Validation and Qualifier Notes:
(R) The sample results are unusable because certain criteria were not met. The analyte may or may not be present in the sample.
(H) Sample holding time exceeded.
(I) The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample.
(D) Sample was diluted by Lab due to matrix
(U) Analyte was analyzed for, but not detected above the specified detection limit.

Notes:
1. Wet Season monitoring period - July 1 to October 31 and Dry Season monitoring period - November 1 to June 30 according to the Watershed Based MS4 Permit NMR04A000.
mean monthly flow of 100 cfs, monthly average concentration for TDS 1,500 mg/l or less, sulfate 500 mg/L or less, and chloride 250 mg/L or less.
3. Aquatic life criteria for metals are expressed as a function of total hardness (mg/L as
4. According to NMAC 20.6.4, E. coli bacteria for Primary Contact - monthly geometric
5. Water quality criterion for metals is based on dissolved metals, NMAC 20.6.4.900.i and individual sample results compared to acute toxicity values.
6. HEAL lab method: SM 9223B Fecal Indicator. Note - lab method for units of MPN/100 ml, lab report uses units CFU/100 ml, for this analysis assuming two units are equivalent

ND - analyte not detected above the laboratory method detection limit
NA - not analyzed
Hatching also indicates that parameter was not analyzed

Samplers Chad Johansen
Sam Fire

CMC Sampling Data Sheet

Site Identification: Rio Grande North ; Angostura Diversion Dam

Notes:

Full Suite Sample Date and Time:	<u>10/5/22</u>	<u>1215</u>
Full Sample Identification:	<u>RG North- 2022 1005</u>	
QC Samples:	Duplicate / <u>None</u>	QC Sample ID:
QC samples require a DIFFERENT sample time than the environmental sample.		
QC Sample time:		

Full Suite Collection Point :	<u>Diversion Structure</u>		
Full Suite Sample Volume:	<u>8gal</u>	Collection Time Start:	<u>1125</u> End: <u>1210</u>

Field Parameters for each 2-gallon grab

Grab	Time	Temp (°C)	pH	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%)
1	1125	16.4	8.56	334	6.56	66.6
2	1140	16.8	7.25	297	5.90	60.7
3	1155	16.8	8.01	295	3.42	34.6
4	1210	14.9	8.27	291	8.91	88.2
Composite	1215	15.9	8.24	290	5.79	59.6

☒ Turbid Water ☐ Color 1.2N ☒ Solids ☐ Oil/Sheen ☐ Foam ☐ Odor _____

Analytical - see 2021 COC table

☒ Site Photo ☒ Sample Photo

Samplers Chad Johannes
Sam Fire

CMC Sampling Data Sheet

Site Identification: Rio Grande @ Isleta

Notes:

Full Suite Sample Date and Time:	<u>10/6/22 0905</u>
Full Sample Identification:	<u>RG South - 2022 1006</u>
QC Samples: Duplicate / None	QC Sample ID:
QC samples require a DIFFERENT sample time than the environmental sample.	
QC Sample time:	

Full Suite Collection Point :	<u>Isleta diversion structure</u>				
Full Suite Sample Volume:	<u>8 gal</u>	Collection Time Start:	<u>0815</u>	End:	<u>0900</u>

Field Parameters for each 2-gallon grab

Grab	Time	Temp (°C)	pH	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%)
1	0815	15.9	8.51	423	5.43	54.7
2	0830	15.8	7.27	399	5.95	59.7
3	0845	15.6	7.97	394	6.08	60.7
4	0900	15.7	8.01	396	6.21	62.0
Composite	0905	15.5	8.02	395	6.24	62.1

☒ Turbid Water ☒ Color Brown ☒ Solids ☐ Oil/Sheen ☒ Foam ☐ Odor

Analytical - see 2021 COC table

☒ Site Photo ☐ Sample Photo

Samplers Chad Johnson
San F. Le

CMC Sampling Data Sheet

Site Identification: Rio Grande at Alameda

Notes:

Full Suite Sample Date and Time:	<u>10/5/22 1340</u>
Full Sample Identification:	<u>R6 Alameda - 20221005</u>
QC Samples:	Duplicate / None
QC Sample ID:	
QC samples require a DIFFERENT sample time than the environmental sample.	
QC Sample time:	

Full Suite Collection Point :	<u>Alameda Bridge</u>				
Full Suite Sample Volume:	<u>1 gal</u>	Collection Time Start:	<u>1330</u>	End:	<u>1340</u>

Field Parameters for each 2-gallon grab

Grab	Time	Temp (°C)	pH	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Dissolved Oxygen (%)
1						
2						
3						
4						
Composite	<u>1340</u>	<u>18.0</u>	<u>7.60</u>	<u>275</u>	<u>5.58</u>	<u>57.9</u>

☒ Turbid Water ☒ Color Brown ☒ Solids ☐ Oil/Sheen ☐ Foam ☐ Odor _____

Analytical - see 2021 COC table

☒ Site Photo ☒ Sample Photo



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 10, 2022

Patrick Chavez

AMAFCA

2600 Prospect Ave NE

Albuquerque, NM 87107

TEL: (505) 884-2215

FAX:

10/5/2022: Alameda and Rio
Grande North E.coli only
samples

RE: CMC Wet 22

OrderNo.: 2210242

Dear Patrick Chavez:

Hall Environmental Analysis Laboratory received 2 sample(s) on 10/5/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman'.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Field Parameters:
Rio Grande North
Temp = 15.9°C
pH = 8.24
Conductivity = 290 uS/cm
Dissolved Oxygen = 5.79 mg/L

Field Parameters:
Rio Grande at Alameda
Temp = 18.0°C
pH = 7.60
Conductivity = 275 uS/cm
Dissolved Oxygen = 5.58 mg/L

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2210242

Date Reported: 10/10/2022

CLIENT: AMAFCA

Client Sample ID: RG North-20221005

Project: CMC Wet 22

Collection Date: 10/5/2022 12:05:00 PM

Lab ID: 2210242-001

Matrix: AQUEOUS

Received Date: 10/5/2022 2:20:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: dms	
E. Coli	135	10.00	10.00		MPN/100	10	10/7/2022 5:05:00 PM	70632

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2210242

Date Reported: 10/10/2022

CLIENT: AMAFCA

Client Sample ID: RG Alameda-20221005

Project: CMC Wet 22

Collection Date: 10/5/2022 1:40:00 PM

Lab ID: 2210242-002

Matrix: AQUEOUS

Received Date: 10/5/2022 2:20:00 PM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: dms	
E. Coli	52	10.00	10.00		MPN/100	10	10/7/2022 5:05:00 PM	70632

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Estimated value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of range due to dilution or matrix interference		

Sample Log-In Check List

Client Name: **AMAFCA**

Work Order Number: **2210242**

RcptNo: 1

Received By: **Juan Rojas** 10/5/2022 2:20:00 PM

Completed By: **Cheyenne Cason** 10/5/2022 2:45:18 PM

Reviewed By: *10-5-22 @ 15:19*

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☐ No ☒ NA ☐
5. Sample(s) in proper container(s)? Samples were collected the same day and chilled. Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☐ No ☐ NA ☒
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels? Yes ☒ No ☐
(Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met? Yes ☒ No ☐
(If no, notify customer for authorization.)

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted? _____

Checked by: *KPG 10-05-22*

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____

Date: _____

By Whom: _____

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

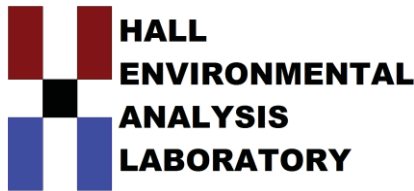
17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	15.1	Good	Not Present			

[illegible][illegible]

Remarks:	
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If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

November 23, 2022

Patrick Chavez

AMAFCA

2600 Prospect Ave NE

Albuquerque, NM 87107

TEL: (505) 884-2215

FAX:

10/5/2022: Rio Grande North
and 10/6/2022: Rio Grande
South

RE: CMC Wet FY23

OrderNo.: 2210315

Dear Patrick Chavez:

Hall Environmental Analysis Laboratory received 3 sample(s) on 10/6/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read 'Andy Freeman', is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Field Parameters:
- Rio Grande North
Temp = 15.9°C
pH = 8.24
Conductivity = 290 uS/cm
Dissolved Oxygen = 5.79 mg/L
- Rio Grande South
Temp = 15.5°C
pH = 8.02
Conductivity = 395 uS/cm
Dissolved Oxygen = 6.24 mg/L

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 2210315

Date Reported: 11/23/2022

CLIENT: AMAFCA

Client Sample ID: R6 North-20221005

Project: CMC Wet FY23

Collection Date: 10/5/2022 12:15:00 PM

Lab ID: 2210315-001A

Matrix: Aqueous

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8081: PESTICIDES							Analyst: JME
Dieldrin	ND	0.10		µg/L	1	10/17/2022 12:51:12 PM	70767
Surr: Decachlorobiphenyl	94.3	40.9-111		%Rec	1	10/17/2022 12:51:12 PM	70767
Surr: Tetrachloro-m-xylene	64.3	15-107		%Rec	1	10/17/2022 12:51:12 PM	70767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 2210315

Date Reported: 11/23/2022

CLIENT: AMAFCA

Client Sample ID: R6 North-20221005

Project: CMC Wet FY23

Collection Date: 10/5/2022 12:15:00 PM

Lab ID: 2210315-001D

Matrix: Aqueous

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 1664B							Analyst: SMS
N-Hexane Extractable Material	ND	9.40		mg/L	1	10/18/2022 6:18:00 PM	70825

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 2210315

Date Reported: 11/23/2022

CLIENT: AMAFCA **Client Sample ID:** R6 North-20221005
Project: CMC Wet FY23 **Collection Date:** 10/5/2022 12:15:00 PM
Lab ID: 2210315-001E **Matrix:** Aqueous

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: JTT
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	10/6/2022 11:59:13 PM	A91618
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	10/6/2022 11:59:13 PM	A91618
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: SNS
Total Dissolved Solids	195	20.0		mg/L	1	10/12/2022 8:50:00 AM	70696
SM 4500 NH3: AMMONIA							Analyst: EKM
Nitrogen, Ammonia	ND	1.0		mg/L	1	10/21/2022 1:24:00 PM	R91993
SM4500-H+B / 9040C: PH							Analyst: JTT
pH	8.24		H	pH units	1	10/10/2022 3:56:29 PM	R91722
EPA METHOD 365.1: TOTAL PHOSPHOROUS							Analyst: CJS
Phosphorus, Total (As P)	ND	0.25	D	mg/L	1	10/25/2022 3:03:00 PM	71023
SM 4500 NORG C: TKN							Analyst: EKM
Nitrogen, Kjeldahl, Total	ND	1.0		mg/L	1	10/24/2022 10:19:00 AM	70981
SM 2540D: TSS							Analyst: KS
Suspended Solids	29	4.0		mg/L	1	10/10/2022 3:18:00 PM	70679

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 2210315

Date Reported: 11/23/2022

CLIENT: AMAFCA

Client Sample ID: R6 North-20221005

Project: CMC Wet FY23

Collection Date: 10/5/2022 12:15:00 PM

Lab ID: 2210315-001F

Matrix: Aqueous

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 365.1: TOTAL PHOSPHOROUS							Analyst: CJS
Phosphorus, Total (As P)	ND	0.25	D	mg/L	1	10/25/2022 3:04:00 PM	71023

Dissolved phosphorous

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 2210315

Date Reported: 11/23/2022

CLIENT: AMAFCA

Client Sample ID: R6 North-20221005

Project: CMC Wet FY23

Collection Date: 10/5/2022 12:15:00 PM

Lab ID: 2210315-001G

Matrix: Aqueous

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2340B: HARDNESS							Analyst: VP
Hardness as CaCO ₃	120	6.6		mg/L	1	10/14/2022 2:05:00 PM	R91819
EPA METHOD 200.7: METALS							Analyst: VP
Calcium	39	1.0		mg/L	1	10/14/2022 5:58:24 PM	70811
Magnesium	6.8	1.0		mg/L	1	10/14/2022 5:58:24 PM	70811

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 2210315

Date Reported: 11/23/2022

CLIENT: AMAFCA

Client Sample ID: R6 North-20221005

Project: CMC Wet FY23

Collection Date: 10/5/2022 12:15:00 PM

Lab ID: 2210315-001N

Matrix: Aqueous

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: bcv
Copper	0.0011	0.0010		mg/L	1	10/18/2022 1:04:27 PM	A91883
Lead	ND	0.00050		mg/L	1	10/18/2022 1:04:27 PM	A91883

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 2210315

Date Reported: 11/23/2022

CLIENT: AMAFCA

Client Sample ID: R6 South-20221006

Project: CMC Wet FY23

Collection Date: 10/6/2022 9:05:00 AM

Lab ID: 2210315-002A

Matrix: Aqueous

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8081: PESTICIDES							Analyst: JME
Dieldrin	ND	0.10		µg/L	1	10/17/2022 1:04:20 PM	70767
Surr: Decachlorobiphenyl	96.8	40.9-111		%Rec	1	10/17/2022 1:04:20 PM	70767
Surr: Tetrachloro-m-xylene	76.2	15-107		%Rec	1	10/17/2022 1:04:20 PM	70767

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 2210315

Date Reported: 11/23/2022

CLIENT: AMAFCA

Client Sample ID: R6 South-20221006

Project: CMC Wet FY23

Collection Date: 10/6/2022 9:05:00 AM

Lab ID: 2210315-002B

Matrix: Aqueous

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM 9223B FECAL INDICATOR: E. COLI MPN							Analyst: dms
E. Coli	<1	1.000		MPN/100	1	10/7/2022 5:05:00 PM	70671

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 2210315

Date Reported: 11/23/2022

CLIENT: AMAFCA

Client Sample ID: R6 South-20221006

Project: CMC Wet FY23

Collection Date: 10/6/2022 9:05:00 AM

Lab ID: 2210315-002D

Matrix: Aqueous

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 1664B							Analyst: SMS
N-Hexane Extractable Material	ND	9.50		mg/L	1	10/18/2022 6:18:00 PM	70825

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 2210315

Date Reported: 11/23/2022

CLIENT: AMAFCA **Client Sample ID:** R6 South-20221006
Project: CMC Wet FY23 **Collection Date:** 10/6/2022 9:05:00 AM
Lab ID: 2210315-002E **Matrix:** Aqueous

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 300.0: ANIONS							Analyst: JTT
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	10/7/2022 1:16:26 AM	A91618
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	10/7/2022 1:16:26 AM	A91618
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: SNS
Total Dissolved Solids	265	100	D	mg/L	1	10/12/2022 8:50:00 AM	70696
SM 4500 NH3: AMMONIA							Analyst: EKM
Nitrogen, Ammonia	ND	1.0		mg/L	1	10/21/2022 1:24:00 PM	R91993
SM4500-H+B / 9040C: PH							Analyst: JTT
pH	8.09		H	pH units	1	10/10/2022 4:00:35 PM	R91722
EPA METHOD 365.1: TOTAL PHOSPHOROUS							Analyst: CJS
Phosphorus, Total (As P)	0.97	0.25	D	mg/L	1	10/25/2022 3:06:00 PM	71023
SM 4500 NORG C: TKN							Analyst: EKM
Nitrogen, Kjeldahl, Total	1.7	1.0		mg/L	1	10/24/2022 10:19:00 AM	70981
SM 2540D: TSS							Analyst: KS
Suspended Solids	890	20	D	mg/L	1	10/10/2022 3:18:00 PM	70679

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order: 2210315

Date Reported: 11/23/2022

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** AMAFCA**Project:** CMC Wet FY23**Lab ID:** 2210315-002F**Client Sample ID:** R6 South-20221006**Collection Date:** 10/6/2022 9:05:00 AM**Matrix:** Aqueous

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 365.1: TOTAL PHOSPHOROUS							Analyst: CJS
Phosphorus, Total (As P)	ND	0.25	D	mg/L	1	10/25/2022 3:08:00 PM	71023

Dissolved phosphorous

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 2210315

Date Reported: 11/23/2022

CLIENT: AMAFCA

Client Sample ID: R6 South-20221006

Project: CMC Wet FY23

Collection Date: 10/6/2022 9:05:00 AM

Lab ID: 2210315-002G

Matrix: Aqueous

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
SM2340B: HARDNESS							Analyst: VP
Hardness as CaCO ₃	280	6.6		mg/L	1	10/14/2022 2:05:00 PM	R91819
EPA METHOD 200.7: METALS							Analyst: VP
Calcium	82	1.0		mg/L	1	10/14/2022 6:01:40 PM	70811
Magnesium	17	1.0		mg/L	1	10/14/2022 6:01:40 PM	70811

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order: 2210315

Date Reported: 11/23/2022

CLIENT: AMAFCA

Client Sample ID: R6 South-20221006

Project: CMC Wet FY23

Collection Date: 10/6/2022 9:05:00 AM

Lab ID: 2210315-002N

Matrix: Aqueous

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA 200.8: DISSOLVED METALS							Analyst: bcv
Copper	ND	0.0010		mg/L	1	10/18/2022 1:07:08 PM	A91883
Lead	ND	0.00050		mg/L	1	10/18/2022 1:07:08 PM	A91883

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Anatek Labs, Inc.

1282 Alturas Drive - Moscow, ID 83843 - (208) 883-2839 - Fax (208) 8829246 - email moscow@anateklabs.com
504 E Sprague Ste. D - Spokane, WA 99202 - (509) 838-3999 - fax (509) 838-4433 - email spokane@anateklabs.com

Client: Hall Environmental Analysis Lab
Address: 4901 Hawkins NE Suite D
Albuquerque, NM 87109
Attn: Andy Freeman

Work Order: MCJ0294
Project: 2210315
Reported: 11/1/2022 11:21

Analytical Results Report

Sample Location: 2210315-001H (R6 North-20221005)
Lab/Sample Number: MCJ0294-01 **Collect Date:** 10/05/22 12:15
Date Received: 10/07/22 14:03 **Collected By:**
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles							
Tetrahydrofuran	ND	ug/L	5.00	10/12/22 18:51	BKP	EPA 8260D	
Surrogate: 1,2-Dichlorobenzene-d4	104%		70-130	10/12/22 18:51	BKP	EPA 8260D	
Surrogate: 4-Bromofluorobenzene	94.8%		70-130	10/12/22 18:51	BKP	EPA 8260D	
Surrogate: Toluene-d8	96.1%		70-130	10/12/22 18:51	BKP	EPA 8260D	

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Analytical Results Report

(Continued)

Sample Location: 2210315-001I (R6 North-20221005)
Lab/Sample Number: MCJ0294-02 Collect Date: 10/05/22 12:15
Date Received: 10/07/22 14:03 Collected By:
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles							
Benzidine	ND	ug/L	1.00	10/18/22 0:20	MH	EPA 8270E	
Benzo[a]anthracene	ND	ug/L	1.00	10/18/22 0:20	MH	EPA 8270E	
Benzo[a]pyrene	ND	ug/L	1.00	10/18/22 0:20	MH	EPA 8270E	
Benzo[b]fluoranthene	ND	ug/L	1.00	10/18/22 0:20	MH	EPA 8270E	
Benzo[k]fluoranthene	ND	ug/L	1.00	10/18/22 0:20	MH	EPA 8270E	
bis(2-Ethylhexyl)phthalate	ND	ug/L	1.00	10/18/22 0:20	MH	EPA 8270E	
Chrysene	ND	ug/L	1.00	10/18/22 0:20	MH	EPA 8270E	
Dibenz[a,h]anthracene	ND	ug/L	1.00	10/18/22 0:20	MH	EPA 8270E	
Dibenzofuran	ND	ug/L	1.00	10/18/22 0:20	MH	EPA 8270E	
Indeno[1,2,3-cd]pyrene	ND	ug/L	1.00	10/18/22 0:20	MH	EPA 8270E	
Pentachlorophenol	ND	ug/L	1.00	10/18/22 0:20	MH	EPA 8270E	
Surrogate: Terphenyl-d14	64.9%		57-133	10/18/22 0:20	MH	EPA 8270E	

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Analytical Results Report

(Continued)

Sample Location: 2210315-002H (R6 South-20221006)
Lab/Sample Number: MCJ0294-03 Collect Date: 10/06/22 09:05
Date Received: 10/07/22 14:03 Collected By:
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles							
Tetrahydrofuran	ND	ug/L	5.00	10/12/22 19:21	BKP	EPA 8260D	
Surrogate: 1,2-Dichlorobenzene-d4	104%		70-130	10/12/22 19:21	BKP	EPA 8260D	
Surrogate: 4-Bromofluorobenzene	92.6%		70-130	10/12/22 19:21	BKP	EPA 8260D	
Surrogate: Toluene-d8	96.5%		70-130	10/12/22 19:21	BKP	EPA 8260D	

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Analytical Results Report

(Continued)

Sample Location: 2210315-002I (R6 South-20221006)
Lab/Sample Number: MCJ0294-04 Collect Date: 10/06/22 09:05
Date Received: 10/07/22 14:03 Collected By:
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Semivolatiles							
Benzidine	ND	ug/L	2.50	10/18/22 0:47	MH	EPA 8270E	
Benzo[a]anthracene	ND	ug/L	2.50	10/18/22 0:47	MH	EPA 8270E	
Benzo[a]pyrene	ND	ug/L	2.50	10/18/22 0:47	MH	EPA 8270E	
Benzo[b]fluoranthene	ND	ug/L	2.50	10/18/22 0:47	MH	EPA 8270E	
Benzo[k]fluoranthene	ND	ug/L	2.50	10/18/22 0:47	MH	EPA 8270E	
bis(2-Ethylhexyl)phthalate	ND	ug/L	2.50	10/18/22 0:47	MH	EPA 8270E	
Chrysene	ND	ug/L	2.50	10/18/22 0:47	MH	EPA 8270E	
Dibenz[a,h]anthracene	ND	ug/L	2.50	10/18/22 0:47	MH	EPA 8270E	
Dibenzofuran	ND	ug/L	2.50	10/18/22 0:47	MH	EPA 8270E	
Indeno[1,2,3-cd]pyrene	ND	ug/L	2.50	10/18/22 0:47	MH	EPA 8270E	
Pentachlorophenol	ND	ug/L	2.50	10/18/22 0:47	MH	EPA 8270E	
Surrogate: Terphenyl-d14	78.7%		57-133	10/18/22 0:47	MH	EPA 8270E	

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Analytical Results Report

(Continued)

Sample Location: 2210315-003A (Trip Blank)
Lab/Sample Number: MCJ0294-05 Collect Date: 10/06/22 00:00
Date Received: 10/07/22 14:03 Collected By:
Matrix: Water

Analyte	Result	Units	PQL	Analyzed	Analyst	Method	Qualifier
Volatiles							
Tetrahydrofuran	ND	ug/L	0.500	10/12/22 19:51	BKP	EPA 8260D	
Surrogate: 1,2-Dichlorobenzene-d4	104%		70-130	10/12/22 19:51	BKP	EPA 8260D	
Surrogate: 4-Bromofluorobenzene	91.6%		70-130	10/12/22 19:51	BKP	EPA 8260D	
Surrogate: Toluene-d8	104%		70-130	10/12/22 19:51	BKP	EPA 8260D	

Authorized Signature,



Justin Doty For Todd Taruscio, Laboratory Manager

PQL Practical Quantitation Limit
ND Not Detected
MCL EPA's Maximum Contaminant Level
Dry Sample results reported on a dry weight basis
* Not a state-certified analyte

This report shall not be reproduced except in full, without the written approval of the laboratory
The results reported related only to the samples indicated.

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Quality Control Data

Semivolatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCJ0360 - SVOC Water										
Blank (BCJ0360-BLK1)			Prepared: 10/10/2022 Analyzed: 10/17/2022							
Dibenzofuran	ND		0.500	ug/L						
Benzidine	ND		0.500	ug/L						
Indeno(1,2,3-cd)pyrene	ND		0.500	ug/L						
Dibenz(a,h)anthracene	ND		0.500	ug/L						
Chrysene	ND		0.500	ug/L						
Di (2-ethylhexyl) phthalate	ND		0.500	ug/L						
Benzo[k]fluoranthene	ND		0.500	ug/L						
Benzo[b]fluoranthene	ND		0.500	ug/L						
Benzo[a]pyrene	ND		0.500	ug/L						
Benzo[a]anthracene	ND		0.500	ug/L						
Pentachlorophenol	ND		0.500	ug/L						
Surrogate: Terphenyl-d14			18.7	ug/L	25.0		74.9	57-133		

LCS (BCJ0360-BS1)			Prepared: 10/10/2022 Analyzed: 10/17/2022							
Dibenzofuran	4.43		0.500	ug/L	5.00		88.6	75-120		
Benzo[a]anthracene	4.38		0.500	ug/L	5.00		87.6	80-120		
Benzo[a]pyrene	4.25		0.500	ug/L	5.00		85.0	66-116		
Benzo[b]fluoranthene	4.61		0.500	ug/L	5.00		92.2	72-116		
Benzo[k]fluoranthene	4.97		0.500	ug/L	5.00		99.4	71-121		
Di (2-ethylhexyl) phthalate	5.39		0.500	ug/L	5.00		108	60-144		
Indeno(1,2,3-cd)pyrene	4.19		0.500	ug/L	5.00		83.8	62-123		
Pentachlorophenol	4.17		0.500	ug/L	5.00		83.4	51-118		
Chrysene	4.70		0.500	ug/L	5.00		94.0	74-124		
Dibenz(a,h)anthracene	4.16		0.500	ug/L	5.00		83.2	62-120		

LCS Dup (BCJ0360-BSD1)			Prepared: 10/10/2022 Analyzed: 10/17/2022							
Di (2-ethylhexyl) phthalate	4.79		0.500	ug/L	5.00		95.8	60-144	11.8	32
Pentachlorophenol	4.51		0.500	ug/L	5.00		90.2	51-118	7.83	25
Indeno(1,2,3-cd)pyrene	4.05		0.500	ug/L	5.00		81.0	62-123	3.40	25
Dibenzofuran	4.46		0.500	ug/L	5.00		89.2	75-120	0.675	25
Chrysene	4.79		0.500	ug/L	5.00		95.8	74-124	1.90	25
Benzo[k]fluoranthene	5.08		0.500	ug/L	5.00		102	71-121	2.19	25
Benzo[b]fluoranthene	4.47		0.500	ug/L	5.00		89.4	72-116	3.08	25
Benzo[a]pyrene	4.07		0.500	ug/L	5.00		81.4	66-116	4.33	25
Benzo[a]anthracene	4.38		0.500	ug/L	5.00		87.6	80-120	0.00	25
Dibenz(a,h)anthracene	3.91		0.500	ug/L	5.00		78.2	62-120	6.20	30

Quality Control Data

Volatiles

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BCJ0445 - VOC										
Blank (BCJ0445-BLK1)			Prepared & Analyzed: 10/12/2022							
Tetrahydrofuran	ND		0.500	ug/L						
Surrogate: 4-Bromofluorobenzene			23.7	ug/L	25.0		94.6	70-130		
Surrogate: Toluene-d8			24.7	ug/L	25.0		98.6	70-130		
Surrogate: 1,2-Dichlorobenzene-d4			19.1	ug/L	19.0		100	70-130		

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Quality Control Data (Continued)

Volatiles (Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch: BCJ0445 - VOC (Continued)

LCS (BCJ0445-BS1)

Prepared & Analyzed: 10/12/2022

Tetrahydrofuran	11.7		1.00	ug/L	10.0		117	80-120		
-----------------	------	--	------	------	------	--	-----	--------	--	--





SUB CONTRACTOR: Anatek ID		COMPANY: Anatek Labs, Inc.		PHONE: (208) 883-2839		FAX: (208) 882-9246	
ADDRESS: 1282 Alturas Dr				ACCOUNT #:		EMAIL:	
CITY, STATE, ZIP: Moscow, ID 83843							

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2210315-001H	R6 North-20221005	VOAHCL	Aqueous	10/5/2022 12:15:00 PM	3	8260 Tetrahydrofuran Only
2	2210315-001I	R6 North-20221005	1LAMGU	Aqueous	10/5/2022 12:15:00 PM	3	8270 - See attached
3	2210315-002H	R6 South-20221006	VOAHCL	Aqueous	10/6/2022 9:05:00 AM	3	8260 Tetrahydrofuran Only
4	2210315-002I	R6 South-20221006	1LAMGU	Aqueous	10/6/2022 9:05:00 AM	2	8270 - See attached
5	2210315-003A	Trip Blank	VOAHCL	Trip Blank		2	8260 Tetrahydrofuran Only

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By: 	Date: 10/6/2022	Time: 2:34 PM	Received By: 	Date: 10/7/22	Time: 14:03	REPORT TRANSMITTAL DESIRED: <input type="checkbox"/> HARDCOPY (extra cost) <input type="checkbox"/> FAX <input type="checkbox"/> EMAIL <input type="checkbox"/> ONLINE FOR LAB USE ONLY Temp of samples _____ °C Attempt to Cool ? _____ Comments: _____
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	
TAT: Standard <input checked="" type="checkbox"/> RUSH Next BD <input type="checkbox"/> 2nd BD <input type="checkbox"/> 3rd BD <input type="checkbox"/>						

Attached Sheet

MCJ0294



Due: 10/24/22

Collaborative Monitoring Cooperative - Analyses List

Attach to Chain of Custody

Please refer to attached NPDES Permit No. NMR04A00.Appendix F. Methods and minimum quality standards (MQL's) will be those approved under 40 CFR 136 and specified in the attached permit

Analyte (Bold Indicates WQS)	CAS #	Fraction	Method #	MDL (µg/L)
Hardness (Ca + Mg)	NA	Total	200.7	2.4
Lead	7439-92-1	Dissolved	200.8	0.09
Copper	7440-50-8	Dissolved	200.8	1.06
Ammonia + organic nitrogen	7664-41-7	Total	350.1	31.32
Total Kjeldahl Nitrogen	17778-88-0	Total	351.2	58.78
Nitrate + Nitrite	14797-55-8	Total	353.2	10.17
Polychlorinated biphenyls (PCBs)	1336-36-3	Total	1668	0.014
Tetrahydrofuran (THF)	109-99-9	Total	8260C	7.9
bis(2-Ethylhexyl)phthalate	117-81-7	Total	8270D	0.2
Dibenzofuran	132-64-9	Total	8270D	0.2
Indeno(1,2,3-cd)pyrene	193-39-5	Total	8270D	0.2
Benzo(b)fluoranthene	205-99-2	Total	8270D	0.1
Benzo(k)fluoranthene	207-08-9	Total	8270D	0.1
Chrysene	218-01-9	Total	8270D	0.2
Benzo(a)pyrene	50-32-8	Total	8270D	0.2
Dibenzo(a,h)anthracene	53-70-3	Total	8270D	0.3
Benzo(a)anthracene	56-55-3	Total	8270D	0.2
Dieldrin	60-57-1	Total	8081	0.1
Pentachlorophenol	87-86-5	Total	8270D	0.2
Benzidine	92-87-5	Total	8270D	0.1
Chemical Oxygen Demand	E1641638 ²	Total	HACH	5100
Gross alpha (adjusted)	NA	Total	Method 900	0.1 pCi/L
Total Dissolved Solids	E1642222 ²	Total	SM 2540C	60.4
Total Suspended Solids	NA	Total	SM 2540D	3450
Biological Oxygen Demand	N/A	Total	Standard Methods	930
Oil and Grease		Total	1664A	5000
Ecoli-enumeration			SM 9223B	
pH			SM 4500	
Phosphorus		Dissolved	365.1	100
Phosphorus		Total	365.1	100
Chromium IV		Total	3500Cr C-2011	100



Anatek Labs, Inc.

Sample Receipt and Preservation Form

MCJ0294



Due: 10/24/22

Client Name: Hall

TAT: Normal RUSH: _____ days

Samples Received From: FedEx UPS USPS Client Courier Other: _____

Custody Seal on Cooler/Box: Yes No Custody Seals Intact: Yes No N/A

Number of Coolers/Boxes: 4 Type of Ice: Wet Ice Ice Packs Dry Ice None

Packing Material: Bubble Wrap Bags Foam/Peanuts Paper None Other: _____

Cooler Temp As Read (°C): 3.8 Cooler Temp Corrected (°C): _____ Thermometer Used: IR-5

Comments:

Samples Received Intact? Yes No N/A

Chain of Custody Present? Yes No N/A

Samples Received Within Hold Time? Yes No N/A

Samples Properly Preserved? Yes No N/A

VOC Vials Free of Headspace (<6mm)? Yes No N/A

VOC Trip Blanks Present? Yes No N/A

Labels and Chains Agree? Yes No N/A

Total Number of Sample Bottles Received: 11

One of 2 trip blanks
2210315-003A excessive HS

Chain of Custody Fully Completed? Yes No N/A

Correct Containers Received? Yes No N/A

Anatek Bottles Used? Yes No Unknown

Record preservatives (and lot numbers, if known) for containers below:

HCl - 8260 Tetrahydrofuran only - g 44mL x 6 + 2 TBs

Notes, comments, etc. (also use this space if contacting the client - record names and date/time)

8270 (see attached) - g 2L x 3 (2210315-001E x 2)

Received/Inspected By: JKT Date/Time: 10/7/22 14:03

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1544321
Samples Received: 10/07/2022
Project Number:
Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

Entire Report Reviewed By:



John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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¹ Cp
² Tc
³ Ss
⁴ Cn
⁵ Sr
⁶ Qc
⁷ Gl
⁸ Al
⁹ Sc

SAMPLE SUMMARY

2210315-001KM R6 NORTH-20221005 L1544321-01 GW

Collected by

Collected date/time

Received date/time

10/05/22 12:15

10/07/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3500Cr C-2011	WG1938076	1	10/12/22 07:17	10/12/22 07:17	ARD	Mt. Juliet, TN
Wet Chemistry by Method 410.4	WG1939857	1	10/09/22 17:30	10/09/22 20:03	EPW	Mt. Juliet, TN

¹Cp

²Tc

³Ss

2210315-002KM R6 SOUTH-20221006 L1544321-02 GW

Collected by

Collected date/time

Received date/time

10/06/22 09:05

10/07/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 3500Cr C-2011	WG1938076	1	10/12/22 07:25	10/12/22 07:25	ARD	Mt. Juliet, TN
Wet Chemistry by Method 410.4	WG1940273	1	10/10/22 13:00	10/10/22 16:42	TQP	Mt. Juliet, TN

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

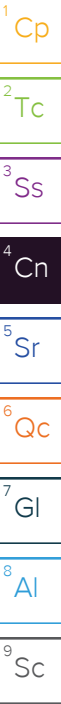
⁹Sc

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



John Hawkins
Project Manager



Wet Chemistry by Method 3500Cr C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.000500	1	10/12/2022 07:17	WG1938076

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
COD	22.3		20.0	1	10/09/2022 20:03	WG1939857

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 3500Cr C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Hexavalent Chromium	ND		0.000500	1	10/12/2022 07:25	WG1938076

Wet Chemistry by Method 410.4

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
COD	ND		20.0	1	10/10/2022 16:42	WG1940273

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3849771-1 10/11/22 21:36

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Hexavalent Chromium	U		0.000150	0.000500

L1542321-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1542321-01 10/11/22 22:35 • (DUP) R3849771-5 10/11/22 22:42

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	ND	ND	1	0.000		20

L1542881-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1542881-01 10/12/22 00:15 • (DUP) R3849771-6 10/12/22 00:22

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Hexavalent Chromium	ND	ND	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3849771-2 10/11/22 21:43

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexavalent Chromium	0.00200	0.00205	102	90.0-110	

L1542312-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1542312-01 10/11/22 22:10 • (MS) R3849771-3 10/11/22 22:19 • (MSD) R3849771-4 10/11/22 22:27

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexavalent Chromium	0.0500	ND	0.0507	0.0511	101	102	1	90.0-110			0.884	20

L1543260-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1543260-01 10/12/22 00:38 • (MS) R3849771-7 10/12/22 01:01

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Hexavalent Chromium	0.0500	ND	0.0503	101	1	90.0-110	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3846395-1 10/09/22 19:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
COD	U		11.7	20.0

L1543424-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1543424-01 10/09/22 19:54 • (DUP) R3846395-3 10/09/22 19:55

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
COD	47.4	47.7	1	0.610		20

L1544335-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1544335-01 10/09/22 20:03 • (DUP) R3846395-6 10/09/22 20:04

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
COD	32.2	32.7	1	1.60		20

Laboratory Control Sample (LCS)

(LCS) R3846395-2 10/09/22 19:53

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
COD	500	537	107	90.0-110	

L1543925-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1543925-02 10/09/22 19:56 • (MS) R3846395-4 10/09/22 19:57 • (MSD) R3846395-5 10/09/22 19:58

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
COD	500	263	1160	1170	180	181	1	80.0-120	E J5	E J5	0.549	20

Sample Narrative:

- MS: Matrix spike failure due to matrix interference.
- MSD: Matrix spike failure due to matrix interference.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3846784-1 10/10/22 16:33

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
COD	U		11.7	20.0

L1544252-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1544252-02 10/10/22 16:36 • (DUP) R3846784-5 10/10/22 16:36

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
COD	33.9	37.2	1	9.50		20

L1544331-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1544331-02 10/10/22 16:42 • (DUP) R3846784-6 10/10/22 16:42

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
COD	33.9	28.6	1	16.9		20

Laboratory Control Sample (LCS)

(LCS) R3846784-2 10/10/22 16:34

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
COD	500	483	96.7	90.0-110	

L1544093-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1544093-01 10/10/22 16:34 • (MS) R3846784-3 10/10/22 16:34 • (MSD) R3846784-4 10/10/22 16:34

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
COD	500	ND	532	549	106	110	1	80.0-120			3.15	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

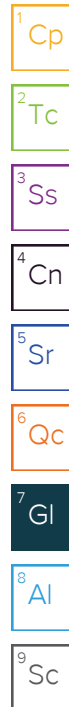
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.



ACCREDITATIONS & LOCATIONS

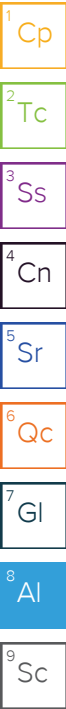
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

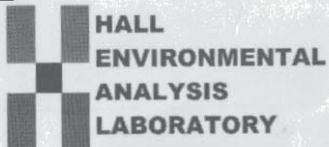
Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.





CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

J091

SUB CONTRACTOR: Pace TN		COMPANY: PACE TN		PHONE: (800) 767-5859		FAX: (615) 758-5859	
ADDRESS: 12065 Lebanon Rd				ACCOUNT #:		EMAIL:	
CITY, STATE, ZIP: Mt. Juliet, TN 37122							
ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2210315-001K	R6 North-20221005	500HDPEH2 504	Aqueous	10/5/2022 12:15:00 PM	1	COD
2	2210315-001M	R6 North-20221005	120mL	Aqueous	10/5/2022 12:15:00 PM	1	HEXAVALENT CHROMIUM
3	2210315-002K	R6 South-20221006	500HDPEH2 504	Aqueous	10/6/2022 9:05:00 AM	1	COD
4	2210315-002M	R6 South-20221006	120mL	Aqueous	10/6/2022 9:05:00 AM	1	HEXAVALENT CHROMIUM

L1944321

cont. - 4
0221 5755 8093 2632

Sample Receipt Checklist

COC Seal Present/Intact:	Y	N	If Applicable
COC Signed/Accurate:	Y	N	VCA Zero Headspace: Y N
Bottles arrive intact:	Y	N	Pres. Correct/Check: Y N
Correct bottles used:	Y	N	
Sufficient volume sent:	Y	N	
RAD Screen <0.5 mR/hr:	Y	N	

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By: <u>See</u>	Date: 10/6/2022	Time: 11:42 AM	Received By: <u>[Signature]</u>	Date: 10/11/22	Time: 0910
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
TAT: Standard <input checked="" type="checkbox"/> RUSH Next BD <input type="checkbox"/> 2nd BD <input type="checkbox"/> 3rd BD <input type="checkbox"/>					
REPORT TRANSMITTAL DESIRED: <input type="checkbox"/> HARD COPY (extra cost) <input type="checkbox"/> FAX <input type="checkbox"/> EMAIL <input type="checkbox"/> ONLINE					
FOR LAB USE ONLY Temp of samples <u>5.8 to 5.8</u> °C Attempt to Cool? _____ Comments: _____					

November 10, 2022

Andy Freeman
Hall Environmental
4901 Hawkins NE
Albuquerque, NM 87109

RE: Project: 2210315
Pace Project No.: 30528336

Dear Andy Freeman:

Enclosed are the analytical results for sample(s) received by the laboratory on October 07, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Carla Cmar
carla.cmar@pacelabs.com
(724)850-5600
Project Manager

Enclosures

cc: Ms. Jackie Ball, Hall Environmental
Michelle Garcia, Hall Environmental



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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CERTIFICATIONS

Project: 2210315

Pace Project No.: 30528336

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification #: PA01547

Connecticut Certification #: PH-0694

Delaware Certification

EPA Region 4 DW Rad

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Florida: Cert E871149 SEKS WET

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: KY90133

KY WW Permit #: KY0098221

KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification #: 9991

Missouri Certification #: 235

Montana Certification #: Cert0082

Nebraska Certification #: NE-OS-29-14

Nevada Certification #: PA014572018-1

New Hampshire/TNI Certification #: 297617

New Jersey/TNI Certification #: PA051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-010

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3

Utah/TNI Certification #: PA014572017-9

USDA Soil Permit #: P330-17-00091

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad

Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 2210315

Pace Project No.: 30528336

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30528336001	2210315-001L/R6 North-20221005	Water	10/05/22 12:15	10/07/22 09:25
30528336002	2210315-002L/ R6 South-2022100	Water	10/06/22 09:05	10/07/22 09:25

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 2210315
Pace Project No.: 30528336

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30528336001	2210315-001L/R6 North-20221005	EPA 900.0	SVM	1	PASI-PA
		EPA 900.0	JAL	1	PASI-PA
30528336002	2210315-002L/ R6 South-2022100	EPA 900.0	SVM	1	PASI-PA
		EPA 900.0	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 2210315
Pace Project No.: 30528336

Method: EPA 900.0
Description: 900.0 Gross Alpha/Beta
Client: Hall Environmental
Date: November 10, 2022

General Information:

2 samples were analyzed for EPA 900.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 2210315
Pace Project No.: 30528336

Method: EPA 900.0
Description: Adjusted Gross Alpha
Client: Hall Environmental
Date: November 10, 2022

General Information:

2 samples were analyzed for EPA 900.0 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2210315

Pace Project No.: 30528336

Sample: 2210315-001L/R6 **North-** **Lab ID:** 30528336001 Collected: 10/05/22 12:15 Received: 10/07/22 09:25 Matrix: Water
20221005

PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Gross Alpha	EPA 900.0	2.00 ± 1.50 (2.55) C:NA T:NA	pCi/L	10/14/22 08:41	12587-46-1	
Pace Analytical Services - Greensburg						
Adjusted Gross Alpha	EPA 900.0	0.895 ± NA (NA) C:NA T:NA	pCi/L	11/10/22 15:20		

Sample: 2210315-002L/ R6 **South-** **Lab ID:** 30528336002 Collected: 10/06/22 09:05 Received: 10/07/22 09:25 Matrix: Water
2022100

PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Gross Alpha	EPA 900.0	25.3 ± 5.74 (3.07) C:NA T:NA	pCi/L	10/13/22 19:38	12587-46-1	
Pace Analytical Services - Greensburg						
Adjusted Gross Alpha	EPA 900.0	22.98 ± NA (NA) C:NA T:NA	pCi/L	11/10/22 15:20		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 2210315
Pace Project No.: 30528336

QC Batch: 538872	Analysis Method: EPA 900.0
QC Batch Method: EPA 900.0	Analysis Description: 900.0 Gross Alpha/Beta
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30528336001, 30528336002

METHOD BLANK: 2614993 Matrix: Water

Associated Lab Samples: 30528336001, 30528336002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	0.883 ± 0.808 (1.48) C:NA T:NA	pCi/L	10/14/22 08:19	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 2210315
Pace Project No.: 30528336

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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SUB CONTRACTOR: Pace-Greensburg		COMPANY: Pace Analytical Services, Inc.		PHONE: (724) 850-5600		FAX: (724) 850-5601	
ADDRESS: 1638 Roseytown Rd Ste 2,3,4				ACCOUNT #:		EMAIL:	
CITY, STATE, ZIP: Greensburg, PA 15601							
ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2210315-001L	R6 North-20221005	1LHDPEHNO	Aqueous	10/5/2022 12:15:00 PM	2	Adjusted Gross Alpha
2	2210315-002L	R6 South-20221006	1LHDPEHNO	Aqueous	10/6/2022 9:05:00 AM	2	Adjusted Gross Alpha


WO# : 30528336



SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By: SL	Date: 10/6/2022	Time: 11:46 AM	Received By: Philip Rock	Date: 10/11/22	Time: 9:25	REPORT TRANSMITTAL DESIRED:	
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	<input type="checkbox"/> HARDCOPY (extra cost) <input type="checkbox"/> FAX <input type="checkbox"/> EMAIL <input type="checkbox"/> ONLINE	
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	FOR LAB USE ONLY	
TAT: Standard <input checked="" type="checkbox"/> RUSH Next BD <input type="checkbox"/> 2nd BD <input type="checkbox"/> 3rd BD <input type="checkbox"/>						Temp of samples _____ °C Attempt to Cool ? _____	
						Comments: _____	

	DC#_Title: ENV-FRM-GBUR-0088 v02_Sample Condition Upon Receipt-Pittsburgh
	Effective Date: 10/03/2022

Client Name: Hall Project #: _____

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking Number: 5344 4102 7710

Custody Seal on Cooler/Box Present: ☐ Yes ☒ No Seals Intact: ☐ Yes ☒ No

Thermometer Used: _____ Type of Ice: Wet Blue None

Cooler Temperature: Observed Temp _____ °C Correction Factor: _____ °C Final Temp: _____ °C
Temp should be above freezing to 6°C

Examined By	<u>PS</u>
Labeled By	<u>PS</u>
Temped By	_____

Comments:	Yes	No	NA	pH paper Lot#	D.P.D. Residual Chlorine Lot #
				<u>1000421</u>	_____
Chain of Custody Present	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.	
Chain of Custody Filled Out: -Were client corrections present on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.	
Chain of Custody Relinquished	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.	
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.	
Sample Labels match COC: -Includes date/time/ID Matrix: <u>WT</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.	
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.	
Short Hold Time Analysis (<72hr remaining):	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7.	
Rush Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.	
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.	
Correct Containers Used: -Pace Containers Used	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.	
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.	
Orthophosphate field filtered:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.	
Hex Cr Aqueous samples field filtered:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	13.	
Organic Samples checked for dechlorination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.	
Filtered volume received for dissolved tests:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15.	
All containers checked for preservation: exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16.	<u>PH<2</u>
All containers meet method preservation requirements:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Initial when completed <u>PS</u>	Date/Time of Preservation
Headspace in VOA Vials (>6mm):	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Lot# of added Preservative	
Trip Blank Present:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	17.	
Trip Blank Custody Seals Present	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	18.	
Rad Samples Screened <0.5 mrem/hr.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Initial when completed <u>PS</u>	Date: <u>10/7/22</u> Survey Meter SN: <u>1563</u>
Comments:					

W0#: 30528336

Due Date: 10/28/22
PH: HMC
CLIENT: HALL ENVIRON

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office.
PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.

Qualtrax ID: 55680



Pace Greensburg Lab -Sample Container Count

Client _____

Profile Number 1845

Site 7210315

Notes _____

Sample Line Item	Matrix	AG1H	AG1S	AG1T	AG2U	AG3S	AG3U	AG5U	AG5T	BG1U	BG2U	BP1N	BP1U	BP2S	BP2U	BP3C	BP3N	BP3S	BP3U	DG9S	GCUB	VG9H	VG9T	VG9U	VOAK	WGFU	WGKU	ZPLC
1	WT											2																
2	WT											2																
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

WO# : 30528336

PM: HMC

Due Date: 10/28/22

CLIENT: HALL ENVIRON

Container Codes

Glass

GJN	1 Gallon Jug with HNO3	DG9S	40mL amber VOA vial H2SO4
AG5U	100mL amber glass unpreserved	VG9U	40mL clear VOA vial
AG5T	100mL amber glass Na Thiosulfate	VG9T	40mL clear VOA vial Na Thiosulfate
GJN	1 Gallon Jug	VG9H	40mL clear VOA vial HCl
AG1S	1L amber glass H2SO4	JGFU	4oz amber wide jar
AG1H	1L amber glass HCl	WGFU	4oz wide jar unpreserved
AG1T	1L amber glass Na Thiosulfate	BG2U	500mL clear glass unpreserved
BG1U	1L clear glass unpreserved	AG2U	500mL amber glass unpreserved
AG3S	250mL amber glass H2SO4	WGKU	8oz wide jar unpreserved
AG3U	250mL amber glass unpreserved		

Plastic / Misc.

GCUB	1 Gallon Cubitainer
12GN	1/2 Gallon Cubitainer
SP5T	120mL Coliform Na Thiosulfate
BP1N	1L plastic HNO3
BP1U	1L plastic unpreserved
BP3S	250mL plastic H2SO4
BP3N	250mL plastic HNO3
BP3U	250mL plastic unpreserved
BP3C	250ml plastic NaOH
BP2S	500mL plastic H2SO4
BP2U	500mL plastic unpreserved

EZI	5g Encore
VOAK	Kit for Volatile Solid
I	Wipe/Swab
ZPLC	Ziploc Bag

WT	Water
SL	Solid
OL	Non-aqueous liquid
WP	Wipe

Pace Analytical - Greensburg, PA

Sample Delivery Group: L1547177
Samples Received: 10/15/2022
Project Number: 30528336
Description: 2210315
Site: 001
Report To: Carla Cmar
1638 Roseytown Road
Greensburg, PA 15601

Entire Report Reviewed By:



Donna Eidson
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SAMPLE SUMMARY

2210315-001L/R6 NORTH-20221005 L1547177-01 Non-Potable Water

Collected by

Collected date/time

Received date/time

10/05/22 12:15

10/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method D5174	WG1949166	1	11/03/22 14:48	11/09/22 16:17	SNR	Mt. Juliet, TN

2210315-002L//R6 SOUTH-2022100 L1547177-02 Non-Potable Water

Collected by

Collected date/time

Received date/time

10/06/22 09:05

10/15/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method D5174	WG1949166	1	11/03/22 14:48	11/09/22 16:20	SNR	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Donna Eidson
Project Manager



Radiochemistry by Method D5174

Analyte	Result	Qualifier	Uncertainty	RDL	Analysis Date	Batch
	ug/l		+ / -	ug/l	date / time	
Uranium	1.65		0.0549	1.00	11/09/2022 16:17	WG1949166

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Radiochemistry by Method D5174

Analyte	Result	Qualifier	Uncertainty	RDL	Analysis Date	Batch
	ug/l		+ / -	ug/l	date / time	
Uranium	3.46		0.115	1.00	11/09/2022 16:20	WG1949166

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3859221-1 11/09/22 15:57

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	ug/l		ug/l	ug/l
Uranium	U		1.00	1.00

Laboratory Control Sample (LCS)

(LCS) R3859221-2 11/09/22 16:00

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	ug/l	ug/l	%	%	
Uranium	30.0	29.2	97.5	80.0-120	

L1547600-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1547600-01 11/09/22 16:58 • (MS) R3859221-3 11/09/22 16:02 • (MSD) R3859221-5 11/09/22 16:07

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Uranium	20.0	ND	20.3	20.1	101	101	1	75.0-125			0.781	20

L1547600-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1547600-02 11/09/22 17:00 • (MS) R3859221-4 11/09/22 16:04 • (MSD) R3859221-6 11/09/22 16:10

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Uranium	20.0	ND	18.7	19.3	93.6	96.5	1	75.0-125			3.07	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

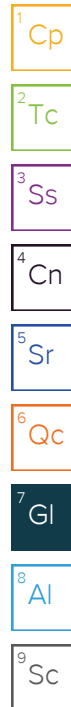
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.



ACCREDITATIONS & LOCATIONS

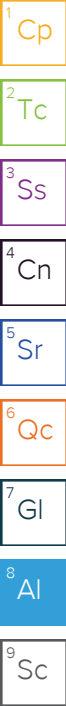
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP, LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Internal Transfer Chain of Custody



☐ Samples Pre-Logged into eCOC.

State Of Origin: NM

Cert. Needed: ☐ Yes ☐ No

Owner Received Date: 10/7/2022 Results Requested By: 11/4/2022



Workorder: 30528336

Workorder Name: 2210315

[illegible]

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

Sample Receipt Checklist

COC Seal Present/Intact: Y N If Applicable
 COC Signed/Accurate: Y N VOA Zero Headspace: Y N
 Bottles arrive intact: Y N Pres. Correct/Check: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 RAD Screen <0.5 mR/hr: Y N

DRA7 14.1 ± 0 = 14.1



CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

454777

SUB CONTRACTOR: Pace-Greensburg		COMPANY: Pace Analytical Services, Inc.		PHONE: (724) 850-5600		FAX: (724) 850-5601	
ADDRESS: 1638 Roseytown Rd Ste 2,3,4				ACCOUNT #:		EMAIL:	
CITY, STATE, ZIP: Greensburg, PA 15601							
ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2210315-001L	R6 North-20221005	1LHDPEHNO	Aqueous	10/5/2022 12:15:00 PM	2	Adjusted Gross Alpha
2	2210315-002L	R6 South-20221006	1LHDPEHNO	Aqueous	10/6/2022 9:05:00 AM	2	Adjusted Gross Alpha

WO#: 30528336



30528336

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By: <i>SL</i>	Date: 10/6/2022	Time: 11:46 AM	Received By: <i>Phil Rock</i>	Date: 10/7/22	Time: 9:25	REPORT TRANSMITTAL DESIRED: <input type="checkbox"/> HARDCOPY (extra cost) <input type="checkbox"/> FAX <input type="checkbox"/> EMAIL <input type="checkbox"/> ONLINE FOR LAB USE ONLY Temp of samples _____ °C Attempt to Cool ? _____ Comments: _____
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	
TAT: Standard <input checked="" type="checkbox"/> RUSH Next BD <input type="checkbox"/> 2nd BD <input type="checkbox"/> 3rd BD <input type="checkbox"/>						

November 23, 2022

Mr. Andy Freeman
Hall Environmental
4901 Hawkins NE
Suite D
Albuquerque, New Mexico 87109

Re: Routine Analysis
Work Order: 20534
SDG: 2210315

Dear Mr. Freeman:

Cape Fear Analytical LLC (CFA) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on October 07, 2022. This original data report has been prepared and reviewed in accordance with CFA's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at 910-795-0421.

Sincerely,



Cynde Larkins
Project Manager

Purchase Order: IDIQ Pricing
Enclosures



CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

 Hall Environmental Analysis Laboratory
 4901 Hawkins NE
 Albuquerque, NM 87109
 TEL: 505-345-3975
 FAX: 505-345-4107
 Website: www.hallenvironmental.com

CFA WO#20534

SUB CONTRACTOR: Cape Fear Analytical		COMPANY: Cape Fear Analytical		PHONE: (910) 795-0421		FAX:	
ADDRESS: 3306 Kitty Hawk Rd Ste 120				ACCOUNT #:		EMAIL:	
CITY, STATE, ZIP: Wilmington, NC 28405							
ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2210315-001J	R6 North-20221005	1LAMGU	Aqueous	10/5/2022 12:15:00 PM	1	PCBs by 1668
2	2210315-002J	R6 South-20221006	1LAMGU	Aqueous	10/6/2022 9:05:00 AM	1	PCBs by 1668

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By: <i>sa</i>	Date: 10/6/2022	Time: 11:42 AM	Received By: <i>Cynde Perkins</i>	Date: 07 OCT 22	Time: 0947	REPORT TRANSMITTAL DESIRED: <input type="checkbox"/> HARDCOPY (extra cost) <input type="checkbox"/> FAX <input type="checkbox"/> EMAIL <input type="checkbox"/> ONLINE FOR LAB USE ONLY Temp of samples <u>5.2</u> °C Attempt to Cool? <input checked="" type="checkbox"/> Comments: _____
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	
TAT: Standard <input checked="" type="checkbox"/> RUSH Next BD <input type="checkbox"/> 2nd BD <input type="checkbox"/> 3rd BD <input type="checkbox"/>						

SAMPLE RECEIPT CHECKLIST

Cape Fear Analytical

Client: <u>HALL</u>	Work Order: <u>20534</u>
---------------------	--------------------------

Shipping Company: <u>FedEx</u>	Date/Time Received: <u>07 OCT 22 0947</u>
--------------------------------	---

Suspected Hazard Information	Yes	NA	No
Shipped as DOT Hazardous?			<input checked="" type="checkbox"/>
Samples identified as Foreign Soil?			<input checked="" type="checkbox"/>

DOE Site Sample Packages	Yes	NA	No*
Screened <0.5 mR/hr?		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Samples < 2x background?		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

* Notify RSO of any responses in this column immediately.

Air Sample Receipt Specifics	Yes	NA	No
Air sample in shipment?			<input checked="" type="checkbox"/>

Air Witness: _____

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: seals broken damaged container leaking container other(describe)
2 Custody seal/s present on cooler?	<input checked="" type="checkbox"/>			Seal intact? <u>Yes</u> No
3 Chain of Custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Samples requiring cold preservation within 0-6°C?	<input checked="" type="checkbox"/>			Preservation Method: <u>blue ice</u> dry ice none other (describe) Temperature Blank present: Yes <u>No</u> <u>5.3° - 0.1 = 5.2°C</u>
5 Aqueous samples found to have visible solids?	<input checked="" type="checkbox"/>			Sample IDs, containers affected: <u>Minimal Solids (<1%), cloudy</u>
5 Samples requiring chemical preservation at proper pH?		<input checked="" type="checkbox"/>		Sample IDs, containers affected and pH observed: <u>pH=7 on both</u> If preservative added, Lot#:
7 Samples requiring preservation have no residual chlorine?	<input checked="" type="checkbox"/>			Sample IDs, containers affected: If preservative added, Lot#:
8 Samples received within holding time?	<input checked="" type="checkbox"/>			Sample IDs, tests affected:
9 Sample IDs on COC match IDs on containers?	<input checked="" type="checkbox"/>			Sample IDs, containers affected:
10 Date & time of COC match date & time on containers?	<input checked="" type="checkbox"/>			Sample IDs, containers affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			List type and number of containers / Sample IDs, containers affected: <u>2 - 1L WMA 6 bottles, 1 per sample</u>
12 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			

Comments:

PCB Congeners Analysis

Case Narrative

**PCBC Case Narrative
Hall Environmental Analysis Laboratory (HALL)
SDG 2210315
Work Order 20534**

Method/Analysis Information

Product: PCB Congeners by EPA Method 1668A in Liquids
Analytical Method: EPA Method 1668A
Extraction Method: SW846 3520C
Analytical Batch Number: 51323
Clean Up Batch Number: 51322
Extraction Batch Number: 51321

Sample Analysis

Samples were received within temperature requirements at 5.2°C (20534001, 20534002). The following samples were analyzed using the analytical protocol as established in EPA Method 1668A:

Sample ID	Client ID
12033076	Method Blank (MB)
12033077	Laboratory Control Sample (LCS)
12033078	Laboratory Control Sample Duplicate (LCSD)
20534001	2210315-001J R6 North-20221005
20534002	2210315-002J R6 South-20221006

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by Cape Fear Analytical LLC (CFA) as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with CF-OA-E-003 REV# 10.

Raw data reports are processed and reviewed by the analyst using the TargetLynx software package.

Calibration Information

Initial Calibration

All initial calibration requirements have been met for this sample delivery group (SDG).

Continuing Calibration Verification (CCV) Requirements

All associated calibration verification standard(s) (ICV or CCV) met the acceptance criteria.

Quality Control (QC) Information

Certification Statement

The test results presented in this document are certified to meet all requirements of the 2009 TNI Standard.

Method Blank (MB) Statement

The MB(s) analyzed with this SDG met the acceptance criteria.

Surrogate Recoveries

All surrogate recoveries were within the established acceptance criteria for this SDG.

Laboratory Control Sample (LCS) Recovery

The LCS spike recoveries met the acceptance limits.

Laboratory Control Sample Duplicate (LCSD) Recovery

The LCSD spike recoveries met the acceptance limits.

LCS/LCSD Relative Percent Difference (RPD) Statement

The RPD(s) between the LCS and LCSD met the acceptance limits.

QC Sample Designation

A matrix spike and matrix spike duplicate analysis was not required for this SDG.

Technical Information

Holding Time Specifications

CFA assigns holding times based on the associated methodology, which assigns the date and time from sample collection. Those holding times expressed in hours are calculated in the AlphaLIMS system. Those holding times expressed as days expire at midnight on the day of expiration. All samples in this SDG met the specified holding time.

Preparation/Analytical Method Verification

All procedures were performed as stated in the SOP.

Sample Dilutions

The samples in this SDG did not require dilutions.

Sample Re-extraction/Re-analysis

Re-extractions or re-analyses were not required in this SDG.

Miscellaneous Information

Manual Integrations

Manual integrations were required for data files in this SDG. Certain standards and QC samples required manual integrations to correctly position the baseline as set in the calibration standard

injections. Where manual integrations were performed, copies of all manual integration peak profiles are included in the raw data section of this fraction.

System Configuration

This analysis was performed on the following instrument configuration:

Instrument ID	Instrument	System Configuration	Column ID	Column Description
HRP875_1	PCB Analysis	PCB Analysis	SPB-Octyl	30m x 0.25mm, 0.25um

Sample Data Summary

Cape Fear Analytical, LLC

3306 Kitty Hawk Road Suite 120, Wilmington, NC 28405 - (910) 795-0421 - www.capefearanalytical.com

Certificate of Analysis Report for

HALL001 Hall Environmental Analysis Laboratory

Client SDG: 2210315 CFA Work Order: 20534

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a surrogate compound
- B The target analyte was detected in the associated blank.
- C Congener has coeluters. When Cxxx, refer to congener number xxx for data
- J Value is estimated
- U Analyte was analyzed for, but not detected above the specified detection limit.

Review/Validation

Cape Fear Analytical requires all analytical data to be verified by a qualified data reviewer.

The following data validator verified the information presented in this case narrative:

Signature:



Name: Alexis Finks

Date: 23 NOV 2022

Title: Data Validator

PCB Congeners
Certificate of Analysis
Sample Summary

Page 1 of 8

SDG Number: 2210315
Lab Sample ID: 20534001
Client Sample: 1668A Water
Client ID: 2210315-001J R6 North-20221005
Batch ID: 51323
Run Date: 11/11/2022 21:11
Data File: d08nov22a_7-9
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001
Date Collected: 10/05/2022 12:15
Date Received: 10/07/2022 09:47

Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 876.4 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
2051-60-7	1-MoCB	U	ND	pg/L	6.00	114
2051-61-8	2-MoCB	U	ND	pg/L	7.44	114
2051-62-9	3-MoCB	U	ND	pg/L	4.95	114
13029-08-8	4-DiCB	U	ND	pg/L	14.3	114
16605-91-7	5-DiCB	U	ND	pg/L	11.3	114
25569-80-6	6-DiCB	U	ND	pg/L	8.42	114
33284-50-3	7-DiCB	U	ND	pg/L	8.40	114
34883-43-7	8-DiCB	U	ND	pg/L	7.33	114
34883-39-1	9-DiCB	U	ND	pg/L	10.8	114
33146-45-1	10-DiCB	U	ND	pg/L	7.01	114
2050-67-1	11-DiCB	J	33.7	pg/L	9.79	114
2974-92-7	12-DiCB	CU	ND	pg/L	9.11	228
2974-90-5	13-DiCB	C12				
34883-41-5	14-DiCB	U	ND	pg/L	9.15	114
2050-68-2	15-DiCB	U	ND	pg/L	12.1	114
38444-78-9	16-TrCB	U	ND	pg/L	3.99	114
37680-66-3	17-TrCB	U	ND	pg/L	4.79	114
37680-65-2	18-TrCB	CJ	6.39	pg/L	4.13	228
38444-73-4	19-TrCB	U	ND	pg/L	5.75	114
38444-84-7	20-TrCB	BCJ	11.3	pg/L	3.58	228
55702-46-0	21-TrCB	CU	ND	pg/L	3.13	228
38444-85-8	22-TrCB	J	4.47	pg/L	3.54	114
55720-44-0	23-TrCB	U	ND	pg/L	3.31	114
55702-45-9	24-TrCB	U	ND	pg/L	4.40	114
55712-37-3	25-TrCB	U	ND	pg/L	2.97	114
38444-81-4	26-TrCB	CU	ND	pg/L	3.45	228
38444-76-7	27-TrCB	U	ND	pg/L	3.72	114
7012-37-5	28-TrCB	C20				
15862-07-4	29-TrCB	C26				
35693-92-6	30-TrCB	C18				
16606-02-3	31-TrCB	U	ND	pg/L	6.60	114
38444-77-8	32-TrCB	U	ND	pg/L	3.29	114

Comments:

- B** The target analyte was detected in the associated blank.
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PCB Congeners
Certificate of Analysis
Sample Summary

Page 2 of 8

SDG Number: 2210315
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Client ID: 2210315-001J R6 North-20221005
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Run Date: 11/11/2022 21:11
Data File: d08nov22a_7-9
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001
Date Collected: 10/05/2022 12:15
Date Received: 10/07/2022 09:47

Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 876.4 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
38444-86-9	33-TrCB	C21				
37680-68-5	34-TrCB	U	ND	pg/L	3.86	114
37680-69-6	35-TrCB	U	ND	pg/L	4.70	114
38444-87-0	36-TrCB	U	ND	pg/L	4.11	114
38444-90-5	37-TrCB	U	ND	pg/L	4.11	114
53555-66-1	38-TrCB	U	ND	pg/L	4.61	114
38444-88-1	39-TrCB	U	ND	pg/L	4.70	114
38444-93-8	40-TeCB	CU	ND	pg/L	5.59	228
52663-59-9	41-TeCB	U	ND	pg/L	9.04	114
36559-22-5	42-TeCB	U	ND	pg/L	5.80	114
70362-46-8	43-TeCB	U	ND	pg/L	7.17	114
41464-39-5	44-TeCB	CU	ND	pg/L	8.26	342
70362-45-7	45-TeCB	CJ	4.22	pg/L	2.65	228
41464-47-5	46-TeCB	U	ND	pg/L	2.58	114
2437-79-8	47-TeCB	C44				
70362-47-9	48-TeCB	U	ND	pg/L	6.16	114
41464-40-8	49-TeCB	CU	ND	pg/L	5.00	228
62796-65-0	50-TeCB	CU	ND	pg/L	2.51	228
68194-04-7	51-TeCB	C45				
35693-99-3	52-TeCB	BJ	8.44	pg/L	6.69	228
41464-41-9	53-TeCB	C50				
15968-05-5	54-TeCB	U	ND	pg/L	1.89	114
74338-24-2	55-TeCB	U	ND	pg/L	3.77	114
41464-43-1	56-TeCB	U	ND	pg/L	3.97	114
70424-67-8	57-TeCB	U	ND	pg/L	3.61	114
41464-49-7	58-TeCB	U	ND	pg/L	3.70	114
74472-33-6	59-TeCB	CU	ND	pg/L	4.61	342
33025-41-1	60-TeCB	U	ND	pg/L	3.81	114
33284-53-6	61-TeCB	CU	ND	pg/L	11.1	456
54230-22-7	62-TeCB	C59				
74472-34-7	63-TeCB	U	ND	pg/L	3.70	114
52663-58-8	64-TeCB	U	ND	pg/L	4.47	114

Comments:

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**PCB Congeners
Certificate of Analysis
Sample Summary**

Page 3 of 8

SDG Number: 2210315
Lab Sample ID: 20534001
Client Sample: 1668A Water
Client ID: 2210315-001J R6 North-20221005
Batch ID: 51323
Run Date: 11/11/2022 21:11
Data File: d08nov22a_7-9
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001
Date Collected: 10/05/2022 12:15
Date Received: 10/07/2022 09:47

Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 876.4 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
33284-54-7	65-TeCB	C44				
32598-10-0	66-TeCB	J	4.52	pg/L	3.95	114
73575-53-8	67-TeCB	U	ND	pg/L	3.08	114
73575-52-7	68-TeCB	U	ND	pg/L	3.35	114
60233-24-1	69-TeCB	C49				
32598-11-1	70-TeCB	C61				
41464-46-4	71-TeCB	C40				
41464-42-0	72-TeCB	U	ND	pg/L	3.63	114
74338-23-1	73-TeCB	U	ND	pg/L	4.27	114
32690-93-0	74-TeCB	C61				
32598-12-2	75-TeCB	C59				
70362-48-0	76-TeCB	C61				
32598-13-3	77-TeCB	U	ND	pg/L	3.72	114
70362-49-1	78-TeCB	U	ND	pg/L	4.56	114
41464-48-6	79-TeCB	U	ND	pg/L	3.51	114
33284-52-5	80-TeCB	U	ND	pg/L	3.31	114
70362-50-4	81-TeCB	U	ND	pg/L	3.47	114
52663-62-4	82-PeCB	U	ND	pg/L	5.04	114
60145-20-2	83-PeCB	U	ND	pg/L	5.77	114
52663-60-2	84-PeCB	U	ND	pg/L	4.27	114
65510-45-4	85-PeCB	CU	ND	pg/L	3.56	342
55312-69-1	86-PeCB	BCJ	7.80	pg/L	3.61	685
38380-02-8	87-PeCB	C86				
55215-17-3	88-PeCB	CU	ND	pg/L	4.31	228
73575-57-2	89-PeCB	U	ND	pg/L	4.95	114
68194-07-0	90-PeCB	CU	ND	pg/L	7.17	342
68194-05-8	91-PeCB	C88				
52663-61-3	92-PeCB	U	ND	pg/L	4.75	114
73575-56-1	93-PeCB	CU	ND	pg/L	3.95	228
73575-55-0	94-PeCB	U	ND	pg/L	4.02	114
38379-99-6	95-PeCB	U	ND	pg/L	4.47	114
73575-54-9	96-PeCB	U	ND	pg/L	2.53	114

Comments:

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PCB Congeners
Certificate of Analysis
Sample Summary

Page 4 of 8

SDG Number: 2210315
Lab Sample ID: 20534001
Client Sample: 1668A Water
Client ID: 2210315-001J R6 North-20221005
Batch ID: 51323
Run Date: 11/11/2022 21:11
Data File: d08nov22a_7-9
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001
Date Collected: 10/05/2022 12:15
Date Received: 10/07/2022 09:47

Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 876.4 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
41464-51-1	97-PeCB	C86				
60233-25-2	98-PeCB	CU	ND	pg/L	3.86	228
38380-01-7	99-PeCB	U	ND	pg/L	3.81	114
39485-83-1	100-PeCB	C93				
37680-73-2	101-PeCB	C90				
68194-06-9	102-PeCB	C98				
60145-21-3	103-PeCB	U	ND	pg/L	4.06	114
56558-16-8	104-PeCB	U	ND	pg/L	2.01	114
32598-14-4	105-PeCB	U	ND	pg/L	4.08	114
70424-69-0	106-PeCB	U	ND	pg/L	4.13	114
70424-68-9	107-PeCB	U	ND	pg/L	3.42	114
70362-41-3	108-PeCB	CU	ND	pg/L	4.20	228
74472-35-8	109-PeCB	C86				
38380-03-9	110-PeCB	CJ	6.91	pg/L	3.31	228
39635-32-0	111-PeCB	U	ND	pg/L	3.15	114
74472-36-9	112-PeCB	U	ND	pg/L	2.85	114
68194-10-5	113-PeCB	C90				
74472-37-0	114-PeCB	U	ND	pg/L	3.72	114
74472-38-1	115-PeCB	C110				
18259-05-7	116-PeCB	C85				
68194-11-6	117-PeCB	C85				
31508-00-6	118-PeCB	U	ND	pg/L	5.41	114
56558-17-9	119-PeCB	C86				
68194-12-7	120-PeCB	U	ND	pg/L	3.33	114
56558-18-0	121-PeCB	U	ND	pg/L	2.99	114
76842-07-4	122-PeCB	U	ND	pg/L	5.39	114
65510-44-3	123-PeCB	U	ND	pg/L	3.42	114
70424-70-3	124-PeCB	C108				
74472-39-2	125-PeCB	C86				
57465-28-8	126-PeCB	U	ND	pg/L	4.52	114
39635-33-1	127-PeCB	U	ND	pg/L	4.47	114
38380-07-3	128-HxCB	CU	ND	pg/L	3.93	228

Comments:

- B** The target analyte was detected in the associated blank.
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J Value is estimated
U Analyte was analyzed for, but not detected above the specified detection limit.

PCB Congeners
Certificate of Analysis
Sample Summary

Page 5 of 8

SDG Number: 2210315
Lab Sample ID: 20534001
Client Sample: 1668A Water
Client ID: 2210315-001J R6 North-20221005
Batch ID: 51323
Run Date: 11/11/2022 21:11
Data File: d08nov22a_7-9
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001
Date Collected: 10/05/2022 12:15
Date Received: 10/07/2022 09:47

Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 876.4 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
55215-18-4	129-HxCB	CJ	9.97	pg/L	4.27	342
52663-66-8	130-HxCB	U	ND	pg/L	4.95	114
61798-70-7	131-HxCB	U	ND	pg/L	4.88	114
38380-05-1	132-HxCB	U	ND	pg/L	4.59	114
35694-04-3	133-HxCB	U	ND	pg/L	4.70	114
52704-70-8	134-HxCB	U	ND	pg/L	5.16	114
52744-13-5	135-HxCB	CJ	5.18	pg/L	3.42	228
38411-22-2	136-HxCB	U	ND	pg/L	2.49	114
35694-06-5	137-HxCB	U	ND	pg/L	4.77	114
35065-28-2	138-HxCB	C129				
56030-56-9	139-HxCB	CU	ND	pg/L	3.99	228
59291-64-4	140-HxCB	C139				
52712-04-6	141-HxCB	U	ND	pg/L	4.04	114
41411-61-4	142-HxCB	U	ND	pg/L	4.86	114
68194-15-0	143-HxCB	U	ND	pg/L	4.56	114
68194-14-9	144-HxCB	U	ND	pg/L	3.38	114
74472-40-5	145-HxCB	U	ND	pg/L	2.35	114
51908-16-8	146-HxCB	U	ND	pg/L	3.90	114
68194-13-8	147-HxCB	CJ	5.73	pg/L	3.88	228
74472-41-6	148-HxCB	U	ND	pg/L	3.26	114
38380-04-0	149-HxCB	C147				
68194-08-1	150-HxCB	U	ND	pg/L	2.19	114
52663-63-5	151-HxCB	C135				
68194-09-2	152-HxCB	U	ND	pg/L	2.44	114
35065-27-1	153-HxCB	BCJ	6.71	pg/L	3.56	228
60145-22-4	154-HxCB	U	ND	pg/L	2.65	114
33979-03-2	155-HxCB	U	ND	pg/L	1.87	114
38380-08-4	156-HxCB	CU	ND	pg/L	3.40	228
69782-90-7	157-HxCB	C156				
74472-42-7	158-HxCB	U	ND	pg/L	2.97	114
39635-35-3	159-HxCB	U	ND	pg/L	2.81	114
41411-62-5	160-HxCB	U	ND	pg/L	3.63	114

Comments:

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PCB Congeners
Certificate of Analysis
Sample Summary

Page 6 of 8

SDG Number: 2210315
Lab Sample ID: 20534001
Client Sample: 1668A Water
Client ID: 2210315-001J R6 North-20221005
Batch ID: 51323
Run Date: 11/11/2022 21:11
Data File: d08nov22a_7-9
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001
Date Collected: 10/05/2022 12:15
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Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 876.4 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
74472-43-8	161-HxCB	U	ND	pg/L	3.26	114
39635-34-2	162-HxCB	U	ND	pg/L	2.78	114
74472-44-9	163-HxCB	C129				
74472-45-0	164-HxCB	U	ND	pg/L	3.10	114
74472-46-1	165-HxCB	U	ND	pg/L	3.63	114
41411-63-6	166-HxCB	C128				
52663-72-6	167-HxCB	U	ND	pg/L	2.42	114
59291-65-5	168-HxCB	C153				
32774-16-6	169-HxCB	U	ND	pg/L	3.01	114
35065-30-6	170-HpCB	U	ND	pg/L	3.67	114
52663-71-5	171-HpCB	CU	ND	pg/L	3.56	228
52663-74-8	172-HpCB	U	ND	pg/L	3.65	114
68194-16-1	173-HpCB	C171				
38411-25-5	174-HpCB	U	ND	pg/L	3.95	114
40186-70-7	175-HpCB	U	ND	pg/L	3.19	114
52663-65-7	176-HpCB	U	ND	pg/L	2.46	114
52663-70-4	177-HpCB	U	ND	pg/L	3.61	114
52663-67-9	178-HpCB	U	ND	pg/L	3.51	114
52663-64-6	179-HpCB	U	ND	pg/L	2.37	114
35065-29-3	180-HpCB	CU	ND	pg/L	5.77	228
74472-47-2	181-HpCB	U	ND	pg/L	3.45	114
60145-23-5	182-HpCB	U	ND	pg/L	3.08	114
52663-69-1	183-HpCB	CJ	3.54	pg/L	3.26	228
74472-48-3	184-HpCB	U	ND	pg/L	2.33	114
52712-05-7	185-HpCB	C183				
74472-49-4	186-HpCB	U	ND	pg/L	2.49	114
52663-68-0	187-HpCB	J	3.13	pg/L	3.08	114
74487-85-7	188-HpCB	U	ND	pg/L	2.19	114
39635-31-9	189-HpCB	U	ND	pg/L	2.56	114
41411-64-7	190-HpCB	U	ND	pg/L	2.85	114
74472-50-7	191-HpCB	U	ND	pg/L	2.65	114
74472-51-8	192-HpCB	U	ND	pg/L	2.94	114

Comments:

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PCB Congeners
Certificate of Analysis
Sample Summary

Page 7 of 8

SDG Number: 2210315
Lab Sample ID: 20534001
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Client ID: 2210315-001J R6 North-20221005
Batch ID: 51323
Run Date: 11/11/2022 21:11
Data File: d08nov22a_7-9
Prep Batch: 51321
Prep Date: 02-NOV-22

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Method: EPA Method 1668A
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Prep Method: SW846 3520C
Prep Aliquot: 876.4 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
69782-91-8	193-HpCB	C180				
35694-08-7	194-OcCB	U	ND	pg/L	4.06	114
52663-78-2	195-OcCB	U	ND	pg/L	2.74	114
42740-50-1	196-OcCB	U	ND	pg/L	3.04	114
33091-17-7	197-OcCB	CJ	3.10	pg/L	2.33	228
68194-17-2	198-OcCB	CJ	4.91	pg/L	3.26	228
52663-75-9	199-OcCB	C198				
52663-73-7	200-OcCB	C197				
40186-71-8	201-OcCB	U	ND	pg/L	2.17	114
2136-99-4	202-OcCB	U	ND	pg/L	2.35	114
52663-76-0	203-OcCB	U	ND	pg/L	3.10	114
74472-52-9	204-OcCB	U	ND	pg/L	2.24	114
74472-53-0	205-OcCB	U	ND	pg/L	1.94	114
40186-72-9	206-NoCB	U	ND	pg/L	4.06	114
52663-79-3	207-NoCB	U	ND	pg/L	2.81	114
52663-77-1	208-NoCB	U	ND	pg/L	2.42	114
2051-24-3	209-DeCB	U	ND	pg/L	3.01	114
1336-36-3	Total PCB Congeners	J	130	pg/L		114

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1-MoCB		896	2280	pg/L	39.3	(15%-150%)
13C-3-MoCB		1040	2280	pg/L	45.7	(15%-150%)
13C-4-DiCB		1100	2280	pg/L	48.0	(25%-150%)
13C-15-DiCB		1650	2280	pg/L	72.2	(25%-150%)
13C-19-TrCB		1390	2280	pg/L	61.0	(25%-150%)
13C-37-TrCB		1450	2280	pg/L	63.6	(25%-150%)
13C-54-TeCB		1430	2280	pg/L	62.6	(25%-150%)
13C-77-TeCB		1840	2280	pg/L	80.8	(25%-150%)
13C-81-TeCB		1900	2280	pg/L	83.2	(25%-150%)
13C-104-PeCB		1320	2280	pg/L	57.7	(25%-150%)
13C-105-PeCB		1480	2280	pg/L	64.7	(25%-150%)
13C-114-PeCB		1470	2280	pg/L	64.4	(25%-150%)
13C-118-PeCB		1370	2280	pg/L	60.1	(25%-150%)
13C-123-PeCB		1590	2280	pg/L	69.5	(25%-150%)
13C-126-PeCB		1530	2280	pg/L	66.9	(25%-150%)
13C-155-HxCB		1480	2280	pg/L	64.7	(25%-150%)
13C-156-HxCB	C	2990	4560	pg/L	65.5	(25%-150%)
13C-157-HxCB	C156L					
13C-167-HxCB		1470	2280	pg/L	64.6	(25%-150%)
13C-169-HxCB		1480	2280	pg/L	64.7	(25%-150%)
13C-188-HpCB		1490	2280	pg/L	65.2	(25%-150%)
13C-189-HpCB		1480	2280	pg/L	64.9	(25%-150%)

**PCB Congeners
Certificate of Analysis
Sample Summary**

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SDG Number: 2210315	Client: HALL001	Project: HALL00113
Lab Sample ID: 20534001	Date Collected: 10/05/2022 12:15	Matrix: WATER
Client Sample: 1668A Water	Date Received: 10/07/2022 09:47	
Client ID: 2210315-001J R6 North-20221005		Prep Basis: As Received
Batch ID: 51323	Method: EPA Method 1668A	
Run Date: 11/11/2022 21:11	Analyst: MLL	Instrument: HRP875
Data File: d08nov22a_7-9		Dilution: 1
Prep Batch: 51321	Prep Method: SW846 3520C	Prep SOP Ref: CF-OA-E-001
Prep Date: 02-NOV-22	Prep Aliquot: 876.4 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
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Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-202-OcCB		1460	2280	pg/L	64.0	(25%-150%)
13C-205-OcCB		1780	2280	pg/L	78.1	(25%-150%)
13C-206-NoCB		1730	2280	pg/L	76.0	(25%-150%)
13C-208-NoCB		1670	2280	pg/L	73.1	(25%-150%)
13C-209-DeCB		1650	2280	pg/L	72.4	(25%-150%)
13C-28-TrCB		1610	2280	pg/L	70.7	(30%-135%)
13C-111-PeCB		1790	2280	pg/L	78.5	(30%-135%)
13C-178-HpCB		2090	2280	pg/L	91.6	(30%-135%)

Comments:

- B** The target analyte was detected in the associated blank.
- C** Congener has coeluters. When Cxxx, refer to congener number xxx for data
- J** Value is estimated
- U** Analyte was analyzed for, but not detected above the specified detection limit.

PCB Congeners
Certificate of Analysis
Sample Summary

Page 1 of 8

SDG Number: 2210315
Lab Sample ID: 20534002
Client Sample: 1668A Water
Client ID: 2210315-002J R6 South-20221006
Batch ID: 51323
Run Date: 11/11/2022 22:21
Data File: d08nov22a_7-10
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001
Date Collected: 10/06/2022 09:05
Date Received: 10/07/2022 09:47

Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 952.9 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
2051-60-7	1-MoCB	U	ND	pg/L	6.23	105
2051-61-8	2-MoCB	U	ND	pg/L	7.85	105
2051-62-9	3-MoCB	U	ND	pg/L	5.33	105
13029-08-8	4-DiCB	U	ND	pg/L	12.7	105
16605-91-7	5-DiCB	U	ND	pg/L	11.7	105
25569-80-6	6-DiCB	U	ND	pg/L	8.73	105
33284-50-3	7-DiCB	U	ND	pg/L	8.69	105
34883-43-7	8-DiCB	U	ND	pg/L	7.60	105
34883-39-1	9-DiCB	U	ND	pg/L	11.2	105
33146-45-1	10-DiCB	U	ND	pg/L	6.40	105
2050-67-1	11-DiCB	J	86.7	pg/L	10.1	105
2974-92-7	12-DiCB	CU	ND	pg/L	9.42	210
2974-90-5	13-DiCB	C12				
34883-41-5	14-DiCB	U	ND	pg/L	9.49	105
2050-68-2	15-DiCB	U	ND	pg/L	15.0	105
38444-78-9	16-TrCB	U	ND	pg/L	4.32	105
37680-66-3	17-TrCB	U	ND	pg/L	5.18	105
37680-65-2	18-TrCB	CU	ND	pg/L	7.68	210
38444-73-4	19-TrCB	U	ND	pg/L	6.02	105
38444-84-7	20-TrCB	BCJ	16.7	pg/L	3.88	210
55702-46-0	21-TrCB	CU	ND	pg/L	6.86	210
38444-85-8	22-TrCB	U	ND	pg/L	6.59	105
55720-44-0	23-TrCB	U	ND	pg/L	3.59	105
55702-45-9	24-TrCB	U	ND	pg/L	4.76	105
55712-37-3	25-TrCB	U	ND	pg/L	3.21	105
38444-81-4	26-TrCB	CU	ND	pg/L	3.71	210
38444-76-7	27-TrCB	U	ND	pg/L	4.03	105
7012-37-5	28-TrCB	C20				
15862-07-4	29-TrCB	C26				
35693-92-6	30-TrCB	C18				
16606-02-3	31-TrCB	U	ND	pg/L	11.3	105
38444-77-8	32-TrCB	U	ND	pg/L	3.76	105

Comments:

- B** The target analyte was detected in the associated blank.
C Congener has coeluters. When Cxxx, refer to congener number xxx for data
J Value is estimated
U Analyte was analyzed for, but not detected above the specified detection limit.

PCB Congeners
Certificate of Analysis
Sample Summary

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SDG Number: 2210315
Lab Sample ID: 20534002
Client Sample: 1668A Water
Client ID: 2210315-002J R6 South-20221006
Batch ID: 51323
Run Date: 11/11/2022 22:21
Data File: d08nov22a_7-10
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001
Date Collected: 10/06/2022 09:05
Date Received: 10/07/2022 09:47

Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 952.9 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
38444-86-9	33-TrCB	C21				
37680-68-5	34-TrCB	U	ND	pg/L	4.18	105
37680-69-6	35-TrCB	U	ND	pg/L	6.57	105
38444-87-0	36-TrCB	U	ND	pg/L	5.71	105
38444-90-5	37-TrCB	J	7.98	pg/L	5.81	105
53555-66-1	38-TrCB	U	ND	pg/L	6.44	105
38444-88-1	39-TrCB	U	ND	pg/L	6.55	105
38444-93-8	40-TeCB	CU	ND	pg/L	5.79	210
52663-59-9	41-TeCB	U	ND	pg/L	9.78	105
36559-22-5	42-TeCB	U	ND	pg/L	6.28	105
70362-46-8	43-TeCB	U	ND	pg/L	7.77	105
41464-39-5	44-TeCB	CJ	18.1	pg/L	6.07	315
70362-45-7	45-TeCB	CJ	5.08	pg/L	3.25	210
41464-47-5	46-TeCB	U	ND	pg/L	3.17	105
2437-79-8	47-TeCB	C44				
70362-47-9	48-TeCB	U	ND	pg/L	6.67	105
41464-40-8	49-TeCB	CU	ND	pg/L	7.70	210
62796-65-0	50-TeCB	CU	ND	pg/L	3.30	210
68194-04-7	51-TeCB	C45				
35693-99-3	52-TeCB	BJ	25.7	pg/L	7.26	210
41464-41-9	53-TeCB	C50				
15968-05-5	54-TeCB	U	ND	pg/L	2.14	105
74338-24-2	55-TeCB	U	ND	pg/L	3.69	105
41464-43-1	56-TeCB	J	8.37	pg/L	3.92	105
70424-67-8	57-TeCB	U	ND	pg/L	3.57	105
41464-49-7	58-TeCB	U	ND	pg/L	3.65	105
74472-33-6	59-TeCB	CU	ND	pg/L	5.00	315
33025-41-1	60-TeCB	U	ND	pg/L	4.01	105
33284-53-6	61-TeCB	CU	ND	pg/L	33.6	420
54230-22-7	62-TeCB	C59				
74472-34-7	63-TeCB	U	ND	pg/L	3.63	105
52663-58-8	64-TeCB	J	8.08	pg/L	4.85	105

Comments:

- B** The target analyte was detected in the associated blank.
C Congener has coeluters. When Cxxx, refer to congener number xxx for data
J Value is estimated
U Analyte was analyzed for, but not detected above the specified detection limit.

PCB Congeners
Certificate of Analysis
Sample Summary

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SDG Number: 2210315
Lab Sample ID: 20534002
Client Sample: 1668A Water
Client ID: 2210315-002J R6 South-20221006
Batch ID: 51323
Run Date: 11/11/2022 22:21
Data File: d08nov22a_7-10
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001
Date Collected: 10/06/2022 09:05
Date Received: 10/07/2022 09:47

Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 952.9 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
33284-54-7	65-TeCB	C44				
32598-10-0	66-TeCB	J	12.8	pg/L	3.88	105
73575-53-8	67-TeCB	U	ND	pg/L	3.04	105
73575-52-7	68-TeCB	U	ND	pg/L	3.32	105
60233-24-1	69-TeCB	C49				
32598-11-1	70-TeCB	C61				
41464-46-4	71-TeCB	C40				
41464-42-0	72-TeCB	U	ND	pg/L	3.59	105
74338-23-1	73-TeCB	U	ND	pg/L	4.62	105
32690-93-0	74-TeCB	C61				
32598-12-2	75-TeCB	C59				
70362-48-0	76-TeCB	C61				
32598-13-3	77-TeCB	J	4.11	pg/L	3.80	105
70362-49-1	78-TeCB	U	ND	pg/L	4.49	105
41464-48-6	79-TeCB	U	ND	pg/L	3.46	105
33284-52-5	80-TeCB	U	ND	pg/L	3.27	105
70362-50-4	81-TeCB	U	ND	pg/L	3.51	105
52663-62-4	82-PeCB	U	ND	pg/L	7.64	105
60145-20-2	83-PeCB	U	ND	pg/L	8.73	105
52663-60-2	84-PeCB	J	9.00	pg/L	6.46	105
65510-45-4	85-PeCB	CJ	8.56	pg/L	5.39	315
55312-69-1	86-PeCB	BCJ	35.2	pg/L	5.48	630
38380-02-8	87-PeCB	C86				
55215-17-3	88-PeCB	CU	ND	pg/L	6.53	210
73575-57-2	89-PeCB	U	ND	pg/L	7.49	105
68194-07-0	90-PeCB	CJ	48.3	pg/L	5.56	315
68194-05-8	91-PeCB	C88				
52663-61-3	92-PeCB	J	8.54	pg/L	7.20	105
73575-56-1	93-PeCB	CU	ND	pg/L	5.98	210
73575-55-0	94-PeCB	U	ND	pg/L	6.09	105
38379-99-6	95-PeCB	J	37.5	pg/L	6.76	105
73575-54-9	96-PeCB	U	ND	pg/L	2.92	105

Comments:

- B** The target analyte was detected in the associated blank.
C Congener has coeluters. When Cxxx, refer to congener number xxx for data
J Value is estimated
U Analyte was analyzed for, but not detected above the specified detection limit.

PCB Congeners
Certificate of Analysis
Sample Summary

Page 4 of 8

SDG Number: 2210315
Lab Sample ID: 20534002
Client Sample: 1668A Water
Client ID: 2210315-002J R6 South-20221006
Batch ID: 51323
Run Date: 11/11/2022 22:21
Data File: d08nov22a_7-10
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001
Date Collected: 10/06/2022 09:05
Date Received: 10/07/2022 09:47

Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 952.9 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
41464-51-1	97-PeCB	C86				
60233-25-2	98-PeCB	CU	ND	pg/L	5.83	210
38380-01-7	99-PeCB	J	14.9	pg/L	5.77	105
39485-83-1	100-PeCB	C93				
37680-73-2	101-PeCB	C90				
68194-06-9	102-PeCB	C98				
60145-21-3	103-PeCB	U	ND	pg/L	6.15	105
56558-16-8	104-PeCB	U	ND	pg/L	2.27	105
32598-14-4	105-PeCB	J	16.5	pg/L	4.47	105
70424-69-0	106-PeCB	U	ND	pg/L	4.83	105
70424-68-9	107-PeCB	U	ND	pg/L	4.30	105
70362-41-3	108-PeCB	CU	ND	pg/L	4.91	210
74472-35-8	109-PeCB	C86				
38380-03-9	110-PeCB	CJ	59.8	pg/L	5.02	210
39635-32-0	111-PeCB	U	ND	pg/L	4.76	105
74472-36-9	112-PeCB	U	ND	pg/L	4.32	105
68194-10-5	113-PeCB	C90				
74472-37-0	114-PeCB	U	ND	pg/L	4.37	105
74472-38-1	115-PeCB	C110				
18259-05-7	116-PeCB	C85				
68194-11-6	117-PeCB	C85				
31508-00-6	118-PeCB	BJ	43.2	pg/L	4.64	105
56558-17-9	119-PeCB	C86				
68194-12-7	120-PeCB	U	ND	pg/L	5.06	105
56558-18-0	121-PeCB	U	ND	pg/L	4.53	105
76842-07-4	122-PeCB	U	ND	pg/L	6.28	105
65510-44-3	123-PeCB	U	ND	pg/L	4.03	105
70424-70-3	124-PeCB	C108				
74472-39-2	125-PeCB	C86				
57465-28-8	126-PeCB	U	ND	pg/L	5.10	105
39635-33-1	127-PeCB	U	ND	pg/L	5.23	105
38380-07-3	128-HxCB	CJ	14.2	pg/L	7.35	210

Comments:

- B** The target analyte was detected in the associated blank.
C Congener has coeluters. When Cxxx, refer to congener number xxx for data
J Value is estimated
U Analyte was analyzed for, but not detected above the specified detection limit.

PCB Congeners
Certificate of Analysis
Sample Summary

Page 5 of 8

SDG Number: 2210315
Lab Sample ID: 20534002
Client Sample: 1668A Water
Client ID: 2210315-002J R6 South-20221006
Batch ID: 51323
Run Date: 11/11/2022 22:21
Data File: d08nov22a_7-10
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001
Date Collected: 10/06/2022 09:05
Date Received: 10/07/2022 09:47

Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 952.9 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
55215-18-4	129-HxCB	CJ	116	pg/L	8.00	315
52663-66-8	130-HxCB	U	ND	pg/L	9.23	105
61798-70-7	131-HxCB	U	ND	pg/L	9.15	105
38380-05-1	132-HxCB	J	30.4	pg/L	8.56	105
35694-04-3	133-HxCB	U	ND	pg/L	8.77	105
52704-70-8	134-HxCB	U	ND	pg/L	9.63	105
52744-13-5	135-HxCB	CJ	33.3	pg/L	4.64	210
38411-22-2	136-HxCB	J	10.7	pg/L	3.36	105
35694-06-5	137-HxCB	U	ND	pg/L	8.92	105
35065-28-2	138-HxCB	C129				
56030-56-9	139-HxCB	CU	ND	pg/L	7.49	210
59291-64-4	140-HxCB	C139				
52712-04-6	141-HxCB	J	20.9	pg/L	7.56	105
41411-61-4	142-HxCB	U	ND	pg/L	9.09	105
68194-15-0	143-HxCB	U	ND	pg/L	8.52	105
68194-14-9	144-HxCB	J	6.00	pg/L	4.55	105
74472-40-5	145-HxCB	U	ND	pg/L	3.19	105
51908-16-8	146-HxCB	U	ND	pg/L	13.1	105
68194-13-8	147-HxCB	CJ	68.6	pg/L	7.24	210
74472-41-6	148-HxCB	U	ND	pg/L	4.37	105
38380-04-0	149-HxCB	C147				
68194-08-1	150-HxCB	U	ND	pg/L	2.98	105
52663-63-5	151-HxCB	C135				
68194-09-2	152-HxCB	U	ND	pg/L	3.30	105
35065-27-1	153-HxCB	CJ	85.4	pg/L	6.67	210
60145-22-4	154-HxCB	U	ND	pg/L	3.61	105
33979-03-2	155-HxCB	U	ND	pg/L	2.67	105
38380-08-4	156-HxCB	CU	ND	pg/L	10.9	210
69782-90-7	157-HxCB	C156				
74472-42-7	158-HxCB	U	ND	pg/L	10.8	105
39635-35-3	159-HxCB	U	ND	pg/L	4.16	105
41411-62-5	160-HxCB	U	ND	pg/L	6.78	105

Comments:

- B** The target analyte was detected in the associated blank.
C Congener has coeluters. When Cxxx, refer to congener number xxx for data
J Value is estimated
U Analyte was analyzed for, but not detected above the specified detection limit.

PCB Congeners
Certificate of Analysis
Sample Summary

Page 6 of 8

SDG Number: 2210315
Lab Sample ID: 20534002
Client Sample: 1668A Water
Client ID: 2210315-002J R6 South-20221006
Batch ID: 51323
Run Date: 11/11/2022 22:21
Data File: d08nov22a_7-10
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001
Date Collected: 10/06/2022 09:05
Date Received: 10/07/2022 09:47

Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 952.9 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
74472-43-8	161-HxCB	U	ND	pg/L	6.11	105
39635-34-2	162-HxCB	U	ND	pg/L	4.13	105
74472-44-9	163-HxCB	C129				
74472-45-0	164-HxCB	U	ND	pg/L	6.00	105
74472-46-1	165-HxCB	U	ND	pg/L	6.78	105
41411-63-6	166-HxCB	C128				
52663-72-6	167-HxCB	J	4.22	pg/L	3.65	105
59291-65-5	168-HxCB	C153				
32774-16-6	169-HxCB	U	ND	pg/L	4.37	105
35065-30-6	170-HpCB	J	32.8	pg/L	3.86	105
52663-71-5	171-HpCB	CU	ND	pg/L	10.5	210
52663-74-8	172-HpCB	J	6.23	pg/L	3.84	105
68194-16-1	173-HpCB	C171				
38411-25-5	174-HpCB	J	27.2	pg/L	3.38	105
40186-70-7	175-HpCB	U	ND	pg/L	3.40	105
52663-65-7	176-HpCB	U	ND	pg/L	3.74	105
52663-70-4	177-HpCB	U	ND	pg/L	18.2	105
52663-67-9	178-HpCB	U	ND	pg/L	8.50	105
52663-64-6	179-HpCB	J	12.2	pg/L	2.52	105
35065-29-3	180-HpCB	CJ	63.2	pg/L	3.09	210
74472-47-2	181-HpCB	U	ND	pg/L	3.63	105
60145-23-5	182-HpCB	U	ND	pg/L	3.27	105
52663-69-1	183-HpCB	CJ	19.3	pg/L	3.44	210
74472-48-3	184-HpCB	U	ND	pg/L	2.48	105
52712-05-7	185-HpCB	C183				
74472-49-4	186-HpCB	U	ND	pg/L	2.64	105
52663-68-0	187-HpCB	J	33.5	pg/L	3.25	105
74487-85-7	188-HpCB	U	ND	pg/L	2.35	105
39635-31-9	189-HpCB	J	3.21	pg/L	3.04	105
41411-64-7	190-HpCB	J	6.07	pg/L	3.00	105
74472-50-7	191-HpCB	U	ND	pg/L	2.79	105
74472-51-8	192-HpCB	U	ND	pg/L	3.13	105

Comments:

- B** The target analyte was detected in the associated blank.
C Congener has coeluters. When Cxxx, refer to congener number xxx for data
J Value is estimated
U Analyte was analyzed for, but not detected above the specified detection limit.

PCB Congeners
Certificate of Analysis
Sample Summary

Page 7 of 8

SDG Number: 2210315
Lab Sample ID: 20534002
Client Sample: 1668A Water
Client ID: 2210315-002J R6 South-20221006
Batch ID: 51323
Run Date: 11/11/2022 22:21
Data File: d08nov22a_7-10
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001
Date Collected: 10/06/2022 09:05
Date Received: 10/07/2022 09:47

Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 952.9 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
69782-91-8	193-HpCB	C180				
35694-08-7	194-OcCB	J	16.7	pg/L	3.15	105
52663-78-2	195-OcCB	U	ND	pg/L	6.67	105
42740-50-1	196-OcCB	U	ND	pg/L	8.71	105
33091-17-7	197-OcCB	CU	ND	pg/L	3.97	210
68194-17-2	198-OcCB	CU	ND	pg/L	16.3	210
52663-75-9	199-OcCB	C198				
52663-73-7	200-OcCB	C197				
40186-71-8	201-OcCB	U	ND	pg/L	2.92	105
2136-99-4	202-OcCB	U	ND	pg/L	3.61	105
52663-76-0	203-OcCB	J	9.93	pg/L	4.20	105
74472-52-9	204-OcCB	U	ND	pg/L	3.00	105
74472-53-0	205-OcCB	U	ND	pg/L	2.22	105
40186-72-9	206-NoCB	J	8.02	pg/L	3.82	105
52663-79-3	207-NoCB	U	ND	pg/L	2.85	105
52663-77-1	208-NoCB	U	ND	pg/L	2.98	105
2051-24-3	209-DeCB	U	ND	pg/L	5.18	105
1336-36-3	Total PCB Congeners	J	1100	pg/L		105

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1-MoCB		886	2100	pg/L	42.2	(15%-150%)
13C-3-MoCB		1020	2100	pg/L	48.7	(15%-150%)
13C-4-DiCB		1130	2100	pg/L	53.8	(25%-150%)
13C-15-DiCB		1550	2100	pg/L	73.8	(25%-150%)
13C-19-TrCB		1330	2100	pg/L	63.5	(25%-150%)
13C-37-TrCB		1380	2100	pg/L	65.7	(25%-150%)
13C-54-TeCB		1390	2100	pg/L	66.4	(25%-150%)
13C-77-TeCB		1680	2100	pg/L	79.8	(25%-150%)
13C-81-TeCB		1770	2100	pg/L	84.2	(25%-150%)
13C-104-PeCB		1260	2100	pg/L	60.2	(25%-150%)
13C-105-PeCB		1460	2100	pg/L	69.7	(25%-150%)
13C-114-PeCB		1400	2100	pg/L	66.6	(25%-150%)
13C-118-PeCB		1310	2100	pg/L	62.5	(25%-150%)
13C-123-PeCB		1510	2100	pg/L	71.8	(25%-150%)
13C-126-PeCB		1520	2100	pg/L	72.5	(25%-150%)
13C-155-HxCB		1270	2100	pg/L	60.3	(25%-150%)
13C-156-HxCB	C	2670	4200	pg/L	63.5	(25%-150%)
13C-157-HxCB	C156L					
13C-167-HxCB		1310	2100	pg/L	62.3	(25%-150%)
13C-169-HxCB		1300	2100	pg/L	62.1	(25%-150%)
13C-188-HpCB		1280	2100	pg/L	61.1	(25%-150%)
13C-189-HpCB		1330	2100	pg/L	63.3	(25%-150%)

**PCB Congeners
Certificate of Analysis
Sample Summary**

Page 8 of 8

SDG Number: 2210315	Client: HALL001	Project: HALL00113
Lab Sample ID: 20534002	Date Collected: 10/06/2022 09:05	Matrix: WATER
Client Sample: 1668A Water	Date Received: 10/07/2022 09:47	
Client ID: 2210315-002J R6 South-20221006		Prep Basis: As Received
Batch ID: 51323	Method: EPA Method 1668A	
Run Date: 11/11/2022 22:21	Analyst: MLL	Instrument: HRP875
Data File: d08nov22a_7-10		Dilution: 1
Prep Batch: 51321	Prep Method: SW846 3520C	Prep SOP Ref: CF-OA-E-001
Prep Date: 02-NOV-22	Prep Aliquot: 952.9 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
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Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-202-OcCB		1260	2100	pg/L	60.1	(25%-150%)
13C-205-OcCB		1590	2100	pg/L	75.6	(25%-150%)
13C-206-NoCB		1610	2100	pg/L	76.8	(25%-150%)
13C-208-NoCB		1420	2100	pg/L	67.8	(25%-150%)
13C-209-DeCB		1590	2100	pg/L	75.8	(25%-150%)
13C-28-TrCB		1570	2100	pg/L	75.0	(30%-135%)
13C-111-PeCB		1650	2100	pg/L	78.5	(30%-135%)
13C-178-HpCB		1800	2100	pg/L	85.9	(30%-135%)

Comments:

- B** The target analyte was detected in the associated blank.
- C** Congener has coeluters. When Cxxx, refer to congener number xxx for data
- J** Value is estimated
- U** Analyte was analyzed for, but not detected above the specified detection limit.

Quality Control Summary

PCB Congeners **Surrogate Recovery Report**

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SDG Number: 2210315

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
12033077	LCS for batch 51321	13C-1-MoCB	C C156L	37.9	(15%-140%)
		13C-3-MoCB		43.8	(15%-140%)
		13C-4-DiCB		43.3	(30%-140%)
		13C-15-DiCB		65.1	(30%-140%)
		13C-19-TrCB		53.6	(30%-140%)
		13C-37-TrCB		61.0	(30%-140%)
		13C-54-TeCB		51.6	(30%-140%)
		13C-77-TeCB		64.6	(30%-140%)
		13C-81-TeCB		66.8	(30%-140%)
		13C-104-PeCB		60.0	(30%-140%)
		13C-105-PeCB		57.4	(30%-140%)
		13C-114-PeCB		56.9	(30%-140%)
		13C-118-PeCB		50.5	(30%-140%)
		13C-123-PeCB		58.0	(30%-140%)
		13C-126-PeCB		65.6	(30%-140%)
		13C-155-HxCB		57.6	(30%-140%)
		13C-156-HxCB		65.3	(30%-140%)
		13C-157-HxCB			
		13C-167-HxCB		65.4	(30%-140%)
		13C-169-HxCB		67.8	(30%-140%)
		13C-188-HpCB		56.5	(30%-140%)
		13C-189-HpCB		58.4	(30%-140%)
		13C-202-OcCB		61.1	(30%-140%)
		13C-205-OcCB		70.3	(30%-140%)
		13C-206-NoCB		69.1	(30%-140%)
		13C-208-NoCB		57.7	(30%-140%)
		13C-209-DeCB		68.4	(30%-140%)
		13C-28-TrCB		61.0	(40%-125%)
		13C-111-PeCB		64.1	(40%-125%)
		13C-178-HpCB		73.2	(40%-125%)
12033078	LCSD for batch 51321	13C-1-MoCB	C C156L	27.2	(15%-140%)
		13C-3-MoCB		31.8	(15%-140%)
		13C-4-DiCB		32.8	(30%-140%)
		13C-15-DiCB		44.8	(30%-140%)
		13C-19-TrCB		41.9	(30%-140%)
		13C-37-TrCB		37.6	(30%-140%)
		13C-54-TeCB		37.5	(30%-140%)
		13C-77-TeCB		41.3	(30%-140%)
		13C-81-TeCB		43.7	(30%-140%)
		13C-104-PeCB		44.2	(30%-140%)
		13C-105-PeCB		43.2	(30%-140%)
		13C-114-PeCB		42.1	(30%-140%)
		13C-118-PeCB		38.2	(30%-140%)
		13C-123-PeCB		44.0	(30%-140%)
		13C-126-PeCB		42.9	(30%-140%)
		13C-155-HxCB		38.2	(30%-140%)
		13C-156-HxCB		41.2	(30%-140%)
		13C-157-HxCB			
		13C-167-HxCB		41.8	(30%-140%)
		13C-169-HxCB		41.8	(30%-140%)
		13C-188-HpCB		39.7	(30%-140%)
		13C-189-HpCB		40.8	(30%-140%)

PCB Congeners
Surrogate Recovery Report

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SDG Number: 2210315

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
12033078	LCSD for batch 51321	13C-202-OcCB		39.0	(30%-140%)
		13C-205-OcCB		47.6	(30%-140%)
		13C-206-NoCB		46.5	(30%-140%)
		13C-208-NoCB		40.6	(30%-140%)
		13C-209-DeCB		46.0	(30%-140%)
		13C-28-TrCB		54.9	(40%-125%)
		13C-111-PeCB		61.1	(40%-125%)
		13C-178-HpCB		63.3	(40%-125%)
12033076	MB for batch 51321	13C-1-MoCB		33.3	(15%-150%)
		13C-3-MoCB		38.0	(15%-150%)
		13C-4-DiCB		38.1	(25%-150%)
		13C-15-DiCB		50.4	(25%-150%)
		13C-19-TrCB		45.8	(25%-150%)
		13C-37-TrCB		48.2	(25%-150%)
		13C-54-TeCB		43.6	(25%-150%)
		13C-77-TeCB		56.2	(25%-150%)
		13C-81-TeCB		60.0	(25%-150%)
		13C-104-PeCB		46.6	(25%-150%)
		13C-105-PeCB		48.6	(25%-150%)
		13C-114-PeCB		48.2	(25%-150%)
		13C-118-PeCB		44.1	(25%-150%)
		13C-123-PeCB		50.5	(25%-150%)
		13C-126-PeCB		50.6	(25%-150%)
		13C-155-HxCB		49.8	(25%-150%)
		13C-156-HxCB		56.2	(25%-150%)
		13C-157-HxCB			
		13C-167-HxCB		55.7	(25%-150%)
		13C-169-HxCB		57.1	(25%-150%)
		13C-188-HpCB		49.5	(25%-150%)
		13C-189-HpCB		51.5	(25%-150%)
		13C-202-OcCB		51.8	(25%-150%)
		13C-205-OcCB		58.6	(25%-150%)
		13C-206-NoCB		57.5	(25%-150%)
		13C-208-NoCB		51.4	(25%-150%)
		13C-209-DeCB		57.7	(25%-150%)
		13C-28-TrCB		51.9	(30%-135%)
		13C-111-PeCB		55.2	(30%-135%)
		13C-178-HpCB		62.0	(30%-135%)
20534001	2210315-001J R6 North-20221005	13C-1-MoCB		39.3	(15%-150%)
		13C-3-MoCB		45.7	(15%-150%)
		13C-4-DiCB		48.0	(25%-150%)
		13C-15-DiCB		72.2	(25%-150%)
		13C-19-TrCB		61.0	(25%-150%)
		13C-37-TrCB		63.6	(25%-150%)
		13C-54-TeCB		62.6	(25%-150%)
		13C-77-TeCB		80.8	(25%-150%)
		13C-81-TeCB		83.2	(25%-150%)
		13C-104-PeCB		57.7	(25%-150%)
		13C-105-PeCB		64.7	(25%-150%)
		13C-114-PeCB		64.4	(25%-150%)
		13C-118-PeCB		60.1	(25%-150%)
			C C156L		

PCB Congeners Surrogate Recovery Report

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SDG Number: 2210315

Matrix Type: LIQUID

Sample ID	Client ID	Surrogate	QUAL	Recovery (%)	Acceptance Limits
20534001	2210315-001J R6 North-20221005	13C-123-PeCB	C C156L	69.5	(25%-150%)
		13C-126-PeCB		66.9	(25%-150%)
		13C-155-HxCB		64.7	(25%-150%)
		13C-156-HxCB		65.5	(25%-150%)
		13C-157-HxCB			
		13C-167-HxCB		64.6	(25%-150%)
		13C-169-HxCB		64.7	(25%-150%)
		13C-188-HpCB		65.2	(25%-150%)
		13C-189-HpCB		64.9	(25%-150%)
		13C-202-OcCB		64.0	(25%-150%)
		13C-205-OcCB		78.1	(25%-150%)
		13C-206-NoCB		76.0	(25%-150%)
		13C-208-NoCB		73.1	(25%-150%)
		13C-209-DeCB		72.4	(25%-150%)
		13C-28-TrCB		70.7	(30%-135%)
		13C-111-PeCB		78.5	(30%-135%)
		13C-178-HpCB		91.6	(30%-135%)
20534002	2210315-002J R6 South-20221006	13C-1-MoCB	C C156L	42.2	(15%-150%)
		13C-3-MoCB		48.7	(15%-150%)
		13C-4-DiCB		53.8	(25%-150%)
		13C-15-DiCB		73.8	(25%-150%)
		13C-19-TrCB		63.5	(25%-150%)
		13C-37-TrCB		65.7	(25%-150%)
		13C-54-TeCB		66.4	(25%-150%)
		13C-77-TeCB		79.8	(25%-150%)
		13C-81-TeCB		84.2	(25%-150%)
		13C-104-PeCB		60.2	(25%-150%)
		13C-105-PeCB		69.7	(25%-150%)
		13C-114-PeCB		66.6	(25%-150%)
		13C-118-PeCB		62.5	(25%-150%)
		13C-123-PeCB		71.8	(25%-150%)
		13C-126-PeCB		72.5	(25%-150%)
		13C-155-HxCB		60.3	(25%-150%)
		13C-156-HxCB		63.5	(25%-150%)
		13C-157-HxCB			
		13C-167-HxCB		62.3	(25%-150%)
		13C-169-HxCB		62.1	(25%-150%)
		13C-188-HpCB		61.1	(25%-150%)
		13C-189-HpCB		63.3	(25%-150%)
		13C-202-OcCB		60.1	(25%-150%)
		13C-205-OcCB		75.6	(25%-150%)
		13C-206-NoCB		76.8	(25%-150%)
		13C-208-NoCB		67.8	(25%-150%)
		13C-209-DeCB		75.8	(25%-150%)
		13C-28-TrCB		75.0	(30%-135%)
		13C-111-PeCB		78.5	(30%-135%)
		13C-178-HpCB		85.9	(30%-135%)

* Recovery outside Acceptance Limits

Column to be used to flag recovery values

D Sample Diluted

PCB Congeners
Quality Control Summary
Spike Recovery Report

Page 1 of 2

SDG Number: 2210315
Client ID: LCS for batch 51321
Lab Sample ID: 12033077
Instrument: HRP875
Analyst: MLL

Sample Type: Laboratory Control Sample

Matrix: WATER

Analysis Date: 11/10/2022 12:14

Dilution: 1

Prep Batch ID: 51321

Batch ID: 51323

CAS No.	Parmname	Amount Added pg/L	Spike Conc. pg/L	Recovery %	Acceptance Limits
2051-60-7	LCS 1-MoCB	500	490	98.1	50-150
2051-62-9	LCS 3-MoCB	500	498	99.6	50-150
13029-08-8	LCS 4-DiCB	500	462	92.3	50-150
2050-68-2	LCS 15-DiCB	500	513	103	50-150
38444-73-4	LCS 19-TrCB	500	513	103	50-150
38444-90-5	LCS 37-TrCB	500	483	96.6	50-150
15968-05-5	LCS 54-TeCB	1000	1020	102	50-150
32598-13-3	LCS 77-TeCB	1000	977	97.7	50-150
70362-50-4	LCS 81-TeCB	1000	826	82.6	50-150
56558-16-8	LCS 104-PeCB	1000	1010	101	50-150
32598-14-4	LCS 105-PeCB	1000	924	92.4	50-150
74472-37-0	LCS 114-PeCB	1000	1040	104	50-150
31508-00-6	LCS 118-PeCB	1000	1110	111	50-150
65510-44-3	LCS 123-PeCB	1000	926	92.6	50-150
57465-28-8	LCS 126-PeCB	1000	993	99.3	50-150
33979-03-2	LCS 155-HxCB	1000	1000	100	50-150
38380-08-4	LCS 156-HxCB	2000	1980	98.9	50-150
69782-90-7	LCS 157-HxCB		C156		
52663-72-6	LCS 167-HxCB	1000	1000	100	50-150
32774-16-6	LCS 169-HxCB	1000	967	96.7	50-150
74487-85-7	LCS 188-HpCB	1000	997	99.7	50-150
39635-31-9	LCS 189-HpCB	1000	1010	101	50-150
2136-99-4	LCS 202-OcCB	1500	1620	108	50-150
74472-53-0	LCS 205-OcCB	1500	1450	96.4	50-150
40186-72-9	LCS 206-NoCB	1500	1490	99.3	50-150
52663-77-1	LCS 208-NoCB	1500	1590	106	50-150
2051-24-3	LCS 209-DeCB	1500	1430	95.4	50-150

PCB Congeners
Quality Control Summary
Spike Recovery Report

Page 2 of 2

SDG Number: 2210315
Client ID: LCSD for batch 51321
Lab Sample ID: 12033078
Instrument: HRP875
Analyst: MLL

Sample Type: Laboratory Control Sample Duplicate
Matrix: WATER
Analysis Date: 11/10/2022 13:23
Dilution: 1
Prep Batch ID: 51321
Batch ID: 51323

CAS No.	Parmname	Amount Added pg/L	Spike Conc. pg/L	Recovery %	Acceptance Limits	RPD %	Acceptance Limits
2051-60-7	LCSD 1-MoCB	500	443	88.5	50-150	10.2	0-20
2051-62-9	LCSD 3-MoCB	500	480	96	50-150	3.66	0-20
13029-08-8	LCSD 4-DiCB	500	425	85	50-150	8.22	0-20
2050-68-2	LCSD 15-DiCB	500	471	94.3	50-150	8.51	0-20
38444-73-4	LCSD 19-TrCB	500	473	94.5	50-150	8.26	0-20
38444-90-5	LCSD 37-TrCB	500	456	91.2	50-150	5.67	0-20
15968-05-5	LCSD 54-TeCB	1000	988	98.8	50-150	3.41	0-20
32598-13-3	LCSD 77-TeCB	1000	901	90.1	50-150	8.10	0-20
70362-50-4	LCSD 81-TeCB	1000	769	76.9	50-150	7.23	0-20
56558-16-8	LCSD 104-PeCB	1000	953	95.3	50-150	5.83	0-20
32598-14-4	LCSD 105-PeCB	1000	847	84.7	50-150	8.71	0-20
74472-37-0	LCSD 114-PeCB	1000	985	98.5	50-150	5.75	0-20
31508-00-6	LCSD 118-PeCB	1000	1010	101	50-150	9.72	0-20
65510-44-3	LCSD 123-PeCB	1000	818	81.8	50-150	12.3	0-20
57465-28-8	LCSD 126-PeCB	1000	947	94.7	50-150	4.74	0-20
33979-03-2	LCSD 155-HxCB	1000	941	94.1	50-150	6.09	0-20
38380-08-4	LCSD 156-HxCB	2000	1830	91.4	50-150	7.91	0-20
69782-90-7	LCSD 157-HxCB		C156				
52663-72-6	LCSD 167-HxCB	1000	933	93.3	50-150	7.24	0-20
32774-16-6	LCSD 169-HxCB	1000	907	90.7	50-150	6.37	0-20
74487-85-7	LCSD 188-HpCB	1000	909	90.9	50-150	9.26	0-20
39635-31-9	LCSD 189-HpCB	1000	895	89.5	50-150	12.1	0-20
2136-99-4	LCSD 202-OcCB	1500	1510	100	50-150	7.05	0-20
74472-53-0	LCSD 205-OcCB	1500	1340	89.4	50-150	7.52	0-20
40186-72-9	LCSD 206-NoCB	1500	1420	94.8	50-150	4.66	0-20
52663-77-1	LCSD 208-NoCB	1500	1530	102	50-150	4.20	0-20
2051-24-3	LCSD 209-DeCB	1500	1330	88.7	50-150	7.30	0-20

Method Blank Summary

Page 1 of 1

SDG Number: 2210315
Client ID: MB for batch 51321
Lab Sample ID: 12033076
Column:

Client: HALL001
Instrument ID: HRP875
Prep Date: 02-NOV-22

Matrix: WATER
Data File: d08nov22a_5-3
Analyzed: 11/10/22 14:33

This method blank applies to the following samples and quality control samples:

Client Sample ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
01 LCS for batch 51321	12033077	d08nov22a_5-1	11/10/22	1214
02 LCSD for batch 51321	12033078	d08nov22a_5-2	11/10/22	1323
03 2210315-001J R6 North-20221005	20534001	d08nov22a_7-9	11/11/22	2111
04 2210315-002J R6 South-20221006	20534002	d08nov22a_7-10	11/11/22	2221

PCB Congeners
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SDG Number: 2210315
Lab Sample ID: 12033076
Client Sample: QC for batch 51321
Client ID: MB for batch 51321
Batch ID: 51323
Run Date: 11/10/2022 14:33
Data File: d08nov22a_5-3
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001

Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 1000 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
2051-60-7	1-MoCB	U	ND	pg/L	4.24	100
2051-61-8	2-MoCB	U	ND	pg/L	4.84	100
2051-62-9	3-MoCB	U	ND	pg/L	3.80	100
13029-08-8	4-DiCB	U	ND	pg/L	11.4	100
16605-91-7	5-DiCB	U	ND	pg/L	9.04	100
25569-80-6	6-DiCB	U	ND	pg/L	7.52	100
33284-50-3	7-DiCB	U	ND	pg/L	7.66	100
34883-43-7	8-DiCB	U	ND	pg/L	6.54	100
34883-39-1	9-DiCB	U	ND	pg/L	8.86	100
33146-45-1	10-DiCB	U	ND	pg/L	6.40	100
2050-67-1	11-DiCB	U	ND	pg/L	58.1	100
2974-92-7	12-DiCB	CU	ND	pg/L	7.68	200
2974-90-5	13-DiCB	C12				
34883-41-5	14-DiCB	U	ND	pg/L	7.86	100
2050-68-2	15-DiCB	U	ND	pg/L	6.96	100
38444-78-9	16-TrCB	U	ND	pg/L	5.24	100
37680-66-3	17-TrCB	U	ND	pg/L	5.26	100
37680-65-2	18-TrCB	CU	ND	pg/L	4.46	200
38444-73-4	19-TrCB	U	ND	pg/L	5.52	100
38444-84-7	20-TrCB	CJ	5.80	pg/L	3.66	200
55702-46-0	21-TrCB	CU	ND	pg/L	3.52	200
38444-85-8	22-TrCB	U	ND	pg/L	3.82	100
55720-44-0	23-TrCB	U	ND	pg/L	3.82	100
55702-45-9	24-TrCB	U	ND	pg/L	4.22	100
55712-37-3	25-TrCB	U	ND	pg/L	3.36	100
38444-81-4	26-TrCB	CU	ND	pg/L	3.82	200
38444-76-7	27-TrCB	U	ND	pg/L	4.04	100
7012-37-5	28-TrCB	C20				
15862-07-4	29-TrCB	C26				
35693-92-6	30-TrCB	C18				
16606-02-3	31-TrCB	U	ND	pg/L	3.52	100
38444-77-8	32-TrCB	U	ND	pg/L	3.68	100

Comments:**C** Congener has coeluters. When Cxxx, refer to congener number xxx for data**J** Value is estimated**U** Analyte was analyzed for, but not detected above the specified detection limit.

PCB Congeners
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Sample Summary

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SDG Number: 2210315
Lab Sample ID: 12033076
Client Sample: QC for batch 51321
Client ID: MB for batch 51321
Batch ID: 51323
Run Date: 11/10/2022 14:33
Data File: d08nov22a_5-3
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001

Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 1000 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
38444-86-9	33-TrCB	C21				
37680-68-5	34-TrCB	U	ND	pg/L	4.14	100
37680-69-6	35-TrCB	U	ND	pg/L	5.24	100
38444-87-0	36-TrCB	U	ND	pg/L	4.62	100
38444-90-5	37-TrCB	U	ND	pg/L	4.66	100
53555-66-1	38-TrCB	U	ND	pg/L	5.26	100
38444-88-1	39-TrCB	U	ND	pg/L	5.12	100
38444-93-8	40-TeCB	CU	ND	pg/L	4.88	200
52663-59-9	41-TeCB	U	ND	pg/L	6.64	100
36559-22-5	42-TeCB	U	ND	pg/L	5.40	100
70362-46-8	43-TeCB	U	ND	pg/L	6.46	100
41464-39-5	44-TeCB	CU	ND	pg/L	6.04	300
70362-45-7	45-TeCB	CU	ND	pg/L	3.42	200
41464-47-5	46-TeCB	U	ND	pg/L	3.54	100
2437-79-8	47-TeCB	C44				
70362-47-9	48-TeCB	U	ND	pg/L	5.38	100
41464-40-8	49-TeCB	CU	ND	pg/L	4.44	200
62796-65-0	50-TeCB	CU	ND	pg/L	3.34	200
68194-04-7	51-TeCB	C45				
35693-99-3	52-TeCB	J	8.28	pg/L	5.84	200
41464-41-9	53-TeCB	C50				
15968-05-5	54-TeCB	U	ND	pg/L	2.26	100
74338-24-2	55-TeCB	U	ND	pg/L	4.76	100
41464-43-1	56-TeCB	U	ND	pg/L	4.80	100
70424-67-8	57-TeCB	U	ND	pg/L	4.56	100
41464-49-7	58-TeCB	U	ND	pg/L	4.72	100
74472-33-6	59-TeCB	CU	ND	pg/L	4.12	300
33025-41-1	60-TeCB	U	ND	pg/L	4.66	100
33284-53-6	61-TeCB	CJ	7.58	pg/L	4.50	400
54230-22-7	62-TeCB	C59				
74472-34-7	63-TeCB	U	ND	pg/L	4.44	100
52663-58-8	64-TeCB	U	ND	pg/L	3.86	100

Comments:**C** Congener has coeluters. When Cxxx, refer to congener number xxx for data**J** Value is estimated**U** Analyte was analyzed for, but not detected above the specified detection limit.

PCB Congeners
Certificate of Analysis
Sample Summary

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SDG Number: 2210315
Lab Sample ID: 12033076
Client Sample: QC for batch 51321
Client ID: MB for batch 51321
Batch ID: 51323
Run Date: 11/10/2022 14:33
Data File: d08nov22a_5-3
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001

Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 1000 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
33284-54-7	65-TeCB	C44				
32598-10-0	66-TeCB	U	ND	pg/L	4.66	100
73575-53-8	67-TeCB	U	ND	pg/L	3.66	100
73575-52-7	68-TeCB	U	ND	pg/L	4.02	100
60233-24-1	69-TeCB	C49				
32598-11-1	70-TeCB	C61				
41464-46-4	71-TeCB	C40				
41464-42-0	72-TeCB	U	ND	pg/L	4.34	100
74338-23-1	73-TeCB	U	ND	pg/L	3.84	100
32690-93-0	74-TeCB	C61				
32598-12-2	75-TeCB	C59				
70362-48-0	76-TeCB	C61				
32598-13-3	77-TeCB	U	ND	pg/L	4.76	100
70362-49-1	78-TeCB	U	ND	pg/L	5.30	100
41464-48-6	79-TeCB	U	ND	pg/L	4.20	100
33284-52-5	80-TeCB	U	ND	pg/L	4.04	100
70362-50-4	81-TeCB	U	ND	pg/L	4.04	100
52663-62-4	82-PeCB	U	ND	pg/L	6.86	100
60145-20-2	83-PeCB	U	ND	pg/L	7.94	100
52663-60-2	84-PeCB	U	ND	pg/L	5.86	100
65510-45-4	85-PeCB	CU	ND	pg/L	4.86	300
55312-69-1	86-PeCB	CJ	6.84	pg/L	4.90	600
38380-02-8	87-PeCB	C86				
55215-17-3	88-PeCB	CU	ND	pg/L	5.84	200
73575-57-2	89-PeCB	U	ND	pg/L	6.96	100
68194-07-0	90-PeCB	CU	ND	pg/L	7.70	300
68194-05-8	91-PeCB	C88				
52663-61-3	92-PeCB	U	ND	pg/L	6.42	100
73575-56-1	93-PeCB	CU	ND	pg/L	5.26	200
73575-55-0	94-PeCB	U	ND	pg/L	5.60	100
38379-99-6	95-PeCB	U	ND	pg/L	6.24	100
73575-54-9	96-PeCB	U	ND	pg/L	3.24	100

Comments:**C** Congener has coeluters. When Cxxx, refer to congener number xxx for data**J** Value is estimated**U** Analyte was analyzed for, but not detected above the specified detection limit.

PCB Congeners
Certificate of Analysis
Sample Summary

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SDG Number: 2210315
Lab Sample ID: 12033076
Client Sample: QC for batch 51321
Client ID: MB for batch 51321
Batch ID: 51323
Run Date: 11/10/2022 14:33
Data File: d08nov22a_5-3
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001

Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 1000 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
41464-51-1	97-PeCB	C86				
60233-25-2	98-PeCB	CU	ND	pg/L	5.32	200
38380-01-7	99-PeCB	U	ND	pg/L	5.34	100
39485-83-1	100-PeCB	C93				
37680-73-2	101-PeCB	C90				
68194-06-9	102-PeCB	C98				
60145-21-3	103-PeCB	U	ND	pg/L	5.42	100
56558-16-8	104-PeCB	U	ND	pg/L	2.42	100
32598-14-4	105-PeCB	U	ND	pg/L	4.16	100
70424-69-0	106-PeCB	U	ND	pg/L	4.48	100
70424-68-9	107-PeCB	U	ND	pg/L	3.60	100
70362-41-3	108-PeCB	CU	ND	pg/L	4.32	200
74472-35-8	109-PeCB	C86				
38380-03-9	110-PeCB	CU	ND	pg/L	6.76	200
39635-32-0	111-PeCB	U	ND	pg/L	4.16	100
74472-36-9	112-PeCB	U	ND	pg/L	3.94	100
68194-10-5	113-PeCB	C90				
74472-37-0	114-PeCB	U	ND	pg/L	3.92	100
74472-38-1	115-PeCB	C110				
18259-05-7	116-PeCB	C85				
68194-11-6	117-PeCB	C85				
31508-00-6	118-PeCB	J	5.50	pg/L	4.02	100
56558-17-9	119-PeCB	C86				
68194-12-7	120-PeCB	U	ND	pg/L	4.38	100
56558-18-0	121-PeCB	U	ND	pg/L	4.12	100
76842-07-4	122-PeCB	U	ND	pg/L	5.68	100
65510-44-3	123-PeCB	U	ND	pg/L	3.70	100
70424-70-3	124-PeCB	C108				
74472-39-2	125-PeCB	C86				
57465-28-8	126-PeCB	U	ND	pg/L	4.76	100
39635-33-1	127-PeCB	U	ND	pg/L	4.44	100
38380-07-3	128-HxCB	CU	ND	pg/L	5.02	200

Comments:**C** Congener has coeluters. When Cxxx, refer to congener number xxx for data**J** Value is estimated**U** Analyte was analyzed for, but not detected above the specified detection limit.

**PCB Congeners
Certificate of Analysis
Sample Summary**

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SDG Number: 2210315
Lab Sample ID: 12033076
Client Sample: QC for batch 51321
Client ID: MB for batch 51321
Batch ID: 51323
Run Date: 11/10/2022 14:33
Data File: d08nov22a_5-3
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001

Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 1000 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
55215-18-4	129-HxCB	CU	ND	pg/L	6.82	300
52663-66-8	130-HxCB	U	ND	pg/L	6.36	100
61798-70-7	131-HxCB	U	ND	pg/L	6.48	100
38380-05-1	132-HxCB	U	ND	pg/L	5.90	100
35694-04-3	133-HxCB	U	ND	pg/L	6.18	100
52704-70-8	134-HxCB	U	ND	pg/L	6.48	100
52744-13-5	135-HxCB	CU	ND	pg/L	4.58	200
38411-22-2	136-HxCB	U	ND	pg/L	3.48	100
35694-06-5	137-HxCB	U	ND	pg/L	5.58	100
35065-28-2	138-HxCB	C129				
56030-56-9	139-HxCB	CU	ND	pg/L	5.20	200
59291-64-4	140-HxCB	C139				
52712-04-6	141-HxCB	U	ND	pg/L	5.24	100
41411-61-4	142-HxCB	U	ND	pg/L	6.30	100
68194-15-0	143-HxCB	U	ND	pg/L	5.98	100
68194-14-9	144-HxCB	U	ND	pg/L	4.50	100
74472-40-5	145-HxCB	U	ND	pg/L	3.30	100
51908-16-8	146-HxCB	U	ND	pg/L	5.00	100
68194-13-8	147-HxCB	CU	ND	pg/L	5.08	200
74472-41-6	148-HxCB	U	ND	pg/L	4.38	100
38380-04-0	149-HxCB	C147				
68194-08-1	150-HxCB	U	ND	pg/L	3.16	100
52663-63-5	151-HxCB	C135				
68194-09-2	152-HxCB	U	ND	pg/L	3.38	100
35065-27-1	153-HxCB	CJ	4.94	pg/L	4.58	200
60145-22-4	154-HxCB	U	ND	pg/L	3.64	100
33979-03-2	155-HxCB	U	ND	pg/L	2.48	100
38380-08-4	156-HxCB	CU	ND	pg/L	4.10	200
69782-90-7	157-HxCB	C156				
74472-42-7	158-HxCB	U	ND	pg/L	3.68	100
39635-35-3	159-HxCB	U	ND	pg/L	3.54	100
41411-62-5	160-HxCB	U	ND	pg/L	4.46	100

Comments:**C** Congener has coeluters. When Cxxx, refer to congener number xxx for data**J** Value is estimated**U** Analyte was analyzed for, but not detected above the specified detection limit.

PCB Congeners
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Sample Summary

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SDG Number: 2210315
Lab Sample ID: 12033076
Client Sample: QC for batch 51321
Client ID: MB for batch 51321
Batch ID: 51323
Run Date: 11/10/2022 14:33
Data File: d08nov22a_5-3
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001

Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 1000 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
74472-43-8	161-HxCB	U	ND	pg/L	4.34	100
39635-34-2	162-HxCB	U	ND	pg/L	3.46	100
74472-44-9	163-HxCB	C129				
74472-45-0	164-HxCB	U	ND	pg/L	4.12	100
74472-46-1	165-HxCB	U	ND	pg/L	4.58	100
41411-63-6	166-HxCB	C128				
52663-72-6	167-HxCB	U	ND	pg/L	3.06	100
59291-65-5	168-HxCB	C153				
32774-16-6	169-HxCB	U	ND	pg/L	3.52	100
35065-30-6	170-HpCB	U	ND	pg/L	4.72	100
52663-71-5	171-HpCB	CU	ND	pg/L	4.98	200
52663-74-8	172-HpCB	U	ND	pg/L	4.90	100
68194-16-1	173-HpCB	C171				
38411-25-5	174-HpCB	U	ND	pg/L	4.64	100
40186-70-7	175-HpCB	U	ND	pg/L	4.20	100
52663-65-7	176-HpCB	U	ND	pg/L	3.24	100
52663-70-4	177-HpCB	U	ND	pg/L	5.02	100
52663-67-9	178-HpCB	U	ND	pg/L	4.46	100
52663-64-6	179-HpCB	U	ND	pg/L	3.16	100
35065-29-3	180-HpCB	CU	ND	pg/L	3.88	200
74472-47-2	181-HpCB	U	ND	pg/L	4.80	100
60145-23-5	182-HpCB	U	ND	pg/L	4.04	100
52663-69-1	183-HpCB	CU	ND	pg/L	4.64	200
74472-48-3	184-HpCB	U	ND	pg/L	3.10	100
52712-05-7	185-HpCB	C183				
74472-49-4	186-HpCB	U	ND	pg/L	3.22	100
52663-68-0	187-HpCB	U	ND	pg/L	4.08	100
74487-85-7	188-HpCB	U	ND	pg/L	2.70	100
39635-31-9	189-HpCB	U	ND	pg/L	4.02	100
41411-64-7	190-HpCB	U	ND	pg/L	3.48	100
74472-50-7	191-HpCB	U	ND	pg/L	3.44	100
74472-51-8	192-HpCB	U	ND	pg/L	4.00	100

Comments:**C** Congener has coeluters. When Cxxx, refer to congener number xxx for data**J** Value is estimated**U** Analyte was analyzed for, but not detected above the specified detection limit.

**PCB Congeners
Certificate of Analysis
Sample Summary**

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SDG Number: 2210315
Lab Sample ID: 12033076
Client Sample: QC for batch 51321
Client ID: MB for batch 51321
Batch ID: 51323
Run Date: 11/10/2022 14:33
Data File: d08nov22a_5-3
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001

Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 1000 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
69782-91-8	193-HpCB	C180				
35694-08-7	194-OcCB	U	ND	pg/L	3.80	100
52663-78-2	195-OcCB	U	ND	pg/L	4.02	100
42740-50-1	196-OcCB	U	ND	pg/L	3.70	100
33091-17-7	197-OcCB	CU	ND	pg/L	2.94	200
68194-17-2	198-OcCB	CU	ND	pg/L	3.84	200
52663-75-9	199-OcCB	C198				
52663-73-7	200-OcCB	C197				
40186-71-8	201-OcCB	U	ND	pg/L	2.74	100
2136-99-4	202-OcCB	U	ND	pg/L	2.74	100
52663-76-0	203-OcCB	U	ND	pg/L	3.66	100
74472-52-9	204-OcCB	U	ND	pg/L	2.82	100
74472-53-0	205-OcCB	U	ND	pg/L	3.00	100
40186-72-9	206-NoCB	U	ND	pg/L	5.48	100
52663-79-3	207-NoCB	U	ND	pg/L	4.04	100
52663-77-1	208-NoCB	U	ND	pg/L	3.76	100
2051-24-3	209-DeCB	U	ND	pg/L	4.54	100
1336-36-3	Total PCB Congeners	J	38.9	pg/L		100

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1-MoCB		666	2000	pg/L	33.3	(15%-150%)
13C-3-MoCB		760	2000	pg/L	38.0	(15%-150%)
13C-4-DiCB		761	2000	pg/L	38.1	(25%-150%)
13C-15-DiCB		1010	2000	pg/L	50.4	(25%-150%)
13C-19-TrCB		915	2000	pg/L	45.8	(25%-150%)
13C-37-TrCB		963	2000	pg/L	48.2	(25%-150%)
13C-54-TeCB		872	2000	pg/L	43.6	(25%-150%)
13C-77-TeCB		1120	2000	pg/L	56.2	(25%-150%)
13C-81-TeCB		1200	2000	pg/L	60.0	(25%-150%)
13C-104-PeCB		932	2000	pg/L	46.6	(25%-150%)
13C-105-PeCB		971	2000	pg/L	48.6	(25%-150%)
13C-114-PeCB		964	2000	pg/L	48.2	(25%-150%)
13C-118-PeCB		882	2000	pg/L	44.1	(25%-150%)
13C-123-PeCB		1010	2000	pg/L	50.5	(25%-150%)
13C-126-PeCB		1010	2000	pg/L	50.6	(25%-150%)
13C-155-HxCB		996	2000	pg/L	49.8	(25%-150%)
13C-156-HxCB	C	2250	4000	pg/L	56.2	(25%-150%)
13C-157-HxCB	C156L					
13C-167-HxCB		1110	2000	pg/L	55.7	(25%-150%)
13C-169-HxCB		1140	2000	pg/L	57.1	(25%-150%)
13C-188-HpCB		989	2000	pg/L	49.5	(25%-150%)
13C-189-HpCB		1030	2000	pg/L	51.5	(25%-150%)

PCB Congeners
Certificate of Analysis
Sample Summary

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SDG Number:	2210315	Client:	HALL001	Project:	HALL00113
Lab Sample ID:	12033076			Matrix:	WATER
Client Sample:	QC for batch 51321				
Client ID:	MB for batch 51321			Prep Basis:	As Received
Batch ID:	51323	Method:	EPA Method 1668A		
Run Date:	11/10/2022 14:33	Analyst:	MLL	Instrument:	HRP875
Data File:	d08nov22a_5-3			Dilution:	1
Prep Batch:	51321	Prep Method:	SW846 3520C	Prep SOP Ref:	CF-OA-E-001
Prep Date:	02-NOV-22	Prep Aliquot:	1000 mL		

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
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Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-202-OcCB		1040	2000	pg/L	51.8	(25%-150%)
13C-205-OcCB		1170	2000	pg/L	58.6	(25%-150%)
13C-206-NoCB		1150	2000	pg/L	57.5	(25%-150%)
13C-208-NoCB		1030	2000	pg/L	51.4	(25%-150%)
13C-209-DeCB		1150	2000	pg/L	57.7	(25%-150%)
13C-28-TrCB		1040	2000	pg/L	51.9	(30%-135%)
13C-111-PeCB		1100	2000	pg/L	55.2	(30%-135%)
13C-178-HpCB		1240	2000	pg/L	62.0	(30%-135%)

Comments:

- C** Congener has coeluters. When Cxxx, refer to congener number xxx for data
J Value is estimated
U Analyte was analyzed for, but not detected above the specified detection limit.

PCB Congeners					Page 1	of 2	
Certificate of Analysis							
Sample Summary							
SDG Number:	2210315	Client:	HALL001	Project:	HALL00113		
Lab Sample ID:	12033077			Matrix:	WATER		
Client Sample:	QC for batch 51321						
Client ID:	LCS for batch 51321			Prep Basis:	As Received		
Batch ID:	51323	Method:	EPA Method 1668A				
Run Date:	11/10/2022 12:14	Analyst:	MLL	Instrument:	HRP875		
Data File:	d08nov22a_5-1			Dilution:	1		
Prep Batch:	51321	Prep Method:	SW846 3520C	Prep SOP Ref:	CF-OA-E-001		
Prep Date:	02-NOV-22	Prep Aliquot:	1000 mL				
CAS No.	Parmname	Qual	Result	Units	EDL	PQL	
2051-60-7	1-MoCB		490	pg/L	5.90	100	
2051-62-9	3-MoCB		498	pg/L	5.40	100	
13029-08-8	4-DiCB		462	pg/L	9.84	100	
2050-68-2	15-DiCB		513	pg/L	8.46	100	
38444-73-4	19-TrCB		513	pg/L	7.04	100	
38444-90-5	37-TrCB		483	pg/L	12.0	100	
15968-05-5	54-TeCB		1020	pg/L	3.78	100	
32598-13-3	77-TeCB		977	pg/L	16.2	100	
70362-50-4	81-TeCB		826	pg/L	15.1	100	
56558-16-8	104-PeCB		1010	pg/L	2.54	100	
32598-14-4	105-PeCB		924	pg/L	19.9	100	
74472-37-0	114-PeCB		1040	pg/L	18.6	100	
31508-00-6	118-PeCB		1110	pg/L	18.9	100	
65510-44-3	123-PeCB		926	pg/L	17.8	100	
57465-28-8	126-PeCB		993	pg/L	20.4	100	
33979-03-2	155-HxCB		1000	pg/L	2.64	100	
38380-08-4	156-HxCB	C	1980	pg/L	17.4	200	
69782-90-7	157-HxCB	C156					
52663-72-6	167-HxCB		1000	pg/L	12.8	100	
32774-16-6	169-HxCB		967	pg/L	14.7	100	
74487-85-7	188-HpCB		997	pg/L	3.20	100	
39635-31-9	189-HpCB		1010	pg/L	8.64	100	
2136-99-4	202-OcCB		1620	pg/L	22.6	100	
74472-53-0	205-OcCB		1450	pg/L	9.54	100	
40186-72-9	206-NoCB		1490	pg/L	7.36	100	
52663-77-1	208-NoCB		1590	pg/L	5.44	100	
2051-24-3	209-DeCB		1430	pg/L	4.50	100	
Surrogate/Tracer recovery		Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1-MoCB			757	2000	pg/L	37.9	(15%-140%)
13C-3-MoCB			876	2000	pg/L	43.8	(15%-140%)
13C-4-DiCB			865	2000	pg/L	43.3	(30%-140%)
13C-15-DiCB			1300	2000	pg/L	65.1	(30%-140%)
13C-19-TrCB			1070	2000	pg/L	53.6	(30%-140%)
13C-37-TrCB			1220	2000	pg/L	61.0	(30%-140%)
13C-54-TeCB			1030	2000	pg/L	51.6	(30%-140%)
13C-77-TeCB			1290	2000	pg/L	64.6	(30%-140%)
13C-81-TeCB			1340	2000	pg/L	66.8	(30%-140%)
13C-104-PeCB			1200	2000	pg/L	60.0	(30%-140%)
13C-105-PeCB			1150	2000	pg/L	57.4	(30%-140%)
13C-114-PeCB			1140	2000	pg/L	56.9	(30%-140%)
13C-118-PeCB			1010	2000	pg/L	50.5	(30%-140%)

**PCB Congeners
Certificate of Analysis
Sample Summary**

Page 2 of 2

SDG Number: 2210315
Lab Sample ID: 12033077
Client Sample: QC for batch 51321
Client ID: LCS for batch 51321
Batch ID: 51323
Run Date: 11/10/2022 12:14
Data File: d08nov22a_5-1
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001

Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 1000 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL	
Surrogate/Tracer recovery		Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-123-PeCB			1160	2000	pg/L	58.0	(30%-140%)
13C-126-PeCB			1310	2000	pg/L	65.6	(30%-140%)
13C-155-HxCB			1150	2000	pg/L	57.6	(30%-140%)
13C-156-HxCB	C		2610	4000	pg/L	65.3	(30%-140%)
13C-157-HxCB	C156L						
13C-167-HxCB			1310	2000	pg/L	65.4	(30%-140%)
13C-169-HxCB			1360	2000	pg/L	67.8	(30%-140%)
13C-188-HpCB			1130	2000	pg/L	56.5	(30%-140%)
13C-189-HpCB			1170	2000	pg/L	58.4	(30%-140%)
13C-202-OcCB			1220	2000	pg/L	61.1	(30%-140%)
13C-205-OcCB			1410	2000	pg/L	70.3	(30%-140%)
13C-206-NoCB			1380	2000	pg/L	69.1	(30%-140%)
13C-208-NoCB			1150	2000	pg/L	57.7	(30%-140%)
13C-209-DeCB			1370	2000	pg/L	68.4	(30%-140%)
13C-28-TrCB			1220	2000	pg/L	61.0	(40%-125%)
13C-111-PeCB			1280	2000	pg/L	64.1	(40%-125%)
13C-178-HpCB			1460	2000	pg/L	73.2	(40%-125%)

Comments:

C Congener has coeluters. When Cxxx, refer to congener number xxx for data

U Analyte was analyzed for, but not detected above the specified detection limit.

PCB Congeners
Certificate of Analysis
Sample Summary

Page 1 of 2

SDG Number: 2210315
Lab Sample ID: 12033078
Client Sample: QC for batch 51321
Client ID: LCSD for batch 51321
Batch ID: 51323
Run Date: 11/10/2022 13:23
Data File: d08nov22a_5-2
Prep Batch: 51321
Prep Date: 02-NOV-22

Client: HALL001

Method: EPA Method 1668A
Analyst: MLL

Prep Method: SW846 3520C
Prep Aliquot: 1000 mL

Project: HALL00113
Matrix: WATER

Prep Basis: As Received

Instrument: HRP875
Dilution: 1
Prep SOP Ref: CF-OA-E-001

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
2051-60-7	1-MoCB		443	pg/L	6.46	100
2051-62-9	3-MoCB		480	pg/L	7.18	100
13029-08-8	4-DiCB		425	pg/L	11.5	100
2050-68-2	15-DiCB		471	pg/L	12.7	100
38444-73-4	19-TrCB		473	pg/L	9.06	100
38444-90-5	37-TrCB		456	pg/L	16.4	100
15968-05-5	54-TeCB		988	pg/L	4.04	100
32598-13-3	77-TeCB		901	pg/L	27.0	100
70362-50-4	81-TeCB		769	pg/L	25.2	100
56558-16-8	104-PeCB		953	pg/L	3.18	100
32598-14-4	105-PeCB		847	pg/L	23.4	100
74472-37-0	114-PeCB		985	pg/L	20.8	100
31508-00-6	118-PeCB		1010	pg/L	23.3	100
65510-44-3	123-PeCB		818	pg/L	19.9	100
57465-28-8	126-PeCB		947	pg/L	26.0	100
33979-03-2	155-HxCB		941	pg/L	9.38	100
38380-08-4	156-HxCB	C	1830	pg/L	21.8	200
69782-90-7	157-HxCB	C156				
52663-72-6	167-HxCB		933	pg/L	16.1	100
32774-16-6	169-HxCB		907	pg/L	18.4	100
74487-85-7	188-HpCB		909	pg/L	3.64	100
39635-31-9	189-HpCB		895	pg/L	8.12	100
2136-99-4	202-OcCB		1510	pg/L	25.5	100
74472-53-0	205-OcCB		1340	pg/L	7.66	100
40186-72-9	206-NoCB		1420	pg/L	9.36	100
52663-77-1	208-NoCB		1530	pg/L	6.86	100
2051-24-3	209-DeCB		1330	pg/L	5.86	100

Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-1-MoCB		544	2000	pg/L	27.2	(15%-140%)
13C-3-MoCB		636	2000	pg/L	31.8	(15%-140%)
13C-4-DiCB		656	2000	pg/L	32.8	(30%-140%)
13C-15-DiCB		895	2000	pg/L	44.8	(30%-140%)
13C-19-TrCB		838	2000	pg/L	41.9	(30%-140%)
13C-37-TrCB		753	2000	pg/L	37.6	(30%-140%)
13C-54-TeCB		750	2000	pg/L	37.5	(30%-140%)
13C-77-TeCB		827	2000	pg/L	41.3	(30%-140%)
13C-81-TeCB		874	2000	pg/L	43.7	(30%-140%)
13C-104-PeCB		884	2000	pg/L	44.2	(30%-140%)
13C-105-PeCB		864	2000	pg/L	43.2	(30%-140%)
13C-114-PeCB		843	2000	pg/L	42.1	(30%-140%)
13C-118-PeCB		764	2000	pg/L	38.2	(30%-140%)

**PCB Congeners
Certificate of Analysis
Sample Summary**

Page 2 of 2

SDG Number: 2210315	Client: HALL001	Project: HALL00113
Lab Sample ID: 12033078		Matrix: WATER
Client Sample: QC for batch 51321		
Client ID: LCSD for batch 51321		Prep Basis: As Received
Batch ID: 51323	Method: EPA Method 1668A	
Run Date: 11/10/2022 13:23	Analyst: MLL	Instrument: HRP875
Data File: d08nov22a_5-2		Dilution: 1
Prep Batch: 51321	Prep Method: SW846 3520C	Prep SOP Ref: CF-OA-E-001
Prep Date: 02-NOV-22	Prep Aliquot: 1000 mL	

CAS No.	Parmname	Qual	Result	Units	EDL	PQL
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Surrogate/Tracer recovery	Qual	Result	Nominal	Units	Recovery%	Acceptable Limits
13C-123-PeCB		880	2000	pg/L	44.0	(30%-140%)
13C-126-PeCB		857	2000	pg/L	42.9	(30%-140%)
13C-155-HxCB		763	2000	pg/L	38.2	(30%-140%)
13C-156-HxCB	C	1650	4000	pg/L	41.2	(30%-140%)
13C-157-HxCB	C156L					
13C-167-HxCB		837	2000	pg/L	41.8	(30%-140%)
13C-169-HxCB		835	2000	pg/L	41.8	(30%-140%)
13C-188-HpCB		795	2000	pg/L	39.7	(30%-140%)
13C-189-HpCB		817	2000	pg/L	40.8	(30%-140%)
13C-202-OcCB		781	2000	pg/L	39.0	(30%-140%)
13C-205-OcCB		953	2000	pg/L	47.6	(30%-140%)
13C-206-NoCB		929	2000	pg/L	46.5	(30%-140%)
13C-208-NoCB		811	2000	pg/L	40.6	(30%-140%)
13C-209-DeCB		920	2000	pg/L	46.0	(30%-140%)
13C-28-TrCB		1100	2000	pg/L	54.9	(40%-125%)
13C-111-PeCB		1220	2000	pg/L	61.1	(40%-125%)
13C-178-HpCB		1270	2000	pg/L	63.3	(40%-125%)

Comments:**C** Congener has coeluters. When Cxxx, refer to congener number xxx for data**U** Analyte was analyzed for, but not detected above the specified detection limit.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2210315

23-Nov-22

Client: AMAFCA
Project: CMC Wet FY23

Sample ID: MB-70825	SampType: MBLK		TestCode: EPA Method 1664B							
Client ID: PBW	Batch ID: 70825		RunNo: 91919							
Prep Date: 10/14/2022	Analysis Date: 10/18/2022		SeqNo: 3297147		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	ND	10.0								

Sample ID: LCS-70825	SampType: LCS		TestCode: EPA Method 1664B							
Client ID: LCSW	Batch ID: 70825		RunNo: 91919							
Prep Date: 10/14/2022	Analysis Date: 10/18/2022		SeqNo: 3297148		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	37.8	10.0	40.00	0	94.5	78	114			

Sample ID: LCSD-70825	SampType: LCSD		TestCode: EPA Method 1664B							
Client ID: LCSS02	Batch ID: 70825		RunNo: 91919							
Prep Date: 10/14/2022	Analysis Date: 10/18/2022		SeqNo: 3297149		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
N-Hexane Extractable Material	37.4	10.0	40.00	0	93.5	78	114	1.06	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2210315

23-Nov-22

Client: AMAFCA
Project: CMC Wet FY23

Sample ID: MB-70811	SampType: MBLK	TestCode: EPA Method 200.7: Metals								
Client ID: PBW	Batch ID: 70811	RunNo: 91819								
Prep Date: 10/13/2022	Analysis Date: 10/14/2022	SeqNo: 3291906 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								

Sample ID: LCSLL-70811	SampType: LCSLL	TestCode: EPA Method 200.7: Metals								
Client ID: BatchQC	Batch ID: 70811	RunNo: 91819								
Prep Date: 10/13/2022	Analysis Date: 10/14/2022	SeqNo: 3291907 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0	0.5000	0	103	50	150			
Magnesium	ND	1.0	0.5000	0	104	50	150			

Sample ID: LCS-70811	SampType: LCS	TestCode: EPA Method 200.7: Metals								
Client ID: LCSW	Batch ID: 70811	RunNo: 91819								
Prep Date: 10/13/2022	Analysis Date: 10/14/2022	SeqNo: 3291908 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	51	1.0	50.00	0	102	85	115			
Magnesium	52	1.0	50.00	0	104	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2210315

23-Nov-22

Client: AMAFCA
Project: CMC Wet FY23

Sample ID: MB	SampType: MBLK		TestCode: EPA 200.8: Dissolved Metals							
Client ID: PBW	Batch ID: A91883		RunNo: 91883							
Prep Date:	Analysis Date: 10/18/2022		SeqNo: 3295065		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	ND	0.0010								
Lead	ND	0.00050								

Sample ID: LCSLL	SampType: LCSLL		TestCode: EPA 200.8: Dissolved Metals							
Client ID: BatchQC	Batch ID: A91883		RunNo: 91883							
Prep Date:	Analysis Date: 10/18/2022		SeqNo: 3295066		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.0010	0.0010	0.001000	0	101	50	150			
Lead	0.00052	0.00050	0.0005000	0	105	50	150			

Sample ID: LCS	SampType: LCS		TestCode: EPA 200.8: Dissolved Metals							
Client ID: LCSW	Batch ID: A91883		RunNo: 91883							
Prep Date:	Analysis Date: 10/18/2022		SeqNo: 3295067		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.025	0.0010	0.02500	0	98.9	85	115			
Lead	0.012	0.00050	0.01250	0	97.4	85	115			

Sample ID: 2210315-002NMSLL	SampType: MS		TestCode: EPA 200.8: Dissolved Metals							
Client ID: R6 South-20221006	Batch ID: A91883		RunNo: 91883							
Prep Date:	Analysis Date: 10/18/2022		SeqNo: 3295096		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.026	0.0010	0.02500	0.0007151	102	70	130			
Lead	0.013	0.00050	0.01250	0.0007696	107	70	130			

Sample ID: 2210315-002NMSDL	SampType: MSD		TestCode: EPA 200.8: Dissolved Metals							
Client ID: R6 South-20221006	Batch ID: A91883		RunNo: 91883							
Prep Date:	Analysis Date: 10/18/2022		SeqNo: 3295097		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.026	0.0010	0.02500	0.0007151	101	70	130	0.371	20	
Lead	0.013	0.00050	0.01250	0.0007696	105	70	130	1.82	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2210315

23-Nov-22

Client: AMAFCA
Project: CMC Wet FY23

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: A91618	RunNo: 91618								
Prep Date:	Analysis Date: 10/6/2022	SeqNo: 3282485 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: A91618	RunNo: 91618								
Prep Date:	Analysis Date: 10/6/2022	SeqNo: 3282486 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	93.8	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.8	90	110			

Sample ID: 2210315-001EMS	SampType: MS	TestCode: EPA Method 300.0: Anions								
Client ID: R6 North-20221005	Batch ID: A91618	RunNo: 91618								
Prep Date:	Analysis Date: 10/7/2022	SeqNo: 3282497 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	4.7	0.50	5.000	0	94.4	83.4	110			
Nitrogen, Nitrate (As N)	13	0.50	12.50	0.1075	99.8	89.5	113			

Sample ID: 2210315-001EMSD	SampType: MSD	TestCode: EPA Method 300.0: Anions								
Client ID: R6 North-20221005	Batch ID: A91618	RunNo: 91618								
Prep Date:	Analysis Date: 10/7/2022	SeqNo: 3282498 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	4.7	0.50	5.000	0	93.8	83.4	110	0.691	20	
Nitrogen, Nitrate (As N)	12	0.50	12.50	0.1075	98.8	89.5	113	0.995	20	

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2210315

23-Nov-22

Client: AMAFCA
Project: CMC Wet FY23

Sample ID: MB-70767	SampType: MBLK	TestCode: EPA Method 8081: PESTICIDES								
Client ID: PBW	Batch ID: 70767	RunNo: 91851								
Prep Date: 10/12/2022	Analysis Date: 10/17/2022	SeqNo: 3294644 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dieldrin	ND	0.10								
Surr: Decachlorobiphenyl	2.5		2.500		101	40.9	111			
Surr: Tetrachloro-m-xylene	2.0		2.500		79.4	15	107			

Sample ID: MB-70767	SampType: MBLK	TestCode: EPA Method 8081: PESTICIDES								
Client ID: PBW	Batch ID: 70767	RunNo: 91851								
Prep Date: 10/12/2022	Analysis Date: 10/17/2022	SeqNo: 3294646 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dieldrin	ND	0.10								
Surr: Decachlorobiphenyl	2.5		2.500		102	40.9	111			
Surr: Tetrachloro-m-xylene	2.0		2.500		80.9	15	107			

Sample ID: LCS-70767	SampType: LCS	TestCode: EPA Method 8081: PESTICIDES								
Client ID: LCSW	Batch ID: 70767	RunNo: 91851								
Prep Date: 10/12/2022	Analysis Date: 10/17/2022	SeqNo: 3294647 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dieldrin	0.43	0.10	0.5000	0	86.2	56.3	121			
Surr: Decachlorobiphenyl	2.4		2.500		95.2	40.9	111			
Surr: Tetrachloro-m-xylene	2.0		2.500		78.6	15	107			

Sample ID: LCS-70767	SampType: LCS	TestCode: EPA Method 8081: PESTICIDES								
Client ID: LCSW	Batch ID: 70767	RunNo: 91851								
Prep Date: 10/12/2022	Analysis Date: 10/17/2022	SeqNo: 3294648 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dieldrin	0.44	0.10	0.5000	0	87.9	56.3	121			
Surr: Decachlorobiphenyl	2.4		2.500		95.7	40.9	111			
Surr: Tetrachloro-m-xylene	2.0		2.500		79.7	15	107			

Sample ID: LCSD-70767	SampType: LCSD	TestCode: EPA Method 8081: PESTICIDES								
Client ID: LCSS02	Batch ID: 70767	RunNo: 91851								
Prep Date: 10/12/2022	Analysis Date: 10/17/2022	SeqNo: 3294649 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dieldrin	0.42	0.10	0.5000	0	84.6	56.3	121	1.91	20	
Surr: Decachlorobiphenyl	2.3		2.500		90.9	40.9	111	0	20	
Surr: Tetrachloro-m-xylene	1.8		2.500		73.5	15	107	0	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2210315

23-Nov-22

Client: AMAFCA
Project: CMC Wet FY23

Sample ID: LCSD-70767	SampType: LCSD		TestCode: EPA Method 8081: PESTICIDES							
Client ID: LCSS02	Batch ID: 70767		RunNo: 91851							
Prep Date: 10/12/2022	Analysis Date: 10/17/2022		SeqNo: 3294650		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Dieldrin	0.43	0.10	0.5000	0	86.1	56.3	121	2.00	20	
Surr: Decachlorobiphenyl	2.3		2.500		91.5	40.9	111	0	20	
Surr: Tetrachloro-m-xylene	1.8		2.500		73.9	15	107	0	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2210315

23-Nov-22

Client: AMAFCA
Project: CMC Wet FY23

Sample ID: MB-70671	SampType: MBLK	TestCode: SM 9223B Fecal Indicator: E. coli MPN								
Client ID: PBW	Batch ID: 70671	RunNo: 91638								
Prep Date: 10/6/2022	Analysis Date: 10/7/2022	SeqNo: 3283469	Units: MPN/100mL							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2210315

23-Nov-22

Client: AMAFCA
Project: CMC Wet FY23

Sample ID: MB	SampType: MBLK		TestCode: SM 4500 NH3: Ammonia							
Client ID: PBW	Batch ID: R91993		RunNo: 91993							
Prep Date:	Analysis Date: 10/21/2022		SeqNo: 3300449		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	ND	1.0								

Sample ID: LCS	SampType: LCS		TestCode: SM 4500 NH3: Ammonia							
Client ID: LCSW	Batch ID: R91993		RunNo: 91993							
Prep Date:	Analysis Date: 10/21/2022		SeqNo: 3300450		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Ammonia	9.8	1.0	10.00	0	98.0	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2210315

23-Nov-22

Client: AMAFCA
Project: CMC Wet FY23

Sample ID: MB-71023	SampType: MBLK	TestCode: EPA Method 365.1: Total Phosphorous								
Client ID: PBW	Batch ID: 71023	RunNo: 92060								
Prep Date: 10/24/2022	Analysis Date: 10/25/2022	SeqNo: 3303642	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.050								

Sample ID: LCS-71023	SampType: LCS	TestCode: EPA Method 365.1: Total Phosphorous								
Client ID: LCSW	Batch ID: 71023	RunNo: 92060								
Prep Date: 10/24/2022	Analysis Date: 10/25/2022	SeqNo: 3303643	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.24	0.050	0.2500	0	96.9	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2210315

23-Nov-22

Client: AMAFCA
Project: CMC Wet FY23

Sample ID: MB-70696	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 70696	RunNo: 91714								
Prep Date: 10/10/2022	Analysis Date: 10/12/2022	SeqNo: 3286928 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: LCS-70696	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 70696	RunNo: 91714								
Prep Date: 10/10/2022	Analysis Date: 10/12/2022	SeqNo: 3286929 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1050	20.0	1000	0	105	80	120			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2210315

23-Nov-22

Client: AMAFCA
Project: CMC Wet FY23

Sample ID: MB-70981	SampType: MBLK	TestCode: SM 4500 Norg C: TKN								
Client ID: PBW	Batch ID: 70981	RunNo: 92019								
Prep Date: 10/21/2022	Analysis Date: 10/24/2022	SeqNo: 3301880	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: LCS-70981	SampType: LCS	TestCode: SM 4500 Norg C: TKN								
Client ID: LCSW	Batch ID: 70981	RunNo: 92019								
Prep Date: 10/21/2022	Analysis Date: 10/24/2022	SeqNo: 3301881	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	10	1.0	10.00	0	101	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2210315

23-Nov-22

Client: AMAFCA
Project: CMC Wet FY23

Sample ID: MB-70679	SampType: MBLK		TestCode: SM 2540D: TSS							
Client ID: PBW	Batch ID: 70679		RunNo: 91686							
Prep Date: 10/7/2022	Analysis Date: 10/10/2022		SeqNo: 3285851		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: LCS-70679	SampType: LCS		TestCode: SM 2540D: TSS							
Client ID: LCSW	Batch ID: 70679		RunNo: 91686							
Prep Date: 10/7/2022	Analysis Date: 10/10/2022		SeqNo: 3285852		Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	89	4.0	91.90	0	96.8	83.89	119.7			

Qualifiers:

* Value exceeds Maximum Contaminant Level.
D Sample Diluted Due to Matrix
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
PQL Practical Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

Sample Log-In Check List

Client Name: AMAFCA

Work Order Number: 2210315

RcptNo: 1

Received By: Joseph Alderette 10/6/2022 10:25:00 AM

Completed By: Sean Livingston 10/6/2022 11:10:53 AM

Reviewed By: SO 10/6/22

Chain of Custody

1. Is Chain of Custody complete? Yes ☒ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4$ " for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH: 14
(<2 or >12 unless noted)

Adjusted? NO

Checked by: KPA 10.6.22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks: NO BOD BOTTLES. NO E. coli bottle for RG North. DO 10.7.22

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.9	Good				

note - BOD bottles not provided to lab for these samples. E. coli for Rio Grande North sample and results provided in previous lab report.

Client: AMAFCA

Mailing Address: _____

Phone #: _____

email or Fax#: pchavez@AMAFCA.org

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other _____

☒ EDD (Type) _____

☒ Standard ☐ Rush

CMC wet FY23

Project Manager:

Patrick Chavez

Sampler: Chad Johannesen

On Ice: ☒ Yes ☐ No

of Coolers: 7


Cooler Temp (including CF): $4.8 + 0.1 = 4.9$ ($^{\circ}\text{C}$)


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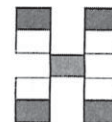
[illegible]

HEAL No.
2210315

[illegible]

Date: 10/6/22	Time: 10:25	Relinquished by: SAM FIRE 
Date:	Time:	Relinquished by:

Received by:	Via:	Date	Time
	CPD	10.6.22	10:25
Received by:	Via:	Date	Time



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

[illegible]

Remarks: Second Cooler temp $13.3 \pm 0.1 = 13.4^{\circ}\text{C}$ 10.6°C

Collaborative Monitoring Cooperative - Analyses List
Attach to Chain of Custody

Please refer to attached NPDES Permit No. NMR04A00 Appendix F. Methods and minimum quantification levels (MQL's) will be those approved under 40 CFR 136 and specified in the attached permit

Analyte (Bold Indicates WQS)	CAS #	Fraction	Method #	MDL (µg/L)
Hardness (Ca + Mg)	NA	Total	200.7	2.4
Lead	7439-92-1	Dissolved	200.8	0.09
Copper	7440-50-8	Dissolved	200.8	1.06
Ammonia + organic nitrogen	7664-41-7	Total	350.1	31.32
Total Kjeldahl Nitrogen	17778-88-0	Total	351.2	58.78
Nitrate + Nitrite	14797-55-8	Total	353.2	10.17
Polychlorinated biphenyls (PCBs)	1336-36-3	Total	1668	0.014
Tetrahydrofuran (THF)	109-99-9	Total	8260C	7.9
bis(2-Ethylhexyl)phthalate	117-81-7	Total	8270D	0.2
Dibenzofuran	132-64-9	Total	8270D	0.2
Indeno(1,2,3-cd)pyrene	193-39-5	Total	8270D	0.2
Benzo(b)fluoranthene	205-99-2	Total	8270D	0.1
Benzo(k)fluoranthene	207-08-9	Total	8270D	0.1
Chrysene	218-01-9	Total	8270D	0.2
Benzo(a)pyrene	50-32-8	Total	8270D	0.3
Dibenzo(a,h)anthracene	53-70-3	Total	8270D	0.2
Benzo(a)anthracene	56-55-3	Total	8270D	0.1
Dieldrin	60-57-1	Total	8081	0.2
Pentachlorophenol	87-86-5	Total	8270D	0.2
Benzidine	92-87-5	Total	8270D	0.1
Chemical Oxygen Demand	E1641638 ²	Total	HACH	5100
Gross alpha (adjusted)	NA	Total	Method 900	0.1 pCi/L
Total Dissolved Solids	E1642222 ²	Total	SM 2540C	60.4
Total Suspended Solids	NA	Total	SM 2540D	3450
Biological Oxygen Demand	N/A	Total	Standard Methods	930
Oil and Grease		Total	1664A	5000
Ecoli-enumeration			SM 9223B	
pH			SM 4500	
Phosphorus		Dissolved	365.1	100
Phosphorus		Total	365.1	100
Chromium IV		Total	3500Cr C-2011	100

ATTACHMENT 2
**FY 2023 WET SEASON COMPLETED DATA VERIFICATION AND
VALIDATION (V&V) FORMS**

Attachment 1.1 Water Quality Sample Data Verification and Validation Worksheet

Study Name: Compliance Monitoring Cooperative (CMC)

Year: FY 2023 (October 2022 – Wet Season Sample)

Project Coordinator: For Data Review and Reporting – SJG, BHI

V&V Reviewer: SJG

Data covered by this worksheet: Rio Grande North – 10/5/2022

Version of Verification/Validation Procedures: QAPP –AMAFCA SOP #5 (7/2022)

Step 1: Verify Field Data

A. Are all Field Data forms present and complete? ☒ Yes ☐ No

If yes, proceed; if no, attempt to locate missing forms, then indicate any remaining missing forms and action taken.

Missing Field Data Forms	Action Taken
_____	_____
_____	_____

Total number of occurrences: 0

B. Are station name and ID, and sampling date and time on forms consistent with database? ☒ Yes ☐ No

If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify.

Station and Parameter	Action Taken	Re-verified?
_____	_____	_____
_____	_____	_____

Total number of occurrences: 0

C. Are field data on forms consistent with database? ☒ Yes ☐ No

If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify.

Station	Sampling Date	Parameter(s) Corrected	Re-verified?
_____	_____	_____	_____
_____	_____	_____	_____

Total number of occurrences: 0

D. Are RIDs correct and associated with the correct analytical suite, media subdivision (e.g. surface water, municipal waste, etc.) and activity type (e.g. Field observation, Routine sample, QA sample etc.)?

☒ Yes ☐ No

If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify

Station/RID	Sampling Date	RID Corrected	Re-verified?

Total number of occurrences: 0

☒ Step 1 Completed Initials: SJG Date: 12/14/22

Step 2: Verify Data Deliverables

A. Have all data in question been delivered? ☒ Yes ☐ No

If yes, proceed; if no, indicate RIDs with missing data (samples or blanks) or attach report with applicable RIDs highlighted. Contact data source and indicate action taken. Complete this step upon receipt of all missing data.

RID	Submittal Date	Missing Data/Parameters	Date of Initial Verification	Date Missing Data Were Received

Total number of occurrences: 0

B. Do all of the analytical suites have the correct number and type of analytes. ☐ Yes ☒ No

If yes, proceed; if no, indicate RIDs with missing or incorrect analyte(s) or attach report with applicable RIDs highlighted. Contact data source and indicate action taken.

RID	Submittal Date	Missing or Incorrect Parameters	Action Taken	Re-verified?
	<u>11/30/22 emailed AMAFCA on missing parameter; BOD</u>	BOD		

	bottle not submitted for sample.			

*Note – HEAL Lab report order numbers 2210242 & 2210315.

☒ **Step 2 Completed** *Initials: SJG Date: 12/14/22*

Step 3: Verify Flow Data

*Note – Not Applicable – no flow data provided with CMC sample collection

A. Identify incorrect or missing data on the flow calculation spreadsheet and correct errors.

Station	Sampling Date	Flow data missing or incorrect?

Total number of occurrences: 0

B. Identify incorrect or missing discharge measurements, correct errors in database and re-verify.

Station	Sampling Date	Flow data missing or incorrect?	Re-verified?

Total number of occurrences: 0

Not Applicable

☐ **Step 3 Completed** *Initials: SJG Date: 12/14/22*

Step 4: Verify Analytical Results for Missing Information or Questionable Results

Were any results with missing/questionable information identified? ☒ Yes ☐ No

If no, proceed; if yes, indicate results with missing information or questionable results or attach report. Contact data source and indicate action taken. Complete this step upon receipt of missing information or clarification of questionable results (clarify questionable results only, DO NOT change results without written approval (from lab or QA officer) and associated documentation).

RID	Sample Date	Missing or Questionable Information/Results	Action Taken
Rio Grande South	<u>10/5/2022</u>	Lab report lists Dissolved Phosphorous results as "Total Phosphorous" for "filtered sample".	BHI added note to the lab report.

Total number of occurrences: 1

☒ Step 4 Completed Initials: SJG Date: 12/14/22

Step 5: Validate Blanks Results

Were any analytes of concern detected in blank samples? ☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager, with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes have been added to database correctly.

RID	Sample Date	Parameter	[Blank]	[Sample]	Validation Code/Flag Applied	Code/Flag verified in database? *

*See validation procedures to determine which associated data need to be flagged and include on *Validation Codes Form*.

Total number of occurrences: 0

☒ Step 5 Completed Initials: SJG Date: 12/14/22

Step 6: Validate Holding Times Violations

Were any samples submitted that did not meet specified holding times? ☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes/flags have been added to database.

RID	Sample Date	Parameter	[Blank]	[Sample]	Validation Code/Flag Applied	Code/Flag verified in database to ALL associated data?*
-----	-------------	-----------	---------	----------	------------------------------	---

*See validation procedures to determine which associated data need to be flagged.
*Note – Lab reports lists pH with hold time flag. Database uses field data reported pH, so this is hold time is not applicable.
Total number of occurrences: 0

☒ **Step 6 Completed** *Initials: SJG Date: 12/14/22*

Step 7: Validate Replicate/Duplicate Results (if applicable)

Were any replicate/duplicate pairs submitted outside of the established control limit of 20%?

☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes/flags have been added to database.

RID Pairs		Replicate or Duplicate?	Sample Date	Parameter	RPD	Validation Code/Flag Applied	Code/Flag verified in database applied?*

Total number of occurrences: 0

☒ **Step 7 Completed** *Initials: SJG Date: 12/14/22*

After all of the above steps have been completed, save and print the worksheet, attach all applicable supplemental information and sign below.

I acknowledge that the data verification and validation process has been completed for the data identified above in accordance with the procedures described in the CMC QAPP, SOP #2



12/14/22

Data Verifier/Validator Signature

Date

COMPLETION OF DATA VERIFICATION AND VALIDATION PROCESS

Once the data verification and validation process has been completed for the entire study (note: if the worksheet is for a subset of the data from a study, be sure ALL the data for the entire study is included before final completion of the data verification and validation process), notify the NMSQUID administrator that the process is complete and request that “V V in STORET” be added to the project title.

Once all data have been verified and validated for a study provide copies of ALL *Data Verification and Validation Worksheets* and attachments associated with the study to the Quality Assurance Officer and retain originals in the project binder.

Attachment 1.2 SWQB Validation Codes

When deficiencies are identified through the data verification and validation process, AMAFCA documents or “flags” the deficiencies by assigning validation codes. All data collected from the last compliant QC sample and up to the next compliant QC sample are assigned validation codes. The validation code alerts the data user that the results are outside QA control limits and may require re-sampling or a separate, qualitative analysis based on professional judgment.

Validation Code	Definition	WQX Equivalent
A1	Sample not collected according to SOP	
B1	Chemical was detected in the field blank at a concentration less than 5% of the sample concentration.	
BN	Blanks NOT collected during sampling run	
BU	Detection in blank. Analyte was not detected in this sample above the method's sample detection limit.	BU
RB1	Chemical was detected in the field blank at a concentration greater than or equal to 5% of the sample concentration. Results for this sample are rejected because they may be the result of contamination; the results may not be reported or used for regulatory compliance purposes.	B
R1	Rejected due to incorrect sample preservation	R
R2	Rejected due to equipment failure in the field	R
R3	Rejected based on best professional judgment	R
D1	Spike recovery not within method acceptance limits	
F1	Sample filter time exceeded	
J1	Estimated: the analyte was positively identified and the associated value is an approximate concentration of the analyte in the sample	J
K1	Holding time violation	H
Ea	Estimated-Incubation temperature between 35.5 and 38.0° Celsius	
Er	Rejected-Incubation temperature < 34.5 or >38.0° Celsius	
PD1	Percent difference between duplicate samples excessive	
S1	Per SLD, uncertainties (sigmas) are expressed as one standard deviation, i.e. one standard error. Small negative or positive values that are less than two standard deviations should be interpreted as “less than the detection limit.”	
S2	Data are suspect but deemed usable based on best professional judgment; documentation of justification is required and should be included in the Data Verification and Validation Packet and reported with results	
Z1	Macroinvertebrate data did not meet QC criteria specified in Section 2.5 of QAPP	
H1	Habitat data did not meet QC criteria specified in Section 2.5 of QAPP	

Attachment 1.1 Water Quality Sample Data Verification and Validation Worksheet

Study Name: Compliance Monitoring Cooperative (CMC)

Year: FY 2023 (October 2022 – Wet Season Sample)

Project Coordinator: For Data Review and Reporting – SJG, BHI

V&V Reviewer: SJG

Data covered by this worksheet: Alameda – 10/5/2022– E. coli Only Sample

Version of Verification/Validation Procedures: QAPP –AMAFCA SOP #5 (7/2022)

Step 1: Verify Field Data

A. Are all Field Data forms present and complete? ☒ Yes ☐ No

If yes, proceed; if no, attempt to locate missing forms, then indicate any remaining missing forms and action taken.

Missing Field Data Forms	Action Taken
_____	_____
_____	_____

Total number of occurrences: 0

B. Are station name and ID, and sampling date and time on forms consistent with database? ☒ Yes ☐ No

If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify.

Station and Parameter	Action Taken	Re-verified?
_____	_____	_____
_____	_____	_____

Total number of occurrences: 0

C. Are field data on forms consistent with database? ☒ Yes ☐ No

If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify.

Station	Sampling Date	Parameter(s) Corrected	Re-verified?
_____	_____	_____	_____
_____	_____	_____	_____

Total number of occurrences: 0

D. Are RIDs correct and associated with the correct analytical suite, media subdivision (e.g. surface water, municipal waste, etc.) and activity type (e.g. Field observation, Routine sample, QA sample etc.)?

☒ Yes ☐ No

If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify

Station/RID	Sampling Date	RID Corrected	Re-verified?

Total number of occurrences: 0

☒ Step 1 Completed Initials: SJG Date: 12/7/22

Step 2: Verify Data Deliverables

A. Have all data in question been delivered? ☒ Yes ☐ No

If yes, proceed; if no, indicate RIDs with missing data (samples or blanks) or attach report with applicable RIDs highlighted. Contact data source and indicate action taken. Complete this step upon receipt of all missing data.

RID	Submittal Date	Missing Data/Parameters	Date of Initial Verification	Date Missing Data Were Received

Total number of occurrences: 0

B. Do all of the analytical suites have the correct number and type of analytes. ☒ Yes ☐ No

If yes, proceed; if no, indicate RIDs with missing or incorrect analyte(s) or attach report with applicable RIDs highlighted. Contact data source and indicate action taken.

RID	Submittal Date	Missing or Incorrect Parameters	Action Taken	Re-verified?

☒ Step 2 Completed Initials: SJG Date: 12/7/22

Step 3: Verify Flow Data

*Note – Not Applicable – no flow data provided with CMC sample collection

A. Identify incorrect or missing data on the flow calculation spreadsheet and correct errors.

Station	Sampling Date	Flow data missing or incorrect?

Total number of occurrences: 0

B. Identify incorrect or missing discharge measurements, correct errors in database and re-verify.

Station	Sampling Date	Flow data missing or incorrect?	Re-verified?

Total number of occurrences: 0

Not Applicable

☐ Step 3 Completed **Initials: SJG Date: 12/7/22**

Step 4: Verify Analytical Results for Missing Information or Questionable Results

Were any results with missing/questionable information identified? ☐ Yes ☒ No

If no, proceed; if yes, indicate results with missing information or questionable results or attach report. Contact data source and indicate action taken. Complete this step upon receipt of missing information or clarification of questionable results (clarify questionable results only, DO NOT change results without written approval (from lab or QA officer) and associated documentation).

RID	Sample Date	Missing or Questionable Information/Results	Action Taken

Total number of occurrences: 0

☒ Step 4 Completed **Initials: SJG Date: 12/7/22**

Step 5: Validate Blanks Results

Were any analytes of concern detected in blank samples? ☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager, with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes have been added to database correctly.

RID	Sample Date	Parameter	[Blank]	[Sample]	Validation Code/Flag Applied	Code/Flag verified in database? *

*See validation procedures to determine which associated data need to be flagged and include on *Validation Codes Form*.

Total number of occurrences: 0

☒ **Step 5 Completed** *Initials: SJG Date: 12/7/22*

Step 6: Validate Holding Times Violations

Were any samples submitted that did not meet specified holding times? ☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes/flags have been added to database.

RID	Sample Date	Parameter	[Blank]	[Sample]	Validation Code/Flag Applied	Code/Flag verified in database to ALL associated data?*

*See validation procedures to determine which associated data need to be flagged.

Total number of occurrences: 0

☒ **Step 6 Completed** *Initials: SJG Date: 12/7/22*

Step 7: Validate Replicate/Duplicate Results (if applicable)

Were any replicate/duplicate pairs submitted outside of the established control limit of 20%?

☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes/flags have been added to database.

RID Pairs	Replicate or Duplicate?	Sample Date	Parameter	RPD	Validation Code/Flag Applied	Code/Flag verified in database applied?*

Total number of occurrences: 0

☒ Step 7 Completed Initials: SJG Date: 12/7/22

After all of the above steps have been completed, save and print the worksheet, attach all applicable supplemental information and sign below.

I acknowledge that the data verification and validation process has been completed for the data identified above in accordance with the procedures described in the CMC QAPP, SOP #2



12/7/22

Data Verifier/Validator Signature

Date

COMPLETION OF DATA VERIFICATION AND VALIDATION PROCESS

Once the data verification and validation process has been completed for the entire study (note: if the worksheet is for a subset of the data from a study, be sure ALL the data for the entire study is included before final completion of the data verification and validation process), notify the NMSQUID administrator that the process is complete and request that "V V in STORET" be added to the project title.

Once all data have been verified and validated for a study provide copies of ALL *Data Verification and Validation Worksheets* and attachments associated with the study to the Quality Assurance Officer and retain originals in the project binder.

Attachment 1.2 SWQB Validation Codes

When deficiencies are identified through the data verification and validation process, AMAFCA documents or “flags” the deficiencies by assigning validation codes. All data collected from the last compliant QC sample and up to the next compliant QC sample are assigned validation codes. The validation code alerts the data user that the results are outside QA control limits and may require re-sampling or a separate, qualitative analysis based on professional judgment.

Validation Code	Definition	WQX Equivalent
A1	Sample not collected according to SOP	
B1	Chemical was detected in the field blank at a concentration less than 5% of the sample concentration.	
BN	Blanks NOT collected during sampling run	
BU	Detection in blank. Analyte was not detected in this sample above the method's sample detection limit.	BU
RB1	Chemical was detected in the field blank at a concentration greater than or equal to 5% of the sample concentration. Results for this sample are rejected because they may be the result of contamination; the results may not be reported or used for regulatory compliance purposes.	B
R1	Rejected due to incorrect sample preservation	R
R2	Rejected due to equipment failure in the field	R
R3	Rejected based on best professional judgment	R
D1	Spike recovery not within method acceptance limits	
F1	Sample filter time exceeded	
J1	Estimated: the analyte was positively identified and the associated value is an approximate concentration of the analyte in the sample	J
K1	Holding time violation	H
Ea	Estimated-Incubation temperature between 35.5 and 38.0° Celsius	
Er	Rejected-Incubation temperature < 34.5 or >38.0° Celsius	
PD1	Percent difference between duplicate samples excessive	
S1	Per SLD, uncertainties (sigmas) are expressed as one standard deviation, i.e. one standard error. Small negative or positive values that are less than two standard deviations should be interpreted as “less than the detection limit.”	
S2	Data are suspect but deemed usable based on best professional judgment; documentation of justification is required and should be included in the Data Verification and Validation Packet and reported with results	
Z1	Macroinvertebrate data did not meet QC criteria specified in Section 2.5 of QAPP	
H1	Habitat data did not meet QC criteria specified in Section 2.5 of QAPP	

Attachment 1.1 Water Quality Sample Data Verification and Validation Worksheet

Study Name: Compliance Monitoring Cooperative (CMC)

Year: FY 2023 (October 2022 – Wet Season Sample) Project Coordinator: For Data Review and Reporting – SJG, BHI

V&V Reviewer: SJG

Data covered by this worksheet: Rio Grande South – 10/6/2022

Version of Verification/Validation Procedures: QAPP –AMAFCA SOP #5 (7/2022)

Step 1: Verify Field Data

A. Are all Field Data forms present and complete? ☒ Yes ☐ No

If yes, proceed; if no, attempt to locate missing forms, then indicate any remaining missing forms and action taken.

Missing Field Data Forms	Action Taken
_____	_____
_____	_____

Total number of occurrences: 0

B. Are station name and ID, and sampling date and time on forms consistent with database? ☒ Yes ☐ No

If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify.

Station and Parameter	Action Taken	Re-verified?
_____	_____	_____
_____	_____	_____

Total number of occurrences: 0

C. Are field data on forms consistent with database? ☒ Yes ☐ No

If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify.

Station	Sampling Date	Parameter(s) Corrected	Re-verified?
_____	_____	_____	_____
_____	_____	_____	_____

Total number of occurrences: 0

D. Are RIDs correct and associated with the correct analytical suite, media subdivision (e.g. surface water, municipal waste, etc.) and activity type (e.g. Field observation, Routine sample, QA sample etc.)?

☒ Yes ☐ No

If yes, proceed; if no, indicate errors identified, correct errors in database and re-verify

Station/RID	Sampling Date	RID Corrected	Re-verified?

Total number of occurrences: 0

☒ Step 1 Completed Initials: SJG Date: 12/14/22

Step 2: Verify Data Deliverables

A. Have all data in question been delivered? ☒ Yes ☐ No

If yes, proceed; if no, indicate RIDs with missing data (samples or blanks) or attach report with applicable RIDs highlighted. Contact data source and indicate action taken. Complete this step upon receipt of all missing data.

RID	Submittal Date	Missing Data/Parameters	Date of Initial Verification	Date Missing Data Were Received

Total number of occurrences: 0

B. Do all of the analytical suites have the correct number and type of analytes. ☐ Yes ☒ No

If yes, proceed; if no, indicate RIDs with missing or incorrect analyte(s) or attach report with applicable RIDs highlighted. Contact data source and indicate action taken.

RID	Submittal Date	Missing or Incorrect Parameters	Action Taken	Re-verified?
	<u>11/30/22 emailed AMAFCA on missing parameter; BOD bottle not</u>	BOD		

	<u>submitted for sample.</u>			

*Note – HEAL Lab report order number 2210315.

☒ **Step 2 Completed** *Initials: SJG Date: 12/14/22*

Step 3: Verify Flow Data

*Note – Not Applicable – no flow data provided with CMC sample collection

A. Identify incorrect or missing data on the flow calculation spreadsheet and correct errors.

Station	Sampling Date	Flow data missing or incorrect?
_____	_____	_____
_____	_____	_____

Total number of occurrences: 0

B. Identify incorrect or missing discharge measurements, correct errors in database and re-verify.

Station	Sampling Date	Flow data missing or incorrect?	Re-verified?
_____	_____	_____	_____
_____	_____	_____	_____

Total number of occurrences: 0

Not Applicable

☐ **Step 3 Completed** *Initials: SJG Date: 12/14/22*

Step 4: Verify Analytical Results for Missing Information or Questionable Results

Were any results with missing/questionable information identified? ☒ Yes ☐ No

If no, proceed; if yes, indicate results with missing information or questionable results or attach report. Contact data source and indicate action taken. Complete this step upon receipt of missing information or clarification of questionable results (clarify questionable results only, DO NOT change results without written approval (from lab or QA officer) and associated documentation).

RID	Sample Date	Missing or Questionable Information/Results	Action Taken
Rio Grande South	<u>10/6/2022</u>	Lab report lists Dissolved Phosphorous results as "Total Phosphorous" for "filtered sample".	BHI added note to the lab report.

*Note – HEAL Lab report order number 2210315.

Total number of occurrences: 1

☒ **Step 4 Completed** *Initials: SJG Date: 12/14/22*

Step 5: Validate Blanks Results

Were any analytes of concern detected in blank samples? ☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager, with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes have been added to database correctly.

RID	Sample Date	Parameter	[Blank]	[Sample]	Validation Code/Flag Applied	Code/Flag verified in database? *

*See validation procedures to determine which associated data need to be flagged and include on *Validation Codes Form*.

Total number of occurrences: 0

☒ **Step 5 Completed** *Initials: SJG Date: 12/14/22*

Step 6: Validate Holding Times Violations

Were any samples submitted that did not meet specified holding times? ☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes/flags have been added to database.

RID	Sample Date	Parameter	[Blank]	[Sample]	Validation Code/Flag Applied	Code/Flag verified in database to ALL associated data?*

*See validation procedures to determine which associated data need to be flagged.

*Note – Lab reports lists pH with hold time flag. Database uses field data reported pH, so this is hold time is not applicable.

Total number of occurrences: 0

☒ **Step 6 Completed** *Initials: SJG Date: 12/14/22*

Step 7: Validate Replicate/Duplicate Results (if applicable)

Were any replicate/duplicate pairs submitted outside of the established control limit of 20%?

☐ Yes ☒ No

If no, proceed; if yes, list results that need to have validation codes applied in the database save these results as an excel file and forward to QA officer or Program Manager with a request to add appropriate validation codes to database. Complete this step after verifying that validation codes/flags have been added to database.

RID Pairs	Replicate or Duplicate?	Sample Date	Parameter	RPD	Validation Code/Flag Applied	Code/Flag verified in database applied?*

Total number of occurrences: 0

☒ **Step 7 Completed** *Initials: SJG Date: 12/14/22*

After all of the above steps have been completed, save and print the worksheet, attach all applicable supplemental information and sign below.

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R1	Rejected due to incorrect sample preservation	R
R2	Rejected due to equipment failure in the field	R
R3	Rejected based on best professional judgment	R
D1	Spike recovery not within method acceptance limits	
F1	Sample filter time exceeded	
J1	Estimated: the analyte was positively identified and the associated value is an approximate concentration of the analyte in the sample	J
K1	Holding time violation	H
Ea	Estimated-Incubation temperature between 35.5 and 38.0° Celsius	
Er	Rejected-Incubation temperature < 34.5 or >38.0° Celsius	
PD1	Percent difference between duplicate samples excessive	
S1	Per SLD, uncertainties (sigmas) are expressed as one standard deviation, i.e. one standard error. Small negative or positive values that are less than two standard deviations should be interpreted as “less than the detection limit.”	
S2	Data are suspect but deemed usable based on best professional judgment; documentation of justification is required and should be included in the Data Verification and Validation Packet and reported with results	
Z1	Macroinvertebrate data did not meet QC criteria specified in Section 2.5 of QAPP	
H1	Habitat data did not meet QC criteria specified in Section 2.5 of QAPP	

Outcome Report

for Fiscal Year 2022–2023

(July 1, 2022 to June 30, 2023)



Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA) • City of Albuquerque • Bernalillo County • Town of Bernalillo • Village of Corrales • Ciudad Soil and Water Conservation District • Eastern Sandoval County Arroyo Flood Control Authority (ESCAFCA) • Village of Los Ranchos de Albuquerque • Department of Transportation (NMDOT) • City of Rio Rancho • Sandoval County • Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA)

PRESENTED BY

SUNNY505

Introduction

The outcomes report is designed to illustrate the collective successes of the Middle Rio Grande Stormwater Quality team. In fiscal year 2022–2023, the Storm Team reached over 100,000 individuals in the Albuquerque Metro area through special events, educational efforts, as well as digital promotions via various social media and the website.

The Storm Team is a collaborative organization made of of the following: The Albuquerque Metropolitan Arroyo Flood Control Authority, the City of Albuquerque, Bernalillo County, the City of Rio Rancho, Ciudad Soil and Water Conservation District, the New Mexico Department of Transportation, the Southern Sandoval County Arroyo Flood Control Authority, the Town of Bernalillo, the Village of Corrales and the Village of Los Ranchos.



Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA) • City of Albuquerque • Bernalillo County • Town of Bernalillo • Village of Corrales • Ciudad Soil and Water Conservation District • Eastern Sandoval County Arroyo Flood Control Authority (ESCAFCA) • Village of Los Ranchos de Albuquerque • Department of Transportation (NMDOT) • City of Rio Rancho • Sandoval County • Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA)

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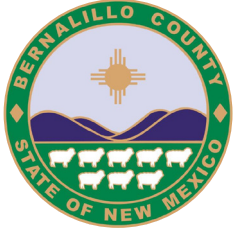
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Will be updated after content is complete.



Bernalillo County

Public Outreach and Education Tracking

FY2023: July 1, 2022 – June 30, 2023

Date	Location	Event Topic	Description of Education/Outreach Event Program/Materials	NRS Programs	Partner Organizations	Participants	Source for Participant Count
Q1							
7/9, 7/30, 8/27, 9/10, 9/24/2022	Tijeras Creek Remediation Project	Volunteer work days, 3 hrs each	Working on watershed restoration by addressing erosion, removing invasive plants, addressing tree health (pruning dead/broken branches), had watering	Water Conservation, Stormwater	Ciudad SWCD, TCWC organization members	27	attendance
7/22/2022	ABCWUA water bill insert	Residential rainwater harvesting PSA	Water bill insert on residential rainwater harvesting that included benefits, steps you can take, and link to more resources.	Water Conservation, Stormwater	Arid LID Coalition	210,000	Total printed copies of insert
8/13/2022	Gutierrez Hubbell House (6029 Isleta Blvd SE, Albuquerque, NM 87105)	Drip Irrigation Repair for Homeowners Workshop	Hands-on workshop for homeowners on drip irrigation repair.	Water Conservation	ABCWUA	17	Headcount at event. 24 registered per Cervis.
9/14/2022	GovDelivery Email	News Bulletin	News Bulletin advertising Water Fair and Well Owner Workshop	Water Conservation, Hydrogeology, Review and Permitting		1,345	Unique recipients for Water Conservation, Hydrogeology, and Review and Permitting email lists
9/25/2022	Los Vecinos Community Center (478 NM-333, Tijeras, NM 87059)	East Mountain Celebration	Natural Resources Services table in Bernalillo County tent. Provided information to educate County residents on stormwater quality, water conservation methods and incentive programs, and groundwater monitoring program.	Water Conservation, Stormwater, Hydrogeology, Review and Permitting		2,300	BernCo Office of Community Engagement and Outreach
9/25/2022	Los Vecinos Community Center (478 NM-333, Tijeras, NM 87059)	Water Fair	Provided staff support for NMDOH/NMED Water Fair at East Mountain Celebration. Included mail out of flyer advertising water fair to 600 Carnuel residents.	Hydrogeology, Review and Permitting	NMDOH, NMED	51	NMDOH count of water samples analyzed



Q2							
10/8/2022	Polk Middle School (2220 Raymac Rd SW, Albuquerque NM 87105)	Household Hazardous Waste (HHW) Collection Event	HHW weekend collection event	Stormwater, Review & Permitting		16	Count
10/15/2022	James McGrane Public Safety Complex (48 Public School Rd, Tijeras, NM 87059)	Well Owner Workshop	3 hour presentation on water quality testing, drinking water contaminants, water rights, well permitting and tagging, East Mountain groundwater resources, financial incentives for water conservation.	Water Conservation, Stormwater, Hydrogeology, Review and Permitting	NMDOH, NMED, OSE	29	NMDOH
11/16/2022	Albuquerque Open Space Visitors Center (6500 Coors Blvd NW, Albuquerque, NM 87120)	Green Stormwater Infrastructure Maintenance Training through ABCWUA WaterSmart Academy	Cofacilitated training with MRWM Landscape Architects on arid-adapted green stormwater infrastructure maintenance for an audience of landscape professionals.	Stormwater, Water Conservation	ABCWUA, MRWM Landscape Architects	8	attendance
11/18/2022	Expo New Mexico	STEAM Discovery Fair	6 hour event for middle school students highlighting Natural Resources as a STEAM career. Worked with the Envirosapes model to discuss hydrology, pollution prevention and water conservation.	Water Conservation, Stormwater, Hydrogeology, Review and Permitting	Big Brothers Big Sisters of Central New Mexico	1,506	attendance
12/10/2022	Tijeras Creek Remediation Project	Volunteer work days, 3 hrs each	Working on watershed restoration by addressing erosion, removing invasive plants, addressing tree health (pruning dead/broken branches), had watering	Water Conservation, Stormwater	Ciudad SWCD, TCWC organization members	5	attendance
12/14/2022	Bernco PROS	GSI/LID Standards Lunch & Learn	Lunch and a presentation about the new Bernalillo County Green Stormwater Infrastructure / Low Impact Development (GSI/ LID) Standards for staff that work on Bernalillo County public and private development projects.	Stormwater / Review & Permitting		9	attendance
Q3							
2/1/2023	Albuquerque Open Space Visitors Center (6500 Coors Blvd NW, Albuquerque, NM 87120)	Green Stormwater Infrastructure Maintenance Training through ABCWUA WaterSmart Academy	Cofacilitated training with MRWM Landscape Architects on arid-adapted green stormwater infrastructure maintenance for an audience of landscape professionals.	Stormwater, Water Conservation	ABCWUA, MRWM Landscape Architects	16	attendance



3/1 – 3/3/2023	Hybrid conference (virtual and in-person at Indian Pueblo Cultural Center at 2401 12th St NW, Albuquerque, NM 87104)	Land and Water Summit	Professional conference that provides 2-days of presentations and 1-day tour of local Green Stormwater Infrastructure projects. 2023 conference theme: Communities, Collaboration, & Climate Change, highlighting local, collaborative responses to climate change. BernCo is a conference sponsor and BernCo staff sit on conference Planning Committee.	Water Conservation, Stormwater Quality, Hydrogeology	Ciudad Soil and Water Conservation District, Arid LID Coalition	378	Whova (virtual conference platform) report
3/11/2023	Tijeras Creek Remediation Project	Volunteer work days, 3 hrs each	Working on watershed restoration by addressing erosion, removing invasive plants, addressing tree health (pruning dead/broken branches), had watering	Water Conservation, Stormwater	Ciudad SWCD, TCWC organization members	5	attendance
3/18/2023	Valle de Oro Backyard Refuge (7851 2nd St SW, Albuquerque, NM 87105)	“Incorporating Passive Rainwater Harvesting into Your Backyard Refuge” presentation at Backyard Refuge Day	Presentation addressed steps to designing, constructing, and maintaining residential passive rainwater harvesting features, drawing context from residential passive rainwater harvesting video series at bernco.gov/rainwater .	Water Conservation, Stormwater Quality	Friends of Valle de Oro Refuge	54	Friends of Valle de Oro Refuge count
3/20/2023	Gutierrez Hubbell House (6029 Isleta Blvd SE, Albuquerque, NM 87105)	Hands-on Training on Drip Irrigation Installation for Grow the Growers Farm Training Program	Hands-on instruction on installation of drip irrigation systems for 2023 Grow the Growers trainees. Workshop included installation of irrigation main lines in Gutierrez Hubbell House Medicinal Garden.	Water Conservation		5	Workshop headcount
3/14/2023, 3/17/2023, 4/7/2023	GovDelivery Email	News Bulletin	News Bulletins advertising Backyard Refuge Day, Irrigation Efficiency Exhibit and workshops	Water Conservation, Stormwater Quality, Hydrogeology		1,502	GovDelivery report
2/23/2023, 2/28/2023, 3/9/2023, 3/16/2023	Mountain View Community Center	GSI Maintenance Training for BernCo Land Management, Drainage Maintenance, and Clean Team staff	Education for landscape maintenance staff for understanding what Green Stormwater Infrastructure is, how to maintain GSI facilities, and how to maintain plants in and around these facilities.	Water Conservation, Stormwater Quality	Arid LID Coalition	60	headcount at training

Q4

4/1/2023 – 5/27/2023	Gutierrez Hubbell House (6029 Isleta Blvd SE, Albuquerque, NM 87105)	Irrigation Efficiency Exhibit	Exhibit based on content from Water Authority's Irrigation Efficiency Guide. Addresses how to efficiently water different types of landscapes, using drip irrigation, spray irrigation, hose watering, flood irrigation, and rainwater harvesting. Includes hands-on elements to demystify irrigation systems. In English and Spanish.	Water Conservation, Stormwater Quality	Water Authority, Middle Rio Grande Conservancy District, Arid LID Coalition, Groundwork Studio	704	Individual and group visitor counts per Open Space (Dave Ottaviano)
4/8/2023	Gutierrez Hubbell House (6029 Isleta Blvd SE, Albuquerque, NM 87105)	Tree Irrigation Workshop	Hands-on workshop on how to install drip irrigation for trees. Workshop attendees installed new drip lines to trees in Gutierrez Hubbell House Medicinal Garden.	Water Conservation	Water Authority, Middle Rio Grande Conservancy District, Arid LID Coalition, Groundwork Studio	16	Workshop headcount
4/13/2023	TransCon, Las Cruces, NM	Panel: Why GSI? Green Stormwater Solutions for Transportation Infrastructure	Panel presentation regarding GSI in transportation projects	Water Conservation/ Stormwater	BHI, NMDOT, PLAND Collaborative	40	Estimate
4/15/2023	Gutierrez Hubbell House (6029 Isleta Blvd SE, Albuquerque, NM 87105)	Perennial Irrigation Workshop	Hands-on workshop on how to install drip irrigation for perennials and grasses. Workshop attendees installed new drip lines to perennials in Gutierrez Hubbell House Medicinal Garden.	Water Conservation	Water Authority, Middle Rio Grande Conservancy District, Arid LID Coalition, Groundwork Studio	10	Workshop headcount
4/17/2023	Bernalillo County Alvarado Square	NRS Earth Day Lunch and Learn – Bioremediation in GSI Features	Presentation from this year's Land and Water Summit by Reese Baker of the RainCatcher. After hearing the talk you'll understand why we can't stop talking about GSI and that there are simple solutions all around us to improve water quality and the urban environment.	Water Conservation, Stormwater Quality	Reese Baker, RainCatcher	22	attendance
4/19/2023	Bernalillo County Alvarado Square	IDDE training	Training for Bernalillo County Zoning Enforcement staff for illicit discharge detection and elimination	Stormwater Quality		8	attendance
4/22/2023, 6/10/2023, 6/24/2023	Tijeras Creek Remediation Project	TCRP workday, 3 hrs each	Working on watershed restoration by addressing erosion, removing invasive plants, addressing tree health (pruning dead/broken branches), had watering	Water Conservation, Stormwater Quality	Ciudad SWCD, TCWC organization members	19	attendance

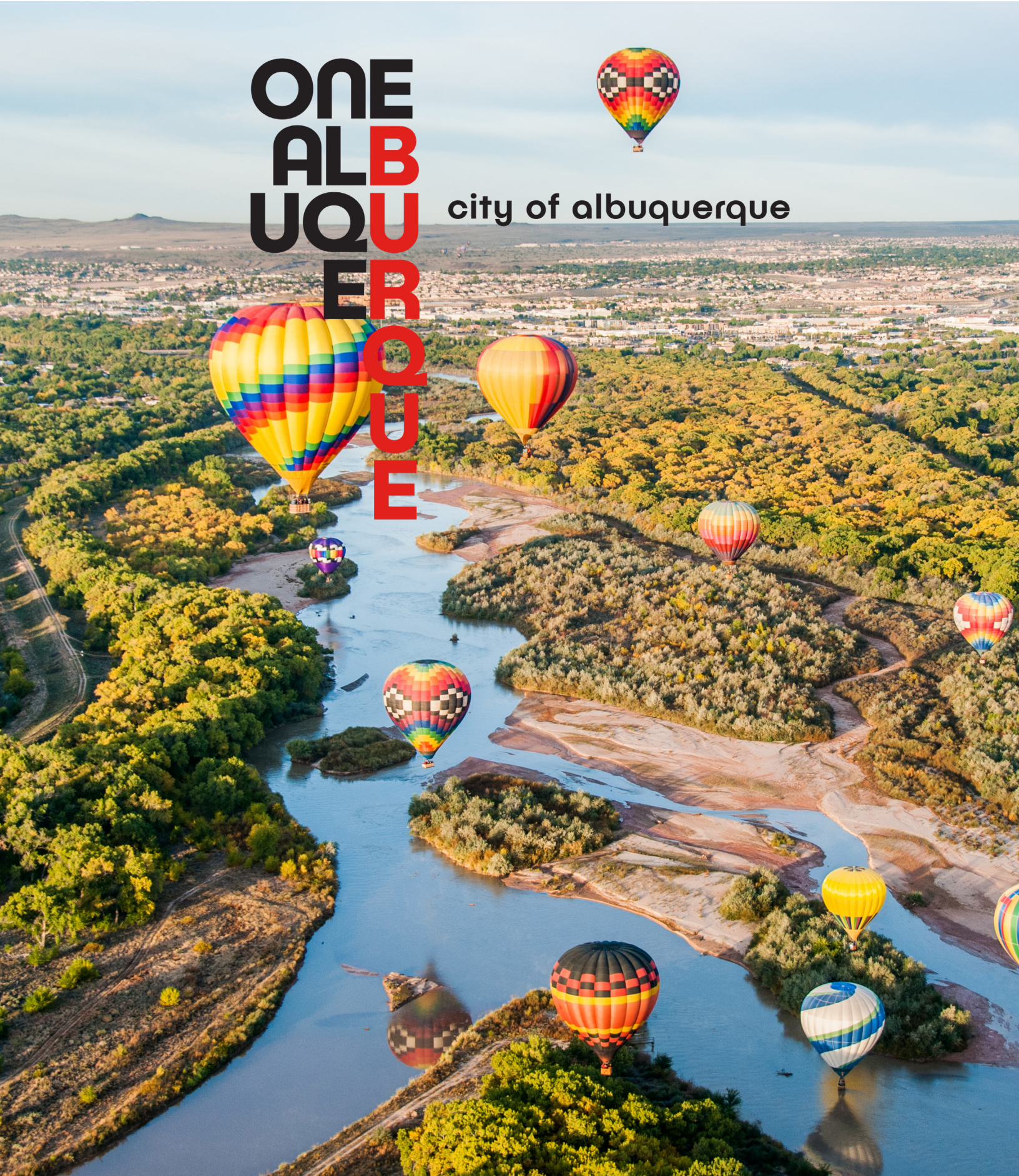
4/23/2023	Westside Community Center	South Valley Pride Day	Natural Resources Services table in Bernalillo County tent. Provided information to educate County residents on stormwater quality, water conservation methods and incentive programs, and groundwater monitoring program.	Water Conservation, Stormwater Quality		4,000	Estimate
4/26/2023	Albuquerque Open Space Visitors Center (6500 Coors Blvd NW, Albuquerque, NM 87120)	Green Stormwater Infrastructure Maintenance Training through ABCWUA WaterSmart Academy	Cofacilitated training with MRWM Landscape Architects on arid-adapted green stormwater infrastructure maintenance for an audience of landscape professionals.	Stormwater, Water Conservation	ABCWUA, MRWM Landscape Architects	4	attendance
4/29/2023	Gutierrez Hubbell House (6029 Isleta Blvd SE, Albuquerque, NM 87105)	Drip Irrigation Fundamentals Workshop	Hands-on workshop on how to build a drip irrigation system that attaches to a hose bib and how to make the most common repairs to a drip system.	Water Conservation	Water Authority, Middle Rio Grande Conservancy District, Arid LID Coalition, Groundwork Studio	16	Workshop headcount
5/13/2023	James McGrane Public Safety Complex (48 Public School Rd, Tijeras, NM 87059)	Tablazon Groundwater	Presentation to Tablazon Water Users Association on Updates to the Groundwater Program, Sandia Basin Closure update, East Mountain and Tablazon water level trends.	Hydrogeology		30	TWUA sign in sheet
5/18/2023	GovDelivery Email	News Bulletin	News Bulletin advertising new Passive Rainwater Harvesting Guide, Next Generation Water Summit, changes to Water Conservation Incentive Program	Water Conservation, Stormwater Quality		1,972	GovDelivery report
5/25/2023	Online	Tijeras Creek Natural Resources Cluster Meeting	Tijeras Creek Watershed Restoration Project discussion and solicitation of ideas for project; watershed planning for the Upper Tijeras Creek Watershed	Stormwater Quality	Ciudad Soil and Water Conservation District, Bernco OS, City OS	11	meeting headcount
6/3/2023	Paradise Hills Community Center	Day in Paradise community event	Evening in Paradise – District focused general community event	Water Conservation, Stormwater Quality		1,700	
6/8/2023	Los Vecinos Community Center (478 NM-333, Tijeras, NM 87059)	Comprehensive Plan Community Update – South Valle	Comprehensive Plan community meeting, Staff offered general support for Q&A for environmental issues	Stormwater/ Water Conservation / Hydrogeology / Review & Permitting		30	Estimate
6/13/2023	Westside Community Center	Comprehensive Plan Community Update - South Valley	Comprehensive Plan community meeting, Staff offered general support for Q&A for environmental issues	Stormwater/ Water Conservation / Hydrogeology / Review & Permitting		40	Estimate



6/17/2023	TCRP, Carlito Springs	Master Naturalist presentation re: stormwater and watershed restoration; geology and hydrogeology	Stormwater, watershed restoration, invasive plant species; geology and hydrogeology of the Sandia Mtns	Stormwater/ Hydrogeology	Ciudad SWCD, TCWC organization members	25	Estimate
6/22/2023	Raymond G. Sanchez Community Center	Comprehensive Plan Community Update – North Valley and District 4	Comprehensive Plan community meeting, Staff offered general support for Q&A for environmental issues	Stormwater/ Water Conservation / Hydrogeology / Review & Permitting		40	Estimate
6/23/2023	Alvarado Square	Comprehensive Plan Community Update – Business Community	Comprehensive Plan community meeting, Staff offered general support for Q&A for environmental issues	Stormwater/ Water Conservation / Hydrogeology / Review & Permitting		40	Estimate
6/27/2023	Online	Comprehensive Plan Community Update - All areas Hybrid Meeting	Comprehensive Plan community meeting, Staff offered general support for Q&A for environmental issues	Stormwater/ Water Conservation / Hydrogeology / Review & Permitting		40	Estimate

ONE ALBUQUERQUE

city of albuquerque



City of Albuquerque

Public Participation Numbers

The City of Albuquerque has provided the following in support of the MS4 permit in fiscal year 2023:

City of Albuquerque MS4 Training:

SWPPP: 148 employees

SPCC: 184 employees

COA Parks and Open Space

Planting Numbers for this fiscal year

Groups: 30

Estimated – 50 Classes that made up the groups

RiverXChange Numbers for this year:

Youth: 1,044

Pre-Lesson Students Served: 914

Classrooms: 45

Classrooms: 45

Adults: 271

Pole Planting Students Served: 886

Pole Planting Adults Served: 152

Pole Planting Trees: 482

Visitor Services Projects

(annual projects, Saturday volunteer days and scout groups)

156 youth and 567 adults = 723

Total hours = 3,615

Visitor Center

Total Volunteers: 881

Total Volunteer hours = 6,069 (does not include clean-up)

NMDA Conference – 1,060 attendees

Materials distributed:

- 150 Reduce Pollution at Home Brochures/Rack Cards
- 100 Fog Brochures
- 150 New Pet Brochures
- 60 Poop Fairy Rack Cards
- 100 Oval Poop Stickers
- 100 KeeptheRioGrand Bumper Stickers
- 20 Old Version Scoop the Poop Bumper Stickers
- 50 Dogs w Poop bags
- 100 City of ABQ water drops
- 75 Poop Emoji Masks

COA Solid Waste Department

Community Volunteer Events

- Fixit Clinic – 47 participants, 15 volunteers
- Company's Comin' – 662 participants (13.5 tons of trash collected)
- One Albuquerque Cleanup Day – 718 participants (18.02 tons of trash collected)
- Junk Jog – 75 participants, 9 volunteers (4.74 tons of trash collected)
- HHW Collection Event – 22,191 lbs. of HHW (and 4,691.66 lbs. of non-regulated solid waste) from 309 residents
- Treecycling – 48.5 tons or 6,461 trees
- Recyclothes – 4.2 tons of clothing collected

Social Media Outreach



(X, formerly Twitter)

178,434 impressions, 4,321 engagements



Facebook

126,786 impressions, 9,165 engagements



Instagram

124,871 impressions, 4,267 engagements

Planting Numbers for 2021–2022

Trees Planted

Date	School	Adults	Students	Trees	Date	Group	Adults	Students	Trees
12.15.22	Bel Air	5	37	18	3.2.23	La Mesa	5	38	40
12.16.22	Mission Avenue	3	31	25	3.3.23	La Mesa	4	33	44
1.12.23	Zia	10	38	25	3.8.23	Holy Ghost 5th and 6th grades	3	33	17
1.13.23	Puesta del Sol	3	32	8	3.9.23	Cochiti	15	35	43
1.19.23	North Valley Academy	6	29	14	3.10.23	Lavaland/Monte Vista	5	37	41
1.20.23	Puesta/North Valley	7	44	17	3.11.23	UNM/ Peace Corps	46	22	46
1.24.23	Holy Ghost 5th and 6th grades	Cancelled—to be rescheduled			3.12.23	Jewish Community	15	8	14
1.25.23	Puesta del Sol	4	39	16	3.14.23	John Baker Elementary	Cancelled—to be rescheduled		
1.26.23	Seven Bar	6	41	16	3.16.23	Martin Luther Kink	4	58	35
1.27.23	Seven Bar	4	28	12	3.17.23	Martin Luther Kink	Cancelled—to be rescheduled		
2.2.23	San Antonio	12	48	13	3.29.23	Cottonwood Classic High	3	20	14
2.3.23	John Baker	11	42	10	3.30.23	Holy Ghost 7th and 8th grades	2	32	100
2.9.23	San Antonio/ Chaparral	11	51	11	3.31.23	John Baker Elementary	9	35	14
2.10.23	Monte Vista	12	45	19	TOTALS				-
2.11.23	UNM Peace Corps	23	4	29					-
2.15.23	Holy Ghost 7th and 8th grades	Cancelled—to be rescheduled							-
2.16.23	Valle Vista	5	40	25					-
2.17.23	Chaparral	10	51	16					-
2.18.23	Sandia Civitans	18	4	38					-
2.22.23	Cottonwood Classic High	Cancelled—to be rescheduled							-
2.23.23	Maggie Cordova Elementary	5	44	18					-
2.24.23	Maggie Cordova Elementary	5	45	16					-

Groups: 30 Estimated – 50 Classes that made up the groups
Youth 1,044, Adults 271

Trees 754 (Cottonwood and Black Willow)
Trees Remaining in troughs – 54

RiverXChange Numbers Specifically:
Pre-Lesson Students Served: 914
Classrooms: 45
Pole Planting Students Served: 886
Pole Planting Adults Served: 152
Pole Planting Trees: 482



Total Waste Diverted

								FY22 Total HHW (lbs) Diverted from Landfill											
Calendar Year	Month	Recycled Waste																	
		Reuse Center	RC0014 Waste Oil	RC5056 Motor Fluids	RC0016 Lead Acid Batteries	RC6006 Mercury	ACT15687 Household Paint, xylene, toluene etc	RC0011 Aerosols	RC7485 Alkaline Batteries	RC7486 Lithium Batteries	RC6254 NiCad Batteries	ACT46232 Compact Bulbs, CFL	ACT46233 HID Lamps	ACT46235 4 Foot Lamps	RC7658 8 Foot Lamps	ACT50491 Non PCB Ballast	ACT58121 Fire Extinguisher	ACT58246 Fertilizer	
2021	Jul	2,250		26,721	2,100	26		2,932	1,128			321		54		300			
	Aug	1,530		15,085				1,414	322		164	120		116	30				
	Sep	1,134		11,197				1,775	200	245	450	120		155	71				
	Oct	1,530		24,741				1,189	455			240		120	46		100		
	Nov	1,290	180	12,866	2,000			1,980	1,100			180		62					
	Dec	798		11,210				550		300				40					
MID YEAR		8,532	180	101,820	4,100	26	0	9,840	3,205	545	614	981	0	547	147	300	100	0	
2022	Jan	1,128		7,680				550	300			120		20					
	Feb	1,206		9,150					300	250				64	31				
	Mar	1,866		18,340	1,200			2,500	800	500		100		41	25	250	200		
	Apr	2,250		16,530			1,630	1,200			275	100		59			250		
	May	2,472		19,465	480		550	1,550				260					180		
	Jun	3,012		20,265			5,950	1,000								250	150		
TOTAL (lbs)		20,466	180	193,250	5,780	26	8,130	16,640	4,605	1,295	889	1,561	0	731	203	800	880	0	
* Misc = Compact Bulbs, 4 ft lamps, Ballast, PCB Capacitors, Carbides, Phosphides, Fertilizers, CO2 Cylinders, etc...																			
		TOTAL		345,540					PO Amount:		\$1,000,500.00		PO# DSW0016901						
		TOTAL Recycled Waste		227,832					Paid Amount:		\$954,466.81		PO# DSW0022306						
		% Recycled		65.9%					Amount left on PO:		\$46,033.19								
* Information on this report is gathered from the Reuse forms sent by mail from ACT and the breakdown of items processed list sent by email monthly by Nicole Gwash																			

Sent for Destruction														
RC0012 Acids	RC0013 Bases	RC0015 Flamables Toxics Incenerated	RC6002 Toxic-Solid (Poisons)	RC7129 Compressed Gas	RC7182 Oxidizers	ACT145226 Pesticides Liquid Toxic	Misc*	TOTAL			Total Pounds Recycled	Tons Recycled	Total Destroyed	Amount Paid
1,119	2,407	137	1,209			2,261		42,965	July		35,832	17.92	3.57	\$105,924.00
1,646	10,985		930	362		1,547		34,251	August		18,781	9.39	7.74	\$91,903.31
1,985	860		816	180		1,414		20,602	September		15,347	7.67	2.63	\$86,831.00
2,858	8,838		600	100		3,904		44,721	October		28,421	14.21	8.15	\$85,161.75
3,160	7,190		710	110		1,700		32,528	November		19,658	9.83	6.44	\$72,841.00
1,260	1,230					2,400		17,788	December		12,898	6.45	2.45	\$59,653.00
12,028	31,510	137	4,265		0		0	192,855						
2,085	3,500					1,050		16,433	January		9,798	4.90	3.32	\$66,513.25
1,200	1,903		1,000	233		1,000		16,337	February		11,001	5.50	2.67	\$47,311.00
980	390		500	100		1,500		29,292	March		25,822	12.91	1.74	\$64,536.25
580	180		550			550		24,154	April		22,294	11.15	0.93	\$83,559.75
2,375	705		950			1,100		30,087	May		24,957	12.48	2.57	\$86,074.75
1,855	850		1,100			1,950		36,382	June		30,627	15.31	2.88	\$104,157.75
21,103	39,038	137	8,365		0		0	345,540			255,436	127.72	34.32	\$954,466.81

City of Albuquerque and Bernalillo County: Public Participation Numbers

Household Hazardous Waste Collection Participation											
July 2021- June 2022											
Month	Participants w/Unknown Location or Not Enough Info to Geocode	Total	Orphaned waste at facility	City Participants (City + No Match or Not Enough Info)	County Participants	Out of County	Out of County Breakdown	County Percentage	Monthly Cost	Light Bulbs (add on to monthly cost)	Total Cumulative Cost
Jul-22	141	1465	0	1271	191	3	3-Sandoval County	13.0%	\$95,225.00	\$2,146.75	\$97,371.75
Aug-22	128	1344	0	1162	178	4	4-Sandoval County	13.2%	\$87,360.00	\$2,537.75	\$89,897.75
Sep-22	136	1248	0	1083	163	2	2-Sandoval County	13.1%	\$81,120.00	\$891.50	\$82,011.50
Oct-22	143	1101	0	954	146	1	1-Sandoval County	13.3%	\$71,565.00	\$2,788.75	\$74,353.75
Nov-22	90	865	0	751	110	4	4-Sandoval County	12.7%	\$56,225.00	\$503.25	\$56,728.25
Dec-22	115	820	0	705	115	0	-	14.0%	\$53,300.00	\$1,469.50	\$54,769.50
Jul-Dec 2022	753	6843	0	5,926	903	14		13.2%	\$444,795.00	\$10,337.50	\$455,132.50
Jan-23	76	833	0	710	121	2	2-Sandoval County	14.5%	\$54,145.00	\$1,065	\$55,210.00
Feb-23	169	718	0	624	94	0	-	13.1%	\$46,670.00	\$1,475	\$48,145.25
Mar-23	288	1014	0	913	101	0	-	10.0%	\$65,910.00	\$6,000	\$71,910.00
Apr-23	378	1232	0	1115	117	0	-	9.5%	\$80,080.00	\$1,286	\$81,366.00
May-23	404	1359	0	1223	136	0	-	10.0%	\$88,335.00	\$1,158	\$89,492.75
Jun-23	476	1532	0	1,371	161	0	-	10.5%	\$99,580.00	\$1,446	\$101,026.00
Jan-Jun 2023	1,791	6,688	0	5,956	730	2		10.9%	\$434,720.00	\$12,430	\$447,150.00
FY23 Total	2,544	13,531	0	11,882	1,633	16		12.1%	\$879,515.00	\$22,768	\$902,282.50
				Participant Total (other than orphaned)				13,531			\$22,768
Monthly Average	1128										
				BERNCO Participation to date				Participants	Percentage	Cost	
								1,633	12.1%	\$106,145	
Participant Fee		\$ 65.00									
FY23 Budget		\$ 1,000,000.00									
Remaining Balance		\$ 97,717.50									
Unknown or Not Enough Info to Geocode (costs absorbed by COA)								2,544	18.80%	\$165,360	

All information in this report comes from ACT—Nichole Gwash (NGwash@ACTEnviro.com) by email. She will send an invoice, a list of residents (which must then be sent to Ben Sanborn for geocoding), a list of items processed, and any logs for drums and light bulbs & tubes.



Silt/Trash/Debris/Vegetation Removed from Arroyos & Catch Basins

Silt/Trash/Debris/Vegetation Removed from Arroyos & Catch Basins																
Cerro Colorado Landfill																
2022 ▶	July	August	September	October	November	December	2023 ▶	January	February	March	April	May	June			
	Trips	Trips	Trips	Trips	Trips	Trips		Trips	Trips	Trips	Trips	Trips	Trips	Trips	Trips	Qty.
Tandem	13	7	15	7	6	7		9	4	26	14	8	16	TOTAL	132	1,320.0 cubic yards
Bobtail	0	15	1	0	0	0		0	0	4	5	0	2	TOTAL	27	162.0 cubic yards
															TOTAL	1,482.0 cubic yards
TOTALS	13	22	16	7	6	7		9	4	30	19	8	18	TOTAL	159	
Southwest Landfill																
2022 ▶	July	August	September	October	November	December	2023 ▶	January	February	March	April	May	June			
	Trips	Trips	Trips	Trips	Trips	Trips		Trips	Trips	Trips	Trips	Trips	Trips	Trips	Trips	Qty.
Tandem	0	0	0	0	0	0		0	0	0	0	0	0	TOTAL	0	0.0 cubic yards
Bobtail	0	0	0	0	0	0		0	0	0	0	0	0	TOTAL	0	0.0 cubic yards
															TOTAL	0.0 cubic yards
TOTALS	0	0	0	0	0	0		0	0	0	0	0	0	TOTAL	0	

Fiscal Year 2023

Data Entered has been acquired from Supervisors' Section Spreadsheets which are based on Landfill Ticket Data

Reported In Calendar Year	Reporting Month	Reporting Section City East Side Sweeping		Reporting Section City West Side Sweeping		Reporting Section City Trouble Shooters		Reporting Section *Storms & Arroyos Sections	
		Tons	Cubic Yards	Tons	Cubic Yards	Tons	Cubic Yards	Tons	Cubic Yards
2022	July	297.65	240.00	242.29	260.00	11.65	52.00	94.23	130.00
2022	August	177.61	180.00	286.41	270.00	17.51	58.00	98.28	160.00
2022	September	161.12	170.00	167.63	200.00	24.52	52.00	150.56	156.00
2022	October	209.20	220.00	168.18	190.00	9.89	48.00	63.02	70.00
2022	November	160.19	240.00	191.58	270.00	35.97	46.00	21.45	60.00
2022	December	264.59	370.00	223.55	330.00	20.80	50.00	45.68	70.00
2023	January	160.47	200.00	306.71	330.00	78.99	94.00	72.32	90.00
2023	February	150.00	180.00	121.94	190.00	6.39	70.00	9.22	40.00
2023	March	228.56	230.00	223.69	250.00	20.81	60.00	282.40	284.00
2023	April	184.11	200.00	153.66	210.00	4.83	36.00	113.84	170.00
2023	May	196.56	250.00	176.50	230.00	10.73	58.00	94.48	80.00
2023	June	204.82	220.00	103.76	156.00	34.68	98.00	94.72	172.00
Section's Totals For FY2023 ►		City East Side Sweeping		City West Side Sweeping		City Trouble Shooters		*Storms & Arroyos Sections	
		Tons	Cubic Yards	Tons	Cubic Yards	Tons	Cubic Yards	Tons	Cubic Yards
		2,394.88	2,700.00	2,365.90	2,886.00	276.77	722.00	1,140.20	1,482.00
		\$71,846.40		\$70,977.00		\$8,338.50		\$34,206.00	

COA / DMD / SMD Trouble Shooters & East & West Side Sweeper Section's		Cost Paid Per	Total Paid
Combined Total Tons Reported for Fiscal Year 2023:		Ton	FY-2023
		5,037.55 Tons	\$30.00
COA / DMD / SMD Trouble Shooters & East & West Side Sweeper Section's			\$151,126.50
Combined Total Cubic Yards Reported for Fiscal Year 2023:		6,308.00 Cubic Yards	

COA / DMD / SMD Storm & Arroyo Maintenance Section's		Cost Paid Per	Total Paid
Combined Total Tons Reported for Fiscal Year 2023:		Ton	FY-2023
		1,140.20 Tons	\$30.00
COA / DMD / SMD Storm & Arroyo Maintenance Section's			\$34,206.00
Combined Total Cubic Yards Reported for Fiscal Year 2023:		1,482.00 Cubic Yards	

All Four Reporting Sections		Cost Paid Per	Total Paid
Combined Total Tons Reported for Fiscal Year 2023:		Ton	FY-2023
		6,177.75 Tons	\$30.00
All Four Reporting Sections			\$185,332.50
Combined Total Cubic Yards Reported for Fiscal Year 2023:		7,790.00 Cubic Yards	





ACT Environmental Services
208 Murray Road SE
Albuquerque, NM 87105
(505) 445-9400 ext. 410 Office
E-mail: mthornton@ACTEnviro.com

HHW Chemical Waste Inventory:

Project Name: Albuquerque/Bernalillo County Household Hazardous Waste Collection Event
5000 Balloon Fiesta Parkway
Albuquerque, NM 87113
Job Date: November 13, 2021
Client: City of Albuquerque/Bernalillo County
Report Date: January 25, 2022
Author: Melanie Thornton / Martin Aranda
Site Contact(s): Jake Daugherty

On November 13, 2021, ACT Environmental Services, and the City of Albuquerque/Bernalillo County, in a joint effort collected, segregated, packaged, labeled, transported, and disposed of 48,373 pounds of Household Hazardous Waste, and 10,380 pounds of Non-Regulated Solid Waste from 585 residents from residents within the Albuquerque/Bernalillo County at an average of 100.43 pounds of waste per customer.

This work was performed per the Scope of Work given to ACT by the City of Albuquerque/Bernalillo County. A copy of each HHW Chemical Waste Manifest/Bill of Ladings was provided to the City Representative at the time of collection.

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DOT Hazard Class	Subsidiary Risk	Types of Chemicals	Total Gross Weight	Number of Drums X Size of Drums	Treatment Technology
Non-Haz		Used motor oil & Antifreeze	8,262 lbs.	4 X 275 Portable Totes	Recycle
Non-RCRA/Non-DOT Regulated Material Solid		Solid waste, empty containers, trash	10,380 lbs.	4 X 40 Yard Bins	Landfill
Non-RCRA/Non-DOT Regulated Material Liquid		Latex Paint	27,280 lbs.	1 X 20 Yard Bin 1 x 30 Yard Bin	Landfill
2.1 – Flammable Gas		Aerosol Spray Cans	1,686 lbs.	3 X 275 Cubic Yard Box	Energy Recovery / Fuel Blending
3 – Flammable Liquid		Paint Related Material	3,511 lbs.	10 X 55 Gallon Metal Drum	Energy Recovery / Fuel Blending
3 – Flammable/Toxic Liquid	6.1 - Toxic	Captan, Diazinon	2,887 lbs.	16 X 55 Gallon Poly Drum	Energy Recovery / Fuel Blending
5.1 – Oxidizing Solids		Potassium Nitrate/Sodium Hypochlorite	12 lbs.	1 X 05 Gallon Poly Drum	Incineration
6.1 – Toxic Solid		Captan, Diazinon	944 lbs.	6 X 55 Gallon Poly Drum	Energy Recovery/Fuel Blending
8 – Corrosive (Acids)		Hydrochloric Acid, Sulfuric Acid	342 lbs.	2 X 55 Gallon Poly Drum	Stabilization / Landfill
8 – Corrosive (Basic)		Sodium Hydroxide, Potassium Hydroxide	1,491 lbs.	8 X 55 Gallon Poly Drum	Stabilization / Landfill
8 – Corrosive (Batteries)		Automotive Lead Batteries, NiCad, Lithium Ion, Alkaline	1,340 lbs.	1 x Wooden Pallet, 2 x 30 Gallon Poly Drum, 5 x 5 Gallon Poly Drums	Recycle
8 – Mercury		Mercury	5 lbs.	1 X 5 Gallon Poly Drum	Recycle
9 – Environmentally Hazardous		Fluorescent Light Bulbs	613 lbs.	9 x Cylinder Box & 1 x 55 Gallon Poly Drum	Recycle



Albuquerque/Bernalillo County Household Hazardous Waste Collection Event at Balloon Fiesta Park

Treatment Technology	Weight
Recycle	10,220 lbs.
Energy Recovery / Fuel Blending	9,028 lbs.
Incineration	12 lbs.
Landfill	39,493 lbs.

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Waste Total	Cost	Cost/lbs.
58,753 lbs.	\$40,663.75	\$1.44/lbs.

585 – Albuquerque/Bernalillo County Participants

We are committed to working with you in fulfilling the environmental needs of our communities.

Melanie Thornton
ACTEnviro Office Manager - ABQ

2022 Foothills Spring Cleanup Results (1 of 2)

2022 Foothills Spring Cleanup Results											
Location	Volunteers	Dog Poop (in Lbs.)	Trash (bags)	Trash * (cubic yards)	Mixed Recycling (bags)	Glass (5 gal buckets)	Aluminum (bags)	New Trail Built (miles)	Trail maintained (miles)	Notes:	
Rt 66	29			14.5	6	4	2	0.1		Large items included numerous tires and a mattress, 2 trail crews completed the a reroute	
Copper	51	40	5	0.9	1	1	0.33		0.5	4 trail crews did maintenance on .5 miles of trail. One cactus crew closed off several social trails	
Indian School	43	25	1	0.2	1	0.5	0		0.45	4 trail crews did maintenance on about .45 miles of trail. Two cactus crews planted hundreds of cactus cuttings to block social trails.	
Menaul	55	35	3	0.5	1	2.5	1		0.4	four trail crews did maintenance on about .4 miles of trail. Three cactus planting crews planted hundreds of cuttings to block off social trails	
Piedra Lisa	39	25	0.5	0.1	0.5	2	0.5		0.25	1 trail crew built 27 drain dips on .25 miles of trail. 2 rock crews built steps on the Canyon Trail, 1 cactus planting crew planted hundreds of cactus cuttings on a variety of short cuts, and 1 graffiti crew scrubbed graffiti off a rock outcrop.	
Embudito	31	20	1	0.2	1	0.33	0.25		0.2	1 trail crew built 20 drain dips and did general maintenance on .2 miles of trail, 1 rock crew reinforced several rock ramps on Trail 365, and 2 Cactus planting crews planted hundreds of cactus cuttings on several social trails adding up to .15 miles of trail closure.	
*trash bags converted to cubic yards and added to cubic yard total											
2022 River Cleanup											
	102			15	10	6	2			Filled a dump trailer, plus 4 pickup trucks. Large items: 12 tires, 5 shopping carts, and a vinyl kiddie pool	
2022 National Trails Day											
	100							0.04	1.4	4 crews planted cactus on short cuts and social trails 6 crews did maintenance on approximately 1.4 miles of trail 2 crews built rock retaining walls 1 crew built a trail reroute (about 190 feet) to replace several social trails several volunteers cleaning up dog poop and trash	

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city of albuquerque



2022 Foothills Spring Cleanup Results (2 of 2)

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Poop Fairy Signs

During FY22 we distributed 276 Poop Fairy signs to local residents. We also gave 250 to Parks and Open Space for posting.

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Mid Rio Grande Stormwater Quality Team



In fiscal year 2023, the Stormwater Quality Team attended the annual Corrales Harvest Festival, a rural community just north of Albuquerque, the Doggie Dash and Dawdle, an event that fundraises on behalf of the local Animal Humane.



Additionally, the group attended a number of community events in Albuquerque's South Valley and West Side. During each event educational rack cards and various promotional products were distributed.

The team also produced a Spanish section of the KeepTheRioGrand.com website.



And finally, the team created custom content and posts on Facebook.

Keep the Rio Grand
Published by Kayla Torres · June 25 ·
#FactFriday Vehicle fluids such as oil, gas, and antifreeze are the #1 surface water quality problems NATIONWIDE!
#KeepTheRioGrand #Albuquerque #NewMexico



Village of Corrales

The Village of Corrales has no municipal storm sewer system. To handle stormwater flows from development, engineered grading and drainage (G & D) plans are required prior to any residential construction that will disturb more than 1,000 square feet. Engineers may design berms, swales, retention ponds and other aspects to keep new impervious surface (roofed or paved) stormwater flows on the subject property and not running into streets or adjacent properties.

Within the Commercial zone, stormwater retention areas must be built into Site Development Plan drawings before those applications can be heard by the Planning and Zoning Commission.

In FY23, the Village saw 21 residential grading and drainage plans prior to issuing building permits. There were four Commercial Site Plans that incorporated drainage (primarily retention ponding) into their designs. One was the Village of Corrales administration complex, which added a new swale on the north side of the property along with the two existing retention areas.

This fiscal year, the Corrales Bosque Advisory Commission in conjunction with the Corrales Fire Department continued their efforts to encourage dog waste pick-up along popular pedestrian areas into the Bosque and elsewhere in the Village. There are nine waste bag stations and trash receptacles located at Bosque access gates, Camino de la Tierra (entrance to

popular Sand Dunes walking area) and at Quirks Lane. CBAC provided approximately 8,500 dog poop bags in/near the Bosque, and an additional 500 bags at the other location, greatly reducing the amount of dog waste otherwise in danger of polluting the acequias, canals or Rio Grande.

The glass recycling area continues to be amazingly successful. From April of 2022 through August 14, 2023, the Village has recycled 93.63 TONS of glass.

The Village is continuing the twice-a-year (spring and fall) community "Clean-Up" days, accepting non-hazardous and yard waste. Approximately 200 households per year participate. Our Code Enforcement Officer works with citizens throughout the year to have them remove trash, non-functional vehicles and other items that could leak fluids into the groundwater. There is no municipal water system; all structures are serviced by wells.

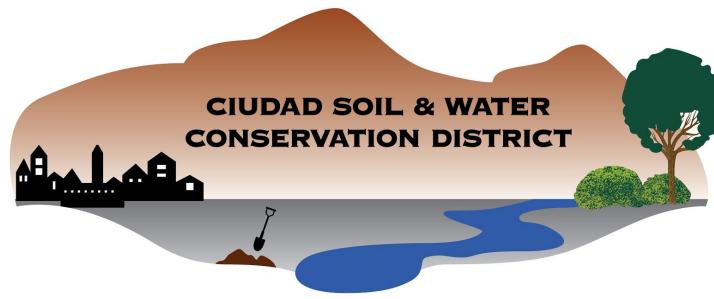
Every year during the Corrales Harvest Festival, which is attended by folks from throughout the metro, a Stormwater Team booth educates the public on the importance of keeping waste, oils, floatables and other items out of the river.

This year it was reported to the Village that a vehicle had leaked a significant amount of fluid along a public right-of-way, Tierra Encantada. Public Works used absorbents to clean up as much as possible.



Rio Rancho?

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Ciudad Soil & Water Conservation District

Non RX Stormwater Presentations 2022

Date	Times	RR or ES	Event	Presenter(s)	Visitors
4.23.2022	9:00am–12:00pm	RR	RiverXchange Community Day	Erin, Steve, Salema	10
6.4.2022	9:00am–12:00pm	RR	BernCo Master Naturalist Presentation	Steve, Erin	25
6.11.2022	9:00am–12:00pm	RR	GHH	BernCo OSD	12
6.13.2022	9:00am–12:00pm	RR	Shady Lakes	Erin, Steve, Jaren (Nature Niños)	45
6.18.2022	9:00am–12:00pm	RR	Phil Chacon Park	COA OSD – Nature in Your Neighborhood	did not attend
6.13.2022	10:00am–1:00pm	RR	Shady Lakes: Nature Niños Summer Camp	Steve, Jaren, Saleema (Nature Niños)	40
6.23&25.2022	6:00–7:30pm 9:00–11:00am		Residential Rainwater Harvesting 2.0 (Online & In-person at GHH)	Jim	45
6.30.2022	10:00am–1:00pm	RR	Shady Lakes: Nature Niños Summer Camp	Steve, Jaren, Saleema	75
7.16.2022	9:00am–12:00pm	RR	Alamosa Community Center	Erin, Steve (COA OSD – Nature in Your Neighborhood)	35
7.25.2022	10:00am–1:00pm	RR	Shady Lakes: Nature Niños Summer Camp	Erin, Steve	75
7.30.2022	9:00am–2:00pm	RR	Isleta Environmental Fair	Steve Glass, Tom Allen Jaren Peplinski	75
8.22 & 24.2022	10:00am–2:00pm & 9:00am–11:00pm	RR	UNM Welcome Back Days	Kolt, Thomas, Steve, Erin	100
8.27.2022	9:00am–12:00pm	ES	TBD	COA OSD- Nature in Your Neighborhood	
8.27.2022	9:00am–1:00pm	RR	Santa Ana Environmental Fair	Jaren, Theresa	
9.24.2022	9:00am–12:00pm	RR	TBD	Erin, Steve (COA OSD – Nature in Your Neighborhood)	





3rd Quarter Report 2022-2023

January- March

Submitted by: Education Manager

Erin Blaz

The RiverXchange Team: Erin Blaz, Theresa Aragon, Astrid Mooney

Participating Schools:

FUNDER	MRGSQT		SSCAFCA	
	SCHOOL - Number of classes	Number of Students	SCHOOL - Number of classes	Number of Students
Title 1 school	La Mesa - 4	58	MLK* - 4	113
	Valle Vista* - 2	43	Maggie Cordova* - 4	100
	Seven Bar* - 3	45		
	John Baker- 2	41		
	Zia*- 2	40	OUTDOOR EQUITY FUND	
	Monte Vista - 3	48	Puesta del Sol* - 5	105
	Cochiti* - 2	47		
	North Valley Academy - 3	50		
	Mission Ave*- 2	54		
	Bel-Air* - 2	46		
	Lavaland* - 1	20		
	San Antonito - 3	71		
	Chaparral* - 3	87		
TOTALS	32	650	13	318
RX Total Classes	45	RX Total Students	968	

Summary:

3rd Quarter: January- March are typically very active months for RiverXchange participants and staff. Pole planting with CABQ OSD occurs weekly, presentations are in full swing and this year, teachers were provided with a six week-long action project support campaign via weekly emails that contained summaries of each stage of the Earth Force process and resources. Theresa Aragon also developed and taught a new Agriculture lesson for APS classes since RiverXchange still has not found a partner with the capacity to serve the number of APS classes enrolled. The lesson focused on food waste, virtual water, and water conservation and was very much enjoyed by the classes. By the end of March, all but 2 RRPS classes had completed all the field trips. These field trips are rescheduled for May in partnership with Talking Talons Youth Leadership EPA field trips at the Tijeras Bio-Zone Education Center, along with Backyard Refuge and includes a stewardship component to help restore the Tijeras Creek riparian zone.

Mid-year: The 2nd quarter activities focused on scheduling and confirming presentations and the field trips; tracking presentations and scheduling reminder emails; and organizing the Earth Force *environmental action civics* process into an online classroom format on Canvas for teachers.

RiverXchange® remains focused on building meaningful watershed experiences for New Mexico students this year and has returned to a fully in person program for 2022-2023.

The agreement with the Middle Rio Grande Stormwater Quality Team (MRGSQT), including the contributions from Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA), provides funding for 38 classes this year. At the suggestion by SSCAFCA, Ciudad Soil and Water Conservation District (SWCD) applied for additional funds to support RiverXchange this year through the Outdoor Equity Fund Grant, and Ciudad SWCD was



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Mid-year: Staff are working on guidance and criteria for awards to be released in January.

Task 12: Collect and analyze teacher feedback.

Complete by May 2023. Status: **approaching**

Staff will revise the teacher feedback form and offer it to teachers by the end of April.

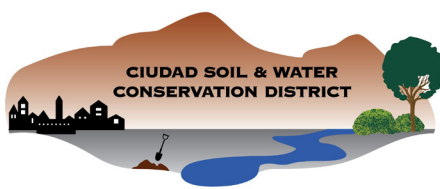
Task 13: Create, print and mail thank you cards to in-kind partners and certificates of recognition to teachers.

Complete during June 2023. Status: **approaching**

We will maintain correspondence with our in-kind partners throughout the school year and send thank you notes as needed.

Task 14: Reporting to sponsors.

3rd quarter report by April 2023. Final report by June 2023.



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Additionally, the Outdoor Equity Grant experienced some hold-ups in the procedure around securing the agreement for the grant, so one school - Puesta del Sol, only came on just at the end of September once we were able to confirm the grant. Around late September most schools had fully confirmed their participating classrooms in RiverXchange, with two schools confirming classes that still did not have a teacher. The other teachers at these schools desired for those students to participate in the program and offered to support those classes until they were assigned a teacher.

Of the 16 schools participating this year, 6 are completely new schools to RiverXchange - Bel Air, Mission Ave., Lavaland, San Antonito, Chaparral and Puesta del Sol.

Task 2: Review and revise curriculum.

Complete by September 2022. **Status: completed.**

RiverXchange staff are proud of this program's continued ability to meet the unique needs of 5th grade teachers in our region. Many elementary teachers suggest that they are the least comfortable teaching science subjects and others reflect that the district purchased science curriculum doesn't provide the same quality of experiences as RiverXchange. One of our most long-standing RiverXchange teachers shared with us that their school consistently scored higher than average on science testing scores and accounts that to their participation in RiverXchange.

This year the RiverXchange [website](https://www.ciudadswcd.org) was significantly updated in effort to improve participating teachers familiarity with, understanding of, and successful use of the RiverXchange curriculum, which is unlike many standard curricula as it blends outside presenters and field experiences with project-based learning. The RiverXchange website now reflects how the curriculum is broken down into 3 areas of study (and the comparative activities and associated leaders of those activities): Understanding a Watershed (Teacher-led, ensures the foundation of



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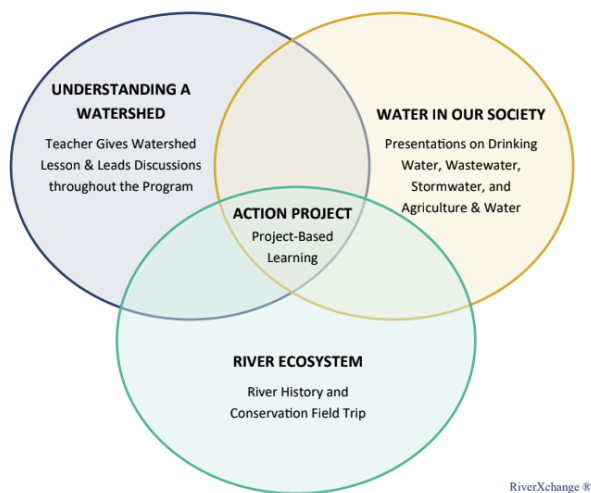
understanding a watershed with a Shower Curtain Watershed lesson or similar activity), Water in Our Society (Presentations with various agencies and presenters) and The River Ecosystem (Pre-lesson and field trip hosted by City of Albuquerque Open Space). These study areas have been defined in RiverXchange for many years through the Big Water Questions, which are suggested reflection prompts for students throughout the program. Using these three areas of study proved to be helpful in introducing RiverXchange to new teachers and refreshing experienced ones.

Most importantly, linking these 3 areas of study together is the Action Project. Using Project-based learning as a means to support student engagement in meaningful action in their watershed, the Action Project is a critical element of the RiverXchange curriculum. In its second year of delivery, previously called the capstone project, The Action Project aims to become a significant professional development opportunity for teachers as a means to deliver high quality STEM and civic engagement through project-based learning in their classroom. Students will benefit from the Action Project by acquiring a multitude of skills that are required to take meaningful action for watershed health. From interviewing stakeholders, collecting data, researching history, policy and practices around an issue, to reporting on and advocating for change through action, the Action Project will build on the core content of RiverXchange and help students understand what it takes to inspire, demand or be a leader for effective change.



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Task 3: Set teacher workshop dates and locations, review training agenda, order curriculum materials, and conduct workshops.

Complete by October 2022. **Status: completed.**

Two teacher workshops were held this year on September 23 and September 30 at the Open Space Visitor Center, with a total of 31 teachers in attendance. Teachers from Chaparral, San

Antonito and Puesta del Sol were unable to attend due to late registration to the program, however staff met with these teachers outside of the workshop to train them on the program and schedule their presentations.

This year's workshops featured BEMP educators Laura Pages and Annie Montes, who facilitated an activity called “Dabbling in Data.” In this activity, groundwater table data is recorded on graphs for multiple years to see seasonal trends and observe periods of drought or heavier than normal snowmelt or precipitation as a means to discuss the relationship between weather patterns, groundwater and ecosystem health. Highlighting BEMP as a collaborative partner with Ciudad SWCD and RiverXchange was helpful for teachers to see how our program fits into the larger landscape of watershed education in our community and how students will eventually build on RiverXchange in future outdoor and environmental education experiences.

The workshop also focused on the framework for The Action Project with teachers, with discussion in small groups on how to implement the project in the classroom. Reflections from that discussion was shared in the larger group, and while feedback was positive and enthusiastic,



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it demonstrated the need for even more clear and direct guidance on the framework, which was helpful for staff to understand so we can find a way to meet that need.

Task 4: Review Action Project format and reporting system.

Goal: Complete by September 2022. **Status:** **in process**

3rd quarter: With around half of the teachers present on the CANVAS platform to explore and utilize the Earth Force process, it was decided to do a six week email campaign to encourage teacher participation in the Action Project, continuing to use the Earth Force process as the guide. These emails also served as a reminder for the deadline to submit summaries of the action projects, along with guiding questions for submissions, and the award prizes (pizza party gift certificates for the first 10 classes to submit). Submissions were due March 17 before spring break and 10 teachers submitted videos or recordings of their students answering questions about their projects.

Mid-year: In October, Erin Blaz attended the North American Association of Environmental Education’s national conference in Tucson, AZ. At this conference, Ms. Blaz was introduced to Earth Force and their “Environmental Action Civics” process. This process is a fully developed framework for completing an action project and aligns with the RiverXchange Action Project Framework that was in development on our end. Earth Force freely shares its process for educational purposes and the integration of this process into RiverXchange has been discussed with their team. While our original framework for the Action Project included 5 steps and guiding questions, the Earth Force process has 6 steps with adjoining lesson plans, videos, activity templates, and helpful tips for each step. An overview of the Earth Force Resources can be found [here](#).



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The project reporting system is in development. We are using a free online learning management system called Canvas to post the Earth Force Learning Process, much like an online class for teachers to follow and implement the process. Canvas allows teachers to upload content such as media files, which we are hoping to obtain for the Children's Radio Hour show which will feature RiverXchange classes for their Earth Day segment.

Task 5: Review, update and distribute pre-survey to all classes before presentations begin and track completion.

Begin August 2022. On-going through Dec 2023. **Status: completed.**

This year's survey was updated slightly with a change to the possible answers being narrowed to mostly True, False or I haven't learned this yet. Rather than allowing students to only show a scaled response that either shows correct or incorrect knowledge, we are attempting to offer "I haven't learned this yet" as a strategy to show authentic learning in post-survey.

The Pre-Survey can be viewed from : www.riverxchange.com/Survey

Task 6: Monitor, coordinate and provide support to teachers for Action Projects.

Begin December 2022. On-going through May 2023. **Status: approaching.**

3rd Quarter: As stated above, a six week email campaign was delivered to all teachers; each week focused on one of the six stages of the Earth Force process with supporting resources. As the Earth Force process is new to RiverXchange, we wanted to present the resources in a few different ways to increase access, while also being cautious of overwhelming teachers with emails and information. Additionally, RiverXchange staff meet with Earth Force representatives to discuss best practices for delivering Earth Force and getting action project reports or



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summaries by students and teachers. RiverXchange staff was also invited to participate in the Earth Force Train the Trainer program in June, which offers a \$500 stipend for participation and demonstration of Earth Force implementation.

Mid year: Staff is making every effort to ensure teachers have easy access to the Earth Force materials as guidance for the Action Project. On November 30, staff hosted an Action Project Discussion on Zoom to review the Earth Force process, orient teachers to the Canvas classroom and show how to upload recordings of students reporting on their projects. Sixteen teachers attended this discussion and 19 teachers have joined the Canvas classroom.

Task 7: Coordinate field trips.

Begin September 2022. On-going through May 2023. **Status:** in process.

Field trip coordination is in progress with our main point person, Ellie Althoff, from CABQ-OSD. Ellie will continue to offer a field trip pre-lesson this year, focused on the River of Change from the Bosque Education Guide. Ellie is coordinating the field trips so that she will offer the pre-lesson the same week as the pole planting field trip. This is an exciting addition to the program as students will be taking immediate action by pole planting native trees after they learn about the impacts of flood control measures on the Bosque and riparian ecosystem of the Rio Grande. Field trips will begin in December and run through March on Thursdays and Fridays.

3rd Quarter: This year the pole planting took place in two locations. For January and February we planted at the Shining River Open Space, just south of Paseo del Norte on the east side of the



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Rio Grande. For March we moved to Gabaldon, just north of the 1-40 and east of the river. This location change was unique, and reflected new staffing at CABQ-OSD, however the desire to ensure a positive experience for everyone was consistent with prior years. The Shining River planting location was extremely challenging for students, adults and staff. The holes were extremely sandy, which meant they were hard to dig out with the hand augers and collapsed often. Most students struggled to get one tree in over the course of the field trip. Although it was challenging, it was possibly even more rewarding once they finished that one, hard-earned tree. Classes that planted in March still voiced an equal number of complaints over the hard work, even though they were able to get up to 4 trees in the ground per group! It goes to show that it is less about the number of trees they get and more about teaching perseverance with the students. It was also noticeable that many classes came to the pole planting with increased understanding of the flood control and management strategies that impact the Bosque ecosystem which informed why they were there, due to the pre-field trip lesson with CABQ-OSD.

Mid-year: Two field trips took place in December in the Bosque off of Paseo del Norte and Rio Grande. 68 students attended and 43 cottonwoods were planted. This site has been confirmed for January plantings, but Open Space is still evaluating the best location for Feb and March plantings. This is unique as most years OSD confirms all pole planting locations at once. Bus costs have increased significantly and staff is working on finding the best vendors to service the field trips.

Task 8: Coordinate classroom guest speakers.

Begin September 2022. On-going through May 2023. **Status:** in process.



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With the program moving to in-person presentations this year, coordinating and getting presenters back on board took a little extra effort as some had not presented for the last two years as they offered a video recording of the presentation instead (i.e. Rio Rancho Utilities, Sandia Labs). Additionally, both APS and RRPS required different levels of background checks. Ample notice was given to those presenters in order to complete those requirements.

APS

Drinking Water and Wastewater Presenters - Ellie Garcia & Rhea Trotman from ABCWUA

Stormwater - Sandia Labs, Leads- John Kay and Nora Wintermute and other various presenters.

Agriculture- Still TBD, BernCo Coop Ext can not serve the 32 classes. We are working to find a solution, as this continues to be a challenging presentation to fill in Albuquerque.

Field Trips and Pre-Lesson, Ellie Althoff and Kyle Bality of CABQ-OSD

RRPS

Drinking Water and Wastewater Presenters - Ellie Garcia. ABCWUA educators generously offered to cover RRPS this year, as the CoRR Utility dept was not yet ready due to new staff and capacity issues.

Stormwater - John Stomp and Andy Edmondson at SSCAFCA

Agriculture- Steve Lucero and Rachel Zweig, Sandoval County Coop Ext.

Field Trips and Pre-Lesson, Ellie Althoff and Kyle Bality of CABQ-OSD

3rd quarter: As is common with such a busy time of presentations, coordination of reschedules between presenters and classes probably happens the most during the 3rd quarter. Theresa Aragon managed these communications smoothly, while also designing a new agriculture + water lesson and teaching it to every APS class in RiverXchange. This was possible due to field



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trip leader funds that weren't utilized now that all pole planting field trips are for two classes at a time, rather than some being for one class only, which reduces the number of total field trips.

Mid-year: All presentations, except Agriculture for APS have been scheduled and confirmed with presenters and classrooms. RiverXchange staff are exploring options to present the Agriculture themselves, as it may be more efficient time and budget wise than seeking new partnerships with little time left to schedule.

Task 9: Review and track Action Project progress

Begin December 2022. On-going through May 2023. **Status:** in process.

3rd quarter: While the initial CANVAS participation by teachers in the 2nd quarter was encouraging, staff have only had one teacher upload any action project recording information on this platform. With Theresa visiting many classes in APS for the Agriculture Presentation and supporting the Pre-Lesson in RRPS, she was able to talk to teachers directly to encourage submissions and take videos herself to submit to the Children's Radio Hour. We were able to gather videos and voice recordings from 10 classes. This is definitely an area that needs evaluation and improvement, as it is difficult to retrieve details about each classroom's project as we are not really there to capture their work.

Mid-year: Staff have shared with teachers the importance of documenting the action projects along the process and have designated a place to upload recordings, documents or pictures to the Canvas classroom. The Canvas platform became accessible to teachers at the end of November and with December being a busy month, we expect to see more to report on in the 3rd quarter.



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Task 10: Distribute post-survey to classes after they complete presentations and field trip, complete metrics evaluation and review.

Begin February 2023. On-going through April 2023. **Status: approaching.**

3rd quarter: A few classes have completed their presentations and post-surveys are being distributed.

Task 11: Review Action Projects for RiverXchange Excellence and award winners.

April 2023. **Status: approaching.**

3rd quarter: This year, in collaboration with the Children's Radio Hour, we are featuring students discussing their Action Projects on the Earth Day show in April. Our initial intention was to incentivize the classes with a feature on the Children's Radio Hour as an award for teachers to submit their projects. However, as a result of few audio and video submissions received, we separated the pizza party awards and radio feature to boost overall project submissions by the deadline. In addition to the awards incentive, teachers were given the opportunity to submit their progress gradually and were encouraged to seek assistance from RiverXchange staff throughout each step of the Earth Force process. The weekly Earth Force email campaign was key in reinvigorating participation in sharing class's Action Projects and delivering specific criteria to the teachers with the flexibility of incorporating their own process.

While presentations in the classroom began, students started making connections to the big water questions and how it relates to problems they were noticing in their own community. Many students jumped into action and started brainstorming their Action Projects by interviewing staff and students about the environmental issues they are trying to solve.



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Mid-year: Staff are working on guidance and criteria for awards to be released in January.

Task 12: Collect and analyze teacher feedback.

Complete by May 2023. Status: **approaching**

Staff will revise the teacher feedback form and offer it to teachers by the end of April.

Task 13: Create, print and mail thank you cards to in-kind partners and certificates of recognition to teachers.

Complete during June 2023. Status: **approaching**

We will maintain correspondence with our in-kind partners throughout the school year and send thank you notes as needed.

Task 14: Reporting to sponsors.

3rd quarter report by April 2023. Final report by June 2023.



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Mid-year Report 2022-2023

October-December

Submitted by: Education Manager

Erin Blaz

The RiverXchange Team: Erin Blaz, Theresa Aragon, Astrid Mooney

Participating Schools:

FUNDER	MRGSQT		SSCAFCA	
	SCHOOL - Number of classes	Number of Students	SCHOOL - Number of classes	Number of Students
Title 1 school	La Mesa - 4	58	MLK* - 4	113
	Valle Vista* - 2	43	Maggie Cordova* - 4	100
	Seven Bar* - 3	45		
	John Baker- 2	41		
	Zia*- 2	40	OUTDOOR EQUITY FUND	
	Monte Vista - 3	48	Puesta del Sol* - 5	105
	Cochiti* - 2	47		
	North Valley Academy - 3	50		
	Mission Ave*- 2	54		
	Bel-Air* - 2	46		
	Lavaland* - 1	20		
	San Antonito - 3	71		
	Chaparral* - 3	87		
TOTALS	32	650	13	318
RX Total Classes	45	RX Total Students	968	

Summary:

Mid-year: The 2nd quarter activities focused on scheduling and confirming presentations and the field trips; tracking presentations and scheduling reminder emails; and organizing the Earth Force *environmental action civics* process into an online classroom format on Canvas for teachers.

RiverXchange® remains focused on building meaningful watershed experiences for New Mexico students this year and has returned to a fully in person program for 2022-2023.

The agreement with the Middle Rio Grande Stormwater Quality Team (MRGSQT), including the contributions from Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA), provides funding for 38 classes this year. At the suggestion by SSCAFCA, Ciudad Soil and Water Conservation District (SWCD) applied for additional funds to support RiverXchange this year through the Outdoor Equity Fund Grant, and Ciudad SWCD was successfully awarded the full request of \$9,650.00 to support additional classes. The Outdoor Equity Funding also supports a review of practices for equity and inclusion in our program as well as the strengthening of those practices. In total, by the end of September the final numbers are 45 classes, with 968 students participating. Twelve out of the sixteen schools are designated Title I.

Additionally, during the 1st quarter Ciudad SWCD employed Jessica “Saleema” Robinson as an Education Assistant to support our education programs. During the first quarter Saleema supported curriculum development for RiverXchange. Due to other opportunities, Saleema’s time with Ciudad was short lived. However we were able to hire Theresa Aragon, a biologist and educator, to fulfill a role as Education Coordinator. Theresa has provided direct



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coordination and planning support for RiverXchange and remains employed with Ciudad SWCD.

Task 1: Recruit and select NM classes.

Complete by September 2022. **Status: completed.**

This year's recruitment for RiverXchange was met with a few obstacles. We found this year that many teachers' positions were changed at the beginning of the semester and in some schools all members of the prior 5th grade teaching cohort were in new positions. This made it difficult to predict how many classes from some schools would be joining RiverXchange, and if some schools would return at all. Colinas del Norte and Sandia Vista, both of whom have been with RiverXchange for at least 4 or more years and had significant teacher turnover, did not respond to our invitations to the program. As a result of the teacher scramble that ensued at the beginning of the year, RiverXchange staff reached out to presenters to see if they had contacts with schools that would be good candidates for RiverXchange. This proved to be a worthy effort because we were met with great interest, and only had to put two schools on the waitlist. Additionally, the Outdoor Equity Grant experienced some hold-ups in the procedure around securing the agreement for the grant, so one school - Puesta del Sol, only came on just at the end of September once we were able to confirm the grant. Around late September most schools had fully confirmed their participating classrooms in RiverXchange, with two schools confirming classes that still did not have a teacher. The other teachers at these schools desired for those students to participate in the program and offered to support those classes until they were assigned a teacher.

Of the 16 schools participating this year, 6 are completely new schools to RiverXchange - Bel Air, Mission Ave., Lavaland, San Antonito, Chaparral and Puesta del Sol.



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Task 2: Review and revise curriculum.

Complete by September 2022. **Status: completed.**

RiverXchange staff are proud of this program's continued ability to meet the unique needs of 5th grade teachers in our region. Many elementary teachers suggest that they are the least comfortable teaching science subjects and others reflect that the district purchased science curriculum doesn't provide the same quality of experiences as RiverXchange. One of our most long-standing RiverXchange teachers shared with us that their school consistently scored higher than average on science testing scores and accounts that to their participation in RiverXchange.

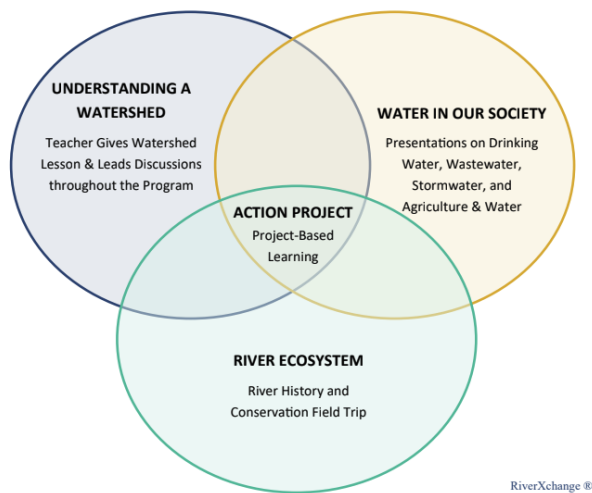
This year the RiverXchange [website](#) was significantly updated in effort to improve participating teachers familiarity with, understanding of, and successful use of the RiverXchange curriculum, which is unlike many standard curricula as it blends outside presenters and field experiences with project-based learning. The RiverXchange website now reflects how the curriculum is broken down into 3 areas of study (and the comparative activities and associated leaders of those activities): Understanding a Watershed (Teacher-led, ensures the foundation of understanding a watershed with a Shower Curtain Watershed lesson or similar activity), Water in Our Society (Presentations with various agencies and presenters) and The River Ecosystem (Pre-lesson and field trip hosted by City of Albuquerque Open Space). These study areas have been defined in RiverXchange for many years through the Big Water Questions, which are suggested reflection prompts for students throughout the program. Using these three areas of study proved to be helpful in introducing RiverXchange to new teachers and refreshing experienced ones.



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Most importantly, linking these 3 areas of study together is the Action Project. Using Project-based learning as a means to support student engagement in meaningful action in their watershed, the Action Project is a critical element of the RiverXchange curriculum. In its second year of delivery, previously called the capstone project, The Action Project aims to become a significant professional development opportunity for teachers as a means to deliver

high quality STEM and civic engagement through project-based learning in their classroom. Students will benefit from the Action Project by acquiring a multitude of skills that are required to take meaningful action for watershed health. From interviewing stakeholders, collecting data, researching history, policy and practices around an issue, to reporting on and advocating for change through action, the Action Project will build on the core content of RiverXchange and help students understand what it takes to inspire, demand or be a leader for effective change.

Task 3: Set teacher workshop dates and locations, review training agenda, order curriculum materials, and conduct workshops.

Complete by October 2022. **Status: completed.**

Two teacher workshops were held this year on September 23 and September 30 at the Open Space Visitor Center, with a total of 31 teachers in attendance. Teachers from Chaparral, San Antonito and Puesta del Sol were unable to attend due to late registration to the program,



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however staff met with these teachers outside of the workshop to train them on the program and schedule their presentations.

This year's workshops featured BEMP educators Laura Pages and Annie Montes, who facilitated an activity called “Dabbling in Data.” In this activity, groundwater table data is recorded on graphs for multiple years to see seasonal trends and observe periods of drought or heavier than normal snowmelt or precipitation as a means to discuss the relationship between weather patterns, groundwater and ecosystem health. Highlighting BEMP as a collaborative partner with Ciudad SWCD and RiverXchange was helpful for teachers to see how our program fits into the larger landscape of watershed education in our community and how students will eventually build on RiverXchange in future outdoor and environmental education experiences.

The workshop also focused on the framework for The Action Project with teachers, with discussion in small groups on how to implement the project in the classroom. Reflections from that discussion was shared in the larger group, and while feedback was positive and enthusiastic, it demonstrated the need for even more clear and direct guidance on the framework, which was helpful for staff to understand so we can find a way to meet that need.

Task 4: Review Action Project format and reporting system.

Goal: Complete by September 2022. **Status:** in process

Mid-year: In October, Erin Blaz attended the North American Association of Environmental Education’s national conference in Tucson, AZ. At this conference, Ms. Blaz was introduced to Earth Force and their “Environmental Action Civics” process. This process is a fully developed framework for completing an action project and aligns with the RiverXchange Action Project Framework that was in development on our end. Earth Force freely shares its process for educational purposes and the integration of this process into RiverXchange has been discussed



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with their team. While our original framework for the Action Project included 5 steps and guiding questions, the Earth Force process has 6 steps with adjoining lesson plans, videos, activity templates, and helpful tips for each step. An overview of the Earth Force Resources can be found [here](#).

The project reporting system is in development. We are using a free online learning management system called Canvas to post the Earth Force Learning Process, much like an online class for teachers to follow and implement the process. Canvas allows teachers to upload content such as media files, which we are hoping to obtain for the Children's Radio Hour show which will feature RiverXchange classes for their Earth Day segment.

Task 5: Review, update and distribute pre-survey to all classes before presentations begin and track completion.

Begin August 2022. On-going through Dec 2023. **Status: completed.**

This year's survey was updated slightly with a change to the possible answers being narrowed to mostly True, False or I haven't learned this yet. Rather than allowing students to only show a scaled response that either shows correct or incorrect knowledge, we are attempting to offer "I haven't learned this yet" as a strategy to show authentic learning in post-survey.

The Pre-Survey can be viewed from : www.riverxchange.com/Survey

Task 6: Monitor, coordinate and provide support to teachers for Action Projects.

Begin December 2022. On-going through May 2023. **Status: approaching.**

Mid year: Staff is making every effort to ensure teachers have easy access to the Earth Force materials as guidance for the Action Project. On November 30, staff hosted an Action Project



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Discussion on Zoom to review the Earth Force process, orient teachers to the Canvas classroom and show how to upload recordings of students reporting on their projects. Sixteen teachers attended this discussion and 19 teachers have joined the Canvas classroom.

Task 7: Coordinate field trips.

Begin September 2022. On-going through May 2023. **Status:** **in process.**

Field trip coordination is in progress with our main point person, Ellie Althoff, from CABQ-OSD. Ellie will continue to offer a field trip pre-lesson this year, focused on the River of Change from the Bosque Education Guide. Ellie is coordinating the field trips so that she will offer the pre-lesson the same week as the pole planting field trip. This is an exciting addition to the program as students will be taking immediate action by pole planting native trees after they learn about the impacts of flood control measures on the Bosque and riparian ecosystem of the Rio Grande. Field trips will begin in December and run through March on Thursdays and Fridays.

Mid-year: Two field trips took place in December in the Bosque off of Paseo del Norte and Rio Grande. 68 students attended and 43 cottonwoods were planted. This site has been confirmed for January plantings, but Open Space is still evaluating the best location for Feb and March plantings. This is unique as most years OSD confirms all pole planting locations at once. Bus costs have increased significantly and staff is working on finding the best vendors to service the field trips.

Task 8: Coordinate classroom guest speakers.

Begin September 2022. On-going through May 2023. **Status:** **in process.**



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With the program moving to in-person presentations this year, coordinating and getting presenters back on board took a little extra effort as some had not presented for the last two years as they offered a video recording of the presentation instead (i.e. Rio Rancho Utilities, Sandia Labs). Additionally, both APS and RRPS required different levels of background checks. Ample notice was given to those presenters in order to complete those requirements.

APS

Drinking Water and Wastewater Presenters - Ellie Garcia & Rhea Trotman from ABCWUA

Stormwater - Sandia Labs, Leads- John Kay and Nora Wintermute and other various presenters.

Agriculture- Still TBD, BernCo Coop Ext can not serve the 32 classes. We are working to find a solution, as this continues to be a challenging presentation to fill in Albuquerque.

Field Trips and Pre-Lesson, Ellie Althoff and Kyle Bality of CABQ-OSD

RRPS

Drinking Water and Wastewater Presenters - Ellie Garcia. ABCWUA educators generously offered to cover RRPS this year, as the CoRR Utility dept was not yet ready due to new staff and capacity issues.

Stormwater - John Stomp and Andy Edmondson at SSCAFCA

Agriculture- Steve Lucero and Rachel Zweig, Sandoval County Coop Ext.

Field Trips and Pre-Lesson, Ellie Althoff and Kyle Bality of CABQ-OSD

Mid-year: All presentations, except Agriculture for APS have been scheduled and confirmed with presenters and classrooms. RiverXchange staff are exploring options to present the



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Agriculture themselves, as it may be more efficient time and budget wise than seeking new partnerships with little time left to schedule.

Task 9: Review and track Action Project progress

Begin December 2022. On-going through May 2023. **Status: in process.**

Tracking and reporting will begin in December.

Mid-year: Staff have shared with teachers the importance of documenting the action projects along the process and have designated a place to upload recordings, documents or pictures to the Canvas classroom. The Canvas platform became accessible to teachers at the end of November and with December being a busy month, we expect to see more to report on in the 3rd quarter.

Task 10: Distribute post-survey to classes after they complete presentations and field trip, complete metrics evaluation and review.

Begin February 2023. On-going through April 2023. **Status: approaching.**

Post- surveys will be distributed as soon as classes finish their presentations and field trip.

Task 11: Review Action Projects for RiverXchange Excellence and award winners.

April 2023. **Status: approaching.**

This year, in collaboration with the Children's Radio Hour, we are hoping to feature students discussing their Action Projects on the Earth Day show in April.



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Mid-year: Staff are working on guidance and criteria for awards to be released in January.

Task 12: Collect and analyze teacher feedback.

Complete by May 2023. Status: **approaching**

Staff will revise the teacher feedback form and offer it to teachers by the end of April.

Task 13: Create, print and mail thank you cards to in-kind partners and certificates of recognition to teachers.

Complete during June 2023. Status: **approaching**

We will maintain correspondence with our in-kind partners throughout the school year and send thank you notes as needed.

Task 14: Reporting to sponsors.

Midyear report by January 31, 2023. Final report by June 1, 2023.



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insert RiverXchange EOY Report (34 pages)

Share the Message



SSCAFCA shares social media messages from the Mid Rio Grande Stormwater Quality Team on our own Social Media pages. We also post and place our own Stormwater Quality Messaging on our social media pages.



Arroyo Awareness Month July, 2023

Heightening the public's awareness
of the many functions of arroyos.



**Southern Sandoval County
Arroyo Flood Control Authority**
1041 Commercial Drive SE • Rio Rancho, NM 87124
Ph (505) 892-8431 (7246) • Fax (505) 892-7241

BOARD OF DIRECTORS
Renee Albemarle
John Conway
Mark Gonsky
Cassandra D'Antonio
James P. Fahey Jr.
EXECUTIVE ENGINEER
David Gutierrez, P.E.

RESOLUTION 2023-05 DECLARATION OF ARROYO AWARENESS MONTH, JULY 2023

WHEREAS, authority is granted to the SSCAFCA Board of Directors to make and pass resolutions and orders on behalf of the Authority not repugnant to the provisions of the Southern Sandoval County Flood Control Act (72-19-1 to 72-19-103, NMSA 1978);

WHEREAS, the Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA) is an independent corporate political body with an elected board entrusted with flood and storm water control;

WHEREAS, SSCAFCA is responsible for the major arroyos within our jurisdiction and in addition to their use for moving stormwater through the drainage system wishes to also make people aware of their use as an amenity and a community resource;

WHEREAS, SSCAFCA acquires, improves, maintains, and operates flood and storm water control facilities on arroyos and watersheds that enter, originate in, or cross the Town of Bernalillo;

WHEREAS, SSCAFCA works together with the communities within its jurisdiction to educate individuals and businesses about reducing stormwater pollution by keeping trash and other pollutants out of our arroyos;

WHEREAS, given the pattern of brief, but intense, summer storms, there is danger from flooding and erosion associated with arroyos that the community should be aware of;

WHEREAS, SSCAFCA has researched the value of the natural arroyos in its jurisdiction with regard to their ability to infiltrate stormwater into groundwater and found that they are highly effective conduits for infiltration;

WHEREAS, SSCAFCA wishes to maintain arroyos in their natural state, whenever possible, with little or no structural improvement, allowing infiltration; and

WHEREAS, everyone will benefit from a greater awareness of the benefits of natural arroyos.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE SOUTHERN SANDOVAL COUNTY ARROYO FLOOD CONTROL AUTHORITY THAT

PROCLAMATION TOWN OF BERNALILLO ARROYO AWARENESS MONTH

WHEREAS: the Town of Bernalillo works with the Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA) on flood and stormwater control;

WHEREAS: SSCAFCA is responsible for the major arroyos within our jurisdiction and, in addition to their ability for moving stormwater through the Town of Bernalillo the governing body wishes to also make people aware of their use as an amenity and a community resource;

WHEREAS: SSCAFCA acquires, improves, maintains, and operates flood and storm water control facilities on arroyos and watersheds that enter, originate in, or cross the Town of Bernalillo;

WHEREAS: given the pattern of brief, but intense, summer storms, there is danger from flooding and erosion associated with arroyos that the community should be aware of; and

WHEREAS: the Town of Bernalillo and SSCAFCA work together to educate individuals and businesses about reducing stormwater pollution by keeping trash and other pollutants out of our arroyos;

WHEREAS: SSCAFCA has researched the value of the natural arroyos in its jurisdiction with regard to their ability to infiltrate stormwater into groundwater and found that they are highly effective conduits for infiltration and therefore strives to maintain arroyos in as natural a state as possible;

WHEREAS: Arroyos serve many functions, from flood control to groundwater recharge to serving as a multi-use open space corridor that can be enjoyed by the public when not being used for flood control purposes; and

WHEREAS: everyone will benefit from a greater awareness of the benefits of natural arroyos.

NOW, THEREFORE, BE IT RESOLVED THAT: Jack Torres as Mayor of the Town of Bernalillo, do hereby recognize July 2023 as Arroyo Awareness Month in the Town of Bernalillo and encourage residents to learn more about the arroyos in our community and the mission of the Southern Sandoval County Arroyo Flood Control Authority.

In witness thereof, I have hereunto set my hand and caused the Seal of the Town of Bernalillo to be affixed this 6th day of July 2023.



Jack Torres
Jack Torres
Mayor of the Town of Bernalillo



VILLAGE OF CORRALES PROCLAMATION NO. 23-06

DESIGNATING JULY 2023 AS ARROYO AWARENESS MONTH IN THE VILLAGE OF CORRALES

WHEREAS, The Village of Corrales works with the Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA) on flood and stormwater control; and

WHEREAS, SSCAFCA is responsible for the major arroyos within our jurisdiction and, in addition to their utility for moving stormwater through the Village of Corrales, the Governing Body wishes to also make people aware of their use as an amenity and a community resource; and

WHEREAS, SSCAFCA acquires, improves, maintains, and operates flood and storm water control facilities on arroyos and watersheds that enter, originate in, or cross the Village of Corrales; and

WHEREAS, Given the pattern of brief, but intense, summer storms, there is danger from flooding and erosion associated with arroyos that the community should be aware of; and

WHEREAS, The Village of Corrales and SSCAFCA work together to educate individuals and businesses about reducing stormwater pollution by keeping trash and other pollutants out of our arroyos; and

WHEREAS, SSCAFCA has researched the value of the natural arroyos in its jurisdiction with regard to their ability to infiltrate stormwater into groundwater and found that they are highly effective conduits for infiltration and therefore strives to maintain arroyos in as natural a state as possible; and

WHEREAS, Arroyos serve many functions, from flood control to groundwater recharge to serving as a multi-use open space corridor that can be enjoyed by the public when not being used for flood control purposes; and

WHEREAS, Everyone will benefit from a greater awareness of the benefits of natural arroyos.

NOW, THEREFORE, I, James F. Fahey, Jr., Mayor of the Village of Corrales, do hereby recognize July 2023 as Arroyo Awareness month in the Village of Corrales and encourage residents to learn more about the arroyos in our community and the mission of the Southern Sandoval County Arroyo Flood Control Authority.

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EDUCATION & OUTREACH & ENGAGEMENT



Tour of the HJC for members of the Meadowlark Senior Center



Talking to the Sandoval County Master Gardners



Meeting with the Mariposa homeowners Association

EDUCATION & ENGAGEMENT



Stormwater Presentation

Multiple presentations at Rio Rancho Public Schools



Yard Signs available upon request

Clean, repair and deliver the Stormwater Kiosk to various locations

HARVEY JONES CHANNEL OUTFALL

A low-impact development project which leveraged treated wastewater effluent and stormwater to establish a wetland on the banks of the Rio Grande

WETLANDS ARE AMONG THE MOST EFFECTIVE IN TERMS OF POLLUTANT REMOVAL AND ALSO OFFER AESTHETIC AND HABITAT VALUE.



Arroyo Classroom

Mid-year report 2022-2023

October-December

Submitted by: Education Manager
Erin Blaz

The Arroyo Classroom Team: Erin Blaz, Theresa Aragon, Astrid Mooney

Participating Schools:

	SCHOOL	Number of classes	Number of Students
Title I*	Enchanted Hills Elem.	6	126
	Martin Luther King Elem.*	5	100
	Sandia Vista Elem.	6	141
	Maggie Cordova Elem.*	6	119
	Cielo Azul Elem.*	5	108
	Puesta del Sol Elem.*	5	103
	Colinas del Norte*	5	107
	TOTALS	38	804

Task 1: Recruit and select classes.

Complete by September 2022.

Status: **completed.**

Recruitment was exciting this year as all the schools we reached out responded with interest in the program, including Cielo Azul who did not participate in 2021-2022. Arroyo Classroom participants generally include the whole 3rd grade cohort, so offering the program to a school means that serving the whole grade level doesn't always line up exactly with the number of classes we target in our agreement with MRGSQT & SSCAFCA. This year, as class sizes and teachers shuffled around much like RiverXchange, we ended up with 38 classes and 804 students. Since this is 3 more classes than the 35 in our agreement with the funders and we compensate presenters for all 4 presentations in this program, Ciudad SWCD is working to figure out a solution to the budget increase for presentations that will need to be covered. Ciudad SWCD will propose solutions to the funders before any budget adjustments are made.

Task 2: Review and revise evaluation and curriculum.

Complete by September 2022.

Status: **completed.**

The pre and post survey was revised, with a few slight changes to reflect our guest speakers program this year. The answer option "I haven't learned this yet" was also added to the Arroyo Classroom survey, as it was the RiverXchange survey.

Task 3: Coordinate classroom guest speakers.

Begin September 2022. On-going through May 2023. Status: **in process.**

All presentations are resuming in person programming this year. All presentations have been fully scheduled.

This year Hawks Aloft will be the only outside contractor for the program. Hawks Aloft is a great partner for this presentation as they have a team of educators and a variety of birds for the presentation. Unfortunately, they have informed us that in future years they will not be able to perform this service at the current compensation rate.

Justin Stevenson of RD Wildlife and our Bat presenter has confirmed he is unavailable this year, but hopes to resume involvement in the program in the future. Theresa Aragon, a biologist and educator, now formally employed with Ciudad SWCD, offered a Reptile/Arthropod presentation for Arroyo Classroom last year with Nature Matters and so she will be offering a similar presentation this year.



The Watershed presentation and Arroyo Walk/Field trip will be offered by Erin Blaz. Arroyo Walks have been scheduled in the fall this year to ensure they are completed (in case any pandemic related issues change school policies) and to explore if holding the walk first has any benefits on the following presentations.

Mid-year: All presentations have been scheduled. We met some challenges this year with scheduling the Bird presentations with Hawks Aloft. Once everything was scheduled and Hawks Aloft reviewed the schedule, they notified us that most of the presentation times would need to be moved to reduce the gaps between presentations as this was not ideal for the well-being of the birds, or the time required by staff. Theresa had to go back to these schools and move the times around, which proved to be difficult for some schools as their schedules are very limited in openings. Once everything was rescheduled, Hawks Aloft approved the final updated schedule. All other presentations are conducted by Ciudad education staff, so we are able to provide more flexibility with teachers' school schedules and gaps between presentation times.

During the second quarter, all 38 classes received their first presentation - which was either the Arroyo Walk or Watershed presentation (if weather was not good). 24 classes received the Bird presentation and 20 class received the Reptile presentation.

Task 4: Collect and analyze teacher feedback.

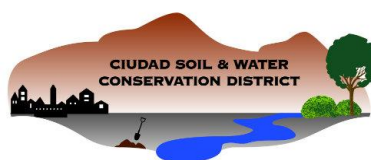
Complete by May 2022. **Status:** [approaching](#).

Staff will revise teacher feedback form and submit to teachers at the end of the program.

Task 5: Reporting to sponsors.

Midyear report by January 31, 2022.

Final report by June 1, 2022.



insert Arroyo Classroom Final Report (21 pages)



Albuquerque Bernalillo County
Water Utility Authority

Water Authority

Is there info. for this page, or is it eliminated?

advertising.



See the Water Authority television advertising at <https://youtu.be/AJojsyJfnK4>.



Town of Bernalillo

"The City of Coronado"

From May 2023 to current, the Town of Bernalillo has hosted the educational stormwater kiosk with approximately .5 visitors per day.

In addition, we have distributed stormwater brochures from our of the Planning Department Office and Town Hall reception desk. Approximately 30.

We have also produced newsletter articles in support of stormwater to include the promotion of the kiosk and fats, oils and greases.



ADD
2021 BEMP Education Report.pdf
HERE

(18 pages)



Albuquerque Metropolitan Arroyo Flood Control Authority

On April 28th, 2023 AMAFCA presented to a studio class at UNM's school of architecture.

BEAR ARROYO

LANDSCAPE DESIGN GUIDELINES

LA503/403 Urban Typologies Studio

Final Presentation

Monday, May 8th

1:30-3:30 PM

UNM SA+P Room P135

Please join us for a gallery-style review exploring Albuquerque's Bear Arroyo and student ideas to improve recreation access and water quality, while improving habitat and environmental education.





April 6, 2023

Dear AMAFCA,

On behalf of the Land and Water Summit Planning Committee, Ciudad Soil & Water Conservation District would like to take this opportunity to thank you for the generous sponsorship in the amount of \$3,500 that was provided for the 2023 Land and Water Summit Hybrid Conference. As the fiscal manager for the Land and Water Summit, Ciudad SWCD is pleased to report that the AMAFCA charitable **Reservoir Level** sponsor contribution assisted with the planning efforts and implementation of the conference.

Through AMAFCA's sponsorship, the Land and Water Summit hosted a pre-conference field trip with 55 attendees and a conference with 249 registered attendees, 131 in-person and 118 remote viewers, and 20 sponsors receiving 30,481 impressions.

The 2023 Land and Water Summit featured a diverse range of presentations on topics related to building resilient landscapes and societies in the face of environmental challenges. A common theme that emerged was the importance of collaboration with communities in developing strategies for resilience. Presentations on shortage-sharing and water agreements highlighted the need for cooperation and sharing in managing scarce resources. Indigenous resiliency was also a prominent topic, emphasizing the importance of traditional knowledge and analysis in land and water management.

The Land and Water Summit annual conference plays a vital role in continuing education about resource conservation and best practices for safeguarding and enhancing local landscapes. The event could not be possible without AMAFCA's financial contribution. The Land and Water Summit Planning Committee and Ciudad SWCD are immensely grateful for your generous support and sponsorship of the conference.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Steven Glass".

J. Steven Glass
Land and Water Summit Planning Committee, Co-Chair
Ciudad Soil & Water Conservation District, Board Chair

Middle Rio Grande Stormwater MS4 Technical Advisory Group

MEMORANDUM OF AGREEMENT

A COOPERATIVE AGREEMENT, CREATING THE MIDDLE RIO GRANDE MS4 TECHNICAL ADVISORY GROUP, IN SUPPORT OF COMPLIANCE EFFORTS FOR A STORMWATER DISCHARGE PERMITTING SYSTEM FOR THE MIDDLE RIO GRANDE VALLEY IN ACCORDANCE WITH THE FEDERAL CLEAN WATER ACT.

WHEREAS, the United States Environmental Protection Agency (EPA), Region 6 regulates the discharge of stormwater from municipal separate storm sewer systems (MS4s) in New Mexico through the issuance of an MS4 permit for the Middle Rio Grande valley urbanized area under the authority of the National Pollutant Discharge Elimination System (NPDES) regulations (40CFR122); and

WHEREAS, the Middle Rio Grande area is comprised of many diverse local, state, federal and tribal entities, each with separate and distinct authority and responsibilities; and

WHEREAS, the Middle Rio Grande area entities potentially eligible for authorization under the proposed NPDES General Permit No. NMR04A000 (hereinafter “MS4 Permit”), and therefore are eligible to enter into this Memorandum of Agreement (hereinafter “Agreement”) in furtherance of the requirements of the MS4 Permit, are the City of Albuquerque, Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA), University of New Mexico, New Mexico Department of Transportation District 3, Bernalillo County, Sandoval County, Village of Corrales, City of Rio Rancho, Los Ranchos de Albuquerque, Kirtland Air Force Base, Town of Bernalillo, State Fairgrounds/Expo New Mexico, the Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA), the Eastern Sandoval County Arroyo Flood Control Authority (ESCAFCA), Sandia National Laboratories/Department of Energy, Pueblo of Sandia, Pueblo of Isleta, and Pueblo of Santa Ana (collectively “Stormwater Management Entities”); and

WHEREAS, the proposed MS4 Permit encourages cooperative efforts among separate local, state, federal and Tribal governments to reduce the amount of pollutants discharged with stormwater from the Middle Rio Grande urbanized area MS4s; and

WHEREAS, continued cooperation among the Stormwater Management Entities in the MS4 Permit offers an enhanced opportunity for each entity to remain aware of the requirements in the MS4 Permit and facilitate compliance with conditions of the permit;

NOW, THEREFORE, BE IT AGREED THAT:

1. The signatories to this Agreement (hereinafter collectively referred to as “Parties” and individually referred to as “Party”) support and encourage a cooperative commitment to assist one another with technical issues regarding compliance with the MS4 Permit and agree to form the Middle Rio Grande MS4 Technical Advisory Group (MS4TAG).

2. The purpose of the MS4TAG will be to exchange technical information regarding compliance with the MS4 Permit, exchange ideas among Parties regarding compliance efforts, and exchange information regarding illicit discharges detected within each Party's jurisdiction. The MS4TAG shall have no binding financial authority and shall be strictly advisory in nature.

3. Nothing in this Agreement shall be construed as obligating a Party to this agreement to expend funds for any purpose, and no Party shall be required to contribute any funds in order to participate in this Agreement. In the event the Parties determine that any joint expenditure of funds among multiple Parties becomes necessary in order to comply with the requirements of the MS4 Permit, a separate agreement shall be entered into between the affected Parties regarding any and all such expenditures at that time.

4. The term of this Agreement shall run from the date the MS4 Permit is issued by the EPA until the date the MS4 Permit is terminated or expires, whichever occurs first. This Agreement may be terminated in its entirety at any time upon the mutual agreement of all of the then-existing Parties to this Agreement. In the event any Party wishes to withdraw from this Agreement without terminating the other Parties' interests in this Agreement, withdrawal shall become effective upon ninety (90) days prior written notice to the other Parties. Withdrawal shall fully and completely terminate that Party's interest in and obligations under this Agreement. Following any Party's withdrawal, this Agreement shall continue in full force and effect as to all remaining Parties to the extent possible.

5. This Agreement does not address the "Public Education and Outreach" or "Cooperative Sampling" sections of the MS4 Permit. Any MS4TAG efforts regarding either of these sections of the MS4 Permit under this Agreement shall be strictly in furtherance of the spirit of cooperation intended among the Parties. Each Party acknowledges its obligations under the "Public Education and Outreach" and "Cooperative Sampling" sections of the MS4 Permit are separate and apart from its activities under this Agreement, and a separate agreement will be required for any collaboration among the Parties with respect to those permit requirements.

6. The Parties will appoint two (2) Co-Coordiators from among the Parties, one of which must be from a Party located within the Bernalillo County geographical area and one of which must be from a Party located within the Sandoval County geographical area. Appointment of a Co-Coordinator shall be by majority vote of the voting Parties, with only those Parties located in the county of Bernalillo voting on the Co-Coordinator from that area, and only those Parties located in the county of Sandoval voting on the Co-Coordinator from that area. Co-Coordiators must be appointed annually in each subsequent permit year, or earlier if the position becomes vacant for any reason. For the New Mexico Department of Transportation District 3, which operates stormwater management facilities in both counties, for the purposes of this section, they shall select one county affiliation in year one of the agreement and alternate affiliations in subsequent years of this Agreement. The Co-Coordiators will be expected to coordinate the Parties' efforts under this Agreement, including facilitating meetings of the MS4TAG at least monthly for the first year of the MS4 Permit. In years two through five of the permit, the frequency of meetings may be reduced to quarterly with additional meetings called as necessary to discuss issues regarding MS4 Permit compliance.

7. Each Party shall be entitled to one (1) vote on any action items.
8. This Agreement creates no obligations on behalf of any Party to any other Party to this Agreement, including for any requirements imposed or determinations made by EPA. The Parties acknowledge and agree that each shall at all times remain individually liable for full compliance with the requirements of the MS4 Permit, including EPA's determination regarding the implementation schedule.
9. This Agreement may be modified in writing at any time upon the mutual agreement of the Parties.
10. Parties can be added at any time during the life of this Agreement. A potential future Party's submittal of a signature page to the Co-Coordiators and approval by the Co-Coordiators shall add the Party to the Agreement.

MIDDLE RIO GRANDE STORMWATER
MS4 TECHNICAL ADVISORY GROUP
FINAL

10-07-13

Approved as to Form:


Bernard P. Metzgar
SSCAFCA Attorney

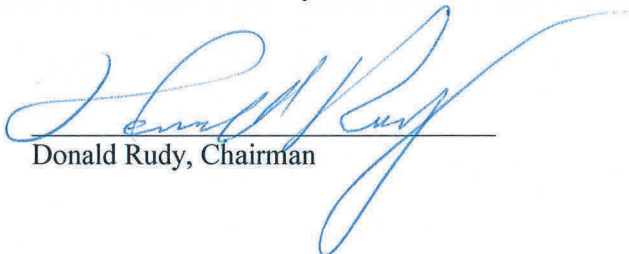
Date:

10/04/13

Southern Sandoval County Arroyo
Flood Control Authority

Date:

10/18/13

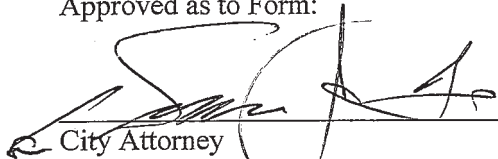

Donald Rudy, Chairman

MIDDLE RIO GRANDE STORMWATER
MS4 TECHNICAL ADVISORY GROUP
FINAL DRAFT

9-30-13

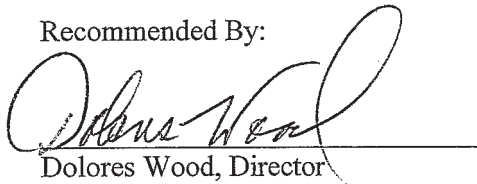
City of Rio Rancho

Approved as to Form:


City Attorney

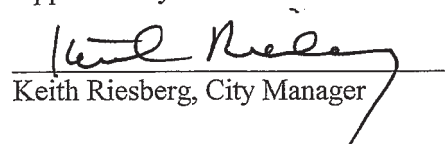
Date: 10/1/13

Recommended By:


Dolores Wood, Director

Date: 11.4.13

Approved By:


Keith Riesberg, City Manager

Date: 11/1/13

MIDDLE RIO GRANDE STORMWATER
MS4 TECHNICAL ADVISORY GROUP
FINAL DRAFT

9-30-13

Approved as to Form:


George Perez
Town of Bernalillo Attorney

Date: 10/15/2013


Mayor Jack Torres, Town of Bernalillo

Date: 10/14/13


Attest: 
Ida Fierro, Town Clerk

Date: 10/14/13


MIDDLE RIO GRANDE STORMWATER
MS4 TECHNICAL ADVISORY GROUP
FINAL

10-07-13

VILLAGE OF CORRALES

By:  10-08-13
Philip Gasteyer, Mayor Date

Attest:

 10-08-2013
Juan Reyes, Village Clerk Date

MIDDLE RIO GRANDE STORMWATER
MS4 TECHNICAL ADVISORY GROUP
FINAL

10-07-13

IN WITNESS WHEREOF, the undersigned have caused this Agreement to be executed.

**Albuquerque Metropolitan Arroyo
Flood Control Authority**

Date: 10/24/2013



Tim Eichenberg
Chair of the Board of Directors

Attest:



Bruce Thomson
Secretary/Treasurer

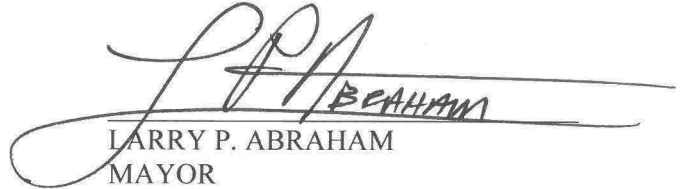
Date: 10/24/13

MIDDLE RIO GRANDE STORMWATER
MS4 TECHNICAL ADVISORY GROUP
FINAL


10-07-13

VILLAGE OF LOS RANCHOS DE ALBUQUERQUE

Date: November 14, 2013


LARRY P. ABRAHAM
MAYOR

(SEAL)


STEHANIE DOMINGUEZ
VILLAGE CLERK

MIDDLE RIO GRANDE STORMWATER
MS4 TECHNICAL ADVISORY GROUP
FINAL

10-07-13

Accepted on behalf of:

U.S. DEPARTMENT OF ENERGY
NATIONAL NUCLEAR SECURITY ADMINISTRATION
SANDIA FIELD OFFICE

By:


Geoffrey L. Beausoleil
Manager

14 NOV 2013
Date

MIDDLE RIO GRANDE STORMWATER
MS4 TECHNICAL ADVISORY GROUP
FINAL

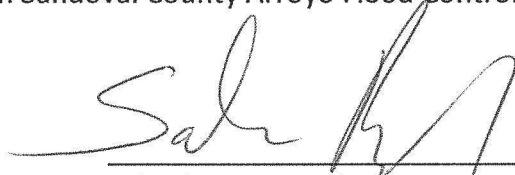
Approved as to Form:


Bernard P. Metzgar
ESCAFCA Attorney

Date: 11/14/13

Eastern Sandoval County Arroyo Flood Control Authority

Date: NOV. 19, 2013


Salvador Reyes, Chairman

MIDDLE RIO GRAND STORMWATER
MS4 TECHNICAL ADVISORY GROUP
FINAL DRAFT

9-30-13

UNIVERSITY OF NEW MEXICO

Approved by:

 Date: 12/17/13
David Harris, Executive Vice President

Recommended by:


 Date: 12-10-13
Carla P. Domenici, Director
Safety and Risk Services Department

MIDDLE RIO GRANDE STORMWATER
MS4 TECHNICAL ADVISORY GROUP
FINAL

10-07-13

New Mexico Department of Transportation

Approved By:



Timothy L. Parker, M.S., P.E.
NMDOT District Three Engineer

Date: 12/22/13

Approved As To Form Only:



Ken Swain, Assistant General Counsel
Office of the General Counsel

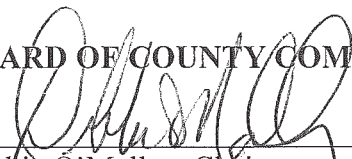
Date: 12/18/2013

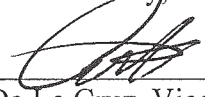
BERNALILLO COUNTY

Motion to: Approve a Memorandum of Agreement (MOA) joining the County with other local entities participating in the Middle Rio Grande MS4 Technical Advisory Group (MS4TAG).

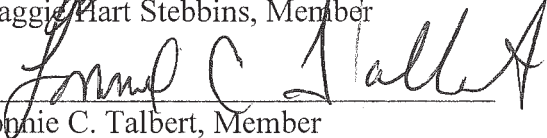
Approved this 28th day of January, 2014

BOARD OF COUNTY COMMISSIONERS


Debbie O'Malley, Chair


Art De La Cruz, Vice Chair


Maggie Hart Stebbins, Member


Lonnie C. Talbert, Member

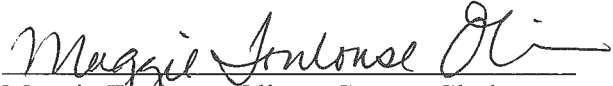

Wayne A. Johnson, Member

APPROVED AS TO FORM:


County Attorney

Date: 1/28/14

ATTEST:


Maggie Toulouse Oliver, County Clerk


Date: 1/28/14



MIDDLE RIO GRANDE STORMWATER
MS4 TECHNICAL ADVISORY GROUP
FINAL

10-07-13

Approved as to Form:



Patrick F. Trujillo
Sandoval County Attorney

Date: 1/27/2014

Sandoval County

Date: 2/6/2014




Phillip Rios, County Manager

MIDDLE RIO GRANDE STORMWATER
MS4 TECHNICAL ADVISORY GROUP
FINAL

10-07-13

Approved as to Form:

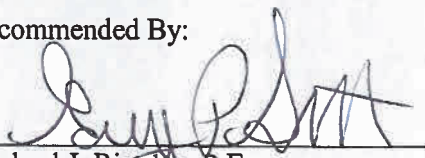


David Tourek
City Attorney

Date:

2/24/14

Recommended By:




Michael J. Riordan, P.E.
Director, Department of Municipal Development

Date:

2/26/14

Approved By:



Robert J. Perry
Chief Administrative Officer

Date:

3/4/14

MIDDLE RIO GRANDE STORMWATER
MS4 TECHNICAL ADVISORY GROUP
FINAL

Memorandum of Agreement accepted on behalf of:

UNITED STATES AIR FORCE
KIRTLAND AIR FORCE BASE

By 
ERIC H. FROEHLICH, COLONEL,
USAF INSTALLATION COMMANDER

Date 28 Dec 15

Intergovernmental Agreement Regarding the Operation, Function,

and Funding of the Storm Water Team

THIS AGREEMENT is made and entered into this 27th day of August, 2008, by and among the County of Bernalillo ("COUNTY"), the City of Albuquerque ("COA"), the Albuquerque Metropolitan Arroyo Flood Control Authority ("AMAFCA"), the New Mexico Department of Transportation ("NMDOT"), the Southern Sandoval County Arroyo Flood Control Authority ("SSCAFCA"), and the Ciudad Soil and Water Conservation District ("CIUDAD"), all political subdivisions of the State of New Mexico, and the University of New Mexico ("UNM"), a state educational institution, individually referred to as "Party" and collectively referred to as "Parties."

WITNESSETH:

WHEREAS, the National Pollution Discharge Elimination System (NPDES) storm water discharge permits for small and large municipal separate storm sewer systems ("MS-4") include a minimum control measure regarding public outreach and education; and

WHEREAS, this minimum control measure requires each permittee to develop and distribute educational materials to the community or conduct equivalent public outreach activities about the impacts of storm water discharges on receiving water bodies and the actions that the public can take to reduce pollutants in storm water runoff; and

WHEREAS, COA, AMAFCA, NMDOT, and UNM, co-permittees of a MS-4 Phase I permit, and the COUNTY, a permittee of a Phase II permit, entered into a Cooperative Agreement dated October 20, 2005 in order to accomplish said public outreach and education, and the group informally became known as the Storm Water Team; and

WHEREAS, the Storm Water Team hired a Storm Water Quality Education Coordinator ("Coordinator") to help develop a public education campaign and produce public service announcements including print materials for distribution, and that contract expires November 2008; and

Intergovernmental Agreement Regarding the Operation, Function,

and Funding of the Storm Water Team

WHEREAS, SSCAFCA desires to combine efforts to educate the public on storm water quality as required in their Phase II storm water discharge permit, and to become one of the participating agencies of the Storm Water Team; and

WHEREAS, CIUDAD desires to combine efforts to educate the public on storm water quality as part of their Watershed Restoration Action Strategy, and to become one of the participating agencies of the Storm Water Team; and

WHEREAS, SSCAFCA and CIUDAD both desire to provide funding as part of their membership to the Storm Water Team; and

WHEREAS, each Party has an interest in reducing pollution and/or meeting storm water permit requirements within their respective boundaries, which are shown in Exhibit 1; and

WHEREAS, with new members being added, it is appropriate to enter into this Agreement in order to formalize the Storm Water Team mission and function, and establish future funding streams.

THEREFORE IN CONSIDERATION OF THE PROMISES AND COVENANTS CONTAINED HEREIN, THE PARTIES HERETO AGREE AS FOLLOWS:

1. The Storm Water Team ("Team") will include all members that have signed a Cooperative Funding Agreement, comply with its terms and continue to fund the team. Additional non-voting members will include other agencies, organizations, or individuals that will provide technical assistance needed to allow the Team to accomplish its mission.
2. The Team will serve as the focal point on public education and outreach regarding storm water quality in the Albuquerque Reach of the Rio Grande watershed, which is

**Intergovernmental Agreement Regarding the Operation, Function,
and Funding of the Storm Water Team**

the area that drains to the Rio Grande between Algodones and Isleta Pueblo. The Team mission statement is hereby agreed to by the Parties:

The Storm Water Team is a multi-agency committee dedicated to providing public education and awareness regarding storm water pollution and how to reduce debris and other pollutants in the Albuquerque Reach of the Rio Grande and its tributary arroyos.

3. The Team will have an Executive Committee made up of one voting member from each Party in good standing, which is defined as having paid their expected contribution, as described in Section 4. Each Party in good standing will designate a staff member to be on the Executive Committee. Other staff liaisons will be assigned to the Team as necessary to support the Team mission. Other/outside agencies may participate on the Team by attending meetings and giving input; however, only the Executive Committee may vote on Team decisions. The purpose of the Executive Committee will be to administer and direct the Team and Coordinator in accordance with the provisions herein. Decisions of the Executive Committee will be decided by majority vote of the Executive Committee.
4. Each Party agrees to provide payment for Fiscal Year 2009 in the amount shown in the Contribution Schedule, which may include the value of Executive Committee approved in-kind services, in Attachment A. For subsequent Fiscal Years, the Contribution Schedule may be adjusted by the Executive Committee, including the value of in-kind contributions.
5. AMAFCA will be the fiscal agent for the purposes of this Agreement. All funds will be held in a separate bank account for the purposes of this Agreement. AMAFCA shall make available to any interested Party, all records, receipts, and other

**Intergovernmental Agreement Regarding the Operation, Function,
and Funding of the Storm Water Team**

documentation with respect to all matters concerning this Agreement, and shall have this account included in its annual audit.

6. Each Party agrees that a Storm Water Quality Education Coordinator will be hired through the Request for Proposal (RFP) process in advance of the expiration of the current Coordinator's contract. The Coordinator shall be a contractor and not an employee of AMAFCA. Responsibilities included in the Storm Water Quality Education Coordination contract will be to develop and manage a comprehensive educational and awareness campaign, arrange all purchases for deliverables and advertising on behalf of the Team, and make presentations to the public as directed. Each Party will have one representative on the Selection Advisory Committee for the request for proposals process. The Selection Advisory Committee will rank proposals and recommend the top three respondents to the AMAFCA Board of Directors. Upon AMAFCA Board of Directors' approval, AMAFCA will negotiate an agreement with the selected consultant. The Executive Committee will provide input on scope and fees; however, final negotiations and approval will be at AMAFCA's sole discretion.
7. The Parties agree that the Storm Water Quality Education Coordination contract is an ongoing program. The effectiveness of the Storm Water Quality Education Coordination contract, with regard to the Team mission statement, will be evaluated prior to annual renewal(s) or request for proposals.
8. AMAFCA will invoice each Party for their respective participation, minus the value of any Executive Committee approved in-kind contributions, in July, at the start of the Fiscal Year. Each Party will pay such invoices to AMAFCA within forty-five

**Intergovernmental Agreement Regarding the Operation, Function,
and Funding of the Storm Water Team**

(45) days of the date of the invoice. Invoices will be sent to Team members listed in Attachment B.

9. It is intended that the Team's operation and function described in this Agreement are ongoing, subject to continued support and authorized funding by each of the Parties. Each Party has the option to not participate in this Agreement in the future by sending written notice to all the other participating Parties at or before the expiration of the Fiscal Year. In such event, the terminating Party shall not be entitled to return of any contribution(s) made under this Agreement; and this Agreement shall remain in full force and effect by and among the remaining Parties.
10. The Team may accept one-time contributions from outside funding sources, to be used to support the Team mission. The Executive Committee will consider the requested uses of such one-time contributions and will ensure the uses are consistent with the Team's ongoing public outreach and education program. Such contributions shall not constitute voting privileges on the Executive Committee.
11. The Parties agree that effort will be expended within the respective boundaries of each participating agency, proportional to funding contributions.
12. If any situation arises which adversely affects any Party's participation in this Agreement, said Party will immediately, and in writing, notify the other Parties. Any circumstance that materially affects this Agreement will be promptly and equitably resolved by all Parties and if necessary, an amendment to this Agreement shall be executed.
13. The obligations of each Party under this Agreement shall be performed in compliance with all applicable laws, statutes and ordinances. Nothing herein is intended to

**Intergovernmental Agreement Regarding the Operation, Function,
and Funding of the Storm Water Team**

constitute any agreement for the Parties to perform any activity in violation of the Constitution or Laws of the State of New Mexico or the Ordinances of any entity that is a Party to this Agreement.

14. If any clause or provision in this Agreement is illegal, invalid or unenforceable, under present or future laws effective during the term of this Agreement, then and in that event, it is the intention of the parties hereto that the remainder of this Agreement shall not be affected thereby.
15. It is specifically agreed among the Parties that this Agreement does not, and is not intended to, create in the public, or any member thereof, any rights whatsoever, such as but not limited to, the rights of a third Party beneficiary, nor to authorize anyone not a Party to this Agreement to maintain a suit for wrongful death or any other claim whatsoever.
16. As among the Parties, each shall be solely responsible for any and all liability from personal injury, including death, or damage to property, arising from any negligent or intentional act or failure to act of the respective Party, its officials, agents, contractors or employees pursuant to this Agreement. Liabilities of each Party shall be subject to the immunities and limitations of the Tort Claims Act, §§41-4-1, et seq., NMSA, 1978, and any amendments thereto. By entering into this Agreement, the COUNTY and its "public employees" as defined in the New Mexico Tort Claims Act, the COA and its "public employees" as defined in the New Mexico Tort Claims Act, AMAFCA and its "public employees" as defined in the New Mexico Tort Claims Act, NMDOT and its "public employees" as defined in the New Mexico Tort Claims Act, UNM and its "public employees" as defined in the New Mexico Tort Claims

**Intergovernmental Agreement Regarding the Operation, Function,
and Funding of the Storm Water Team**

Act, SSCAFCA and its "public employees" as defined in the New Mexico Tort Claims Act, and CIUDAD and its "public employees" as defined in the New Mexico Tort Claims Act, do not waive sovereign immunity, do not waive any defense and/or do not waive any limitation of liability pursuant to law. No provision in this Agreement modifies and/or waives any provision of the New Mexico Tort Claims Act.

17. The effective date of this Agreement shall be the latest date of approval by all of the interested Parties.
18. Upon approval by all Parties, the covenants, terms and conditions of this Agreement shall be binding upon and inure to the benefit of the Parties hereto, their successors and assigns.

Intergovernmental Agreement Regarding the Operation, Function,
and Funding of the Storm Water Team

IN WITNESS WHEREOF, the undersigned have caused this Agreement to be executed as
of the day and year set forth above.


Albuquerque Metropolitan Arroyo
Flood Control Authority

Date: March 20, 2008



Danny Hernandez
Chair of the Board of Directors

Attest:



Tim Eichenberg,
Secretary/Treasurer

Date: March 20, 2008


Intergovernmental Agreement Regarding the Operation, Function,
and Funding of the Storm Water Team

County of Bernalillo

Date: 5/12/08


Thaddeus Lucero, County Manager

Approved As To Form Only:


Deborah Seligman,
Assistant County Attorney

Date: 5/19/2008

Recommended By:

Tom Zdunek 
~~XXXXXX~~, Deputy County Manager
Public Works Division

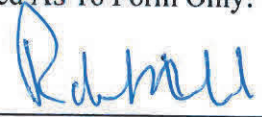
Date: 5/21/8

BC CCN 2008-0264

**Intergovernmental Agreement Regarding the Operation, Function,
and Funding of the Storm Water Team**

City of Albuquerque

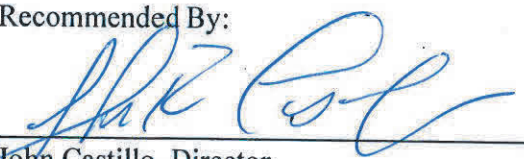
Approved As To Form Only:



City Attorney GAPS

Date: 5-12-08

Recommended By:



John Castillo, Director

Date: 5/13/08

Approved By:



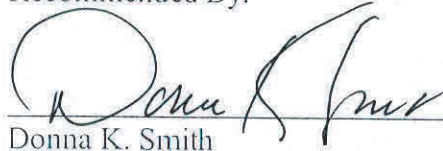
Dr. Bruce Perlman, Chief Administrative Officer

Date: 5/16/08

Intergovernmental Agreement Regarding the Operation, Function,
and Funding of the Storm Water Team

University of New Mexico

Recommended By:


Donna K. Smith

Director, Safety & Risk Services

Date: 4-23-08

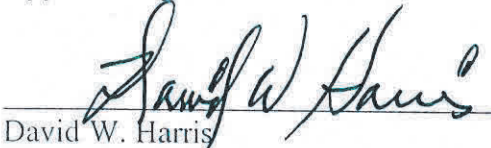
Approved As To Form Only:


Richard Mertz

Associate University Counsel

Date: 4/29/08

Approved By:


David W. Harris

Executive Vice President for Administration

Date: 5/1/08

Intergovernmental Agreement Regarding the Operation, Function,
and Funding of the Storm Water Team

New Mexico Department of Transportation

Approved As To Form Only:

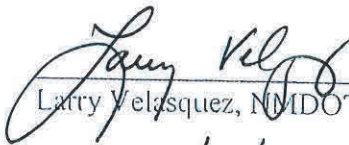


Office of the General Counsel

Date:

5/22/08

Approved By:



Larry Velasquez, NMDOT District Three Engineer

Date:

8/28/08

**Intergovernmental Agreement Regarding the Operation, Function,
and Funding of the Storm Water Team**

Ciudad Soil and Water Conservation District

Date: April 7, 2008

Lauro Silva
Lauro Silva, Chair

Intergovernmental Agreement Regarding the Operation, Function,
and Funding of the Storm Water Team

Approved as to Form:


Bernard P. Metzgar
SSCAFCA Attorney

Date:

4/18/08

Southern Sandoval County
Arroyo Flood Control Authority

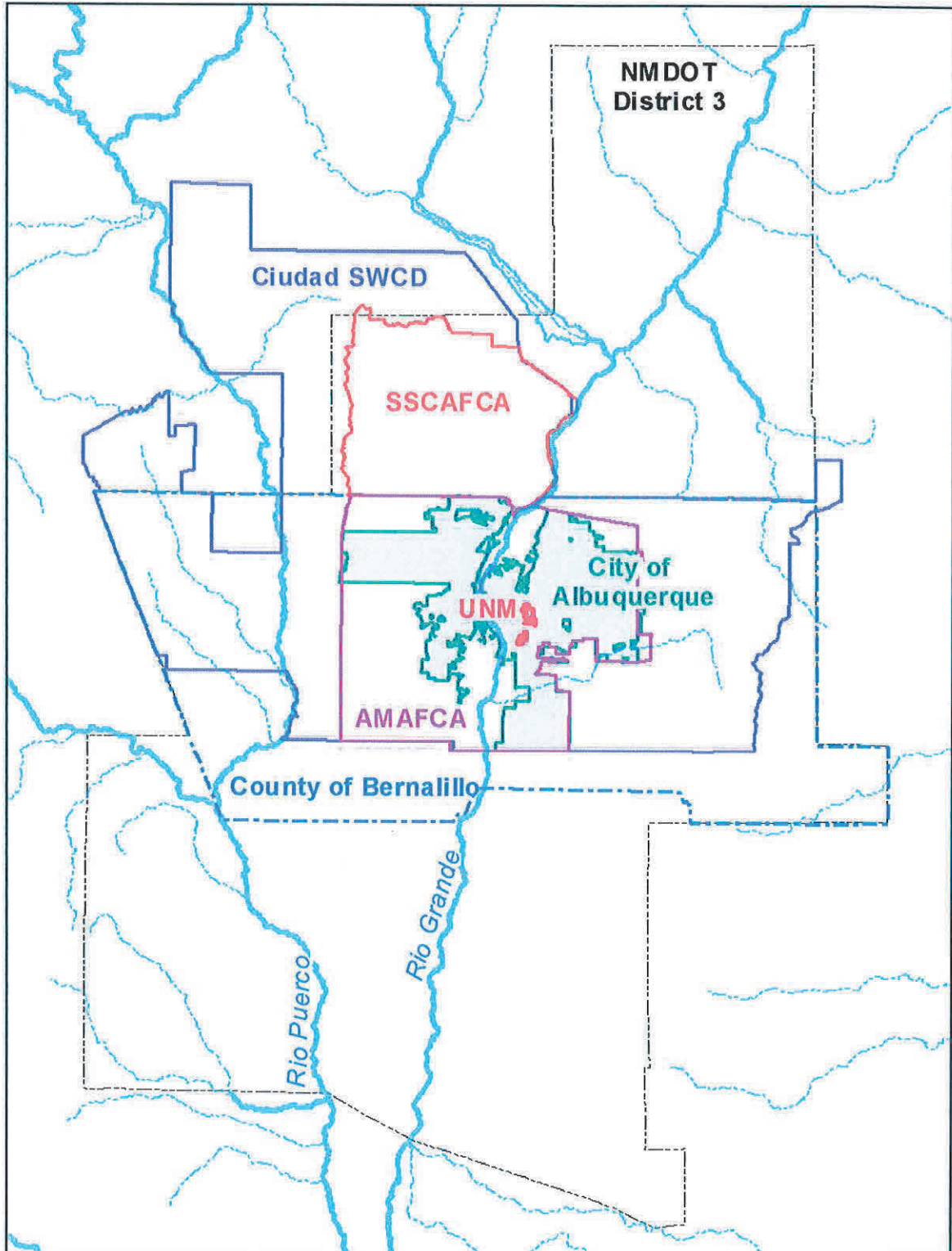
Date:

5/2/08


John Chaney, Chairman

**Intergovernmental Agreement Regarding the Operation, Function,
and Funding of the Storm Water Team**

Exhibit 1
Boundaries of Participating Agencies



Intergovernmental Agreement Regarding the Operation, Function,

and Funding of the Storm Water Team

Storm Water Team Intergovernmental Agreement – Attachment A

STORM WATER TEAM CONTRIBUTIONS

FY 05		Date received by AMAFCA
AMAFCA	\$10,000	12/01/2004
City of Albuquerque	10,000	04/28/2005
County of Bernalillo	10,000	12/02/2004
UNM	7,000*	07/19/2005
NMDOT	10,000	05/26/2005
Total	\$47,000	
FY 06		
AMAFCA	\$10,000	12/23/2005
City of Albuquerque	10,000	01/23/2006
County of Bernalillo	10,000	06/29/2006
UNM	7,000	02/02/2006
NMDOT	10,000	06/29/2006
Total	\$47,000	
FY 07		
AMAFCA	\$10,000	03/21/2007
City of Albuquerque	10,000	06/13/2007
County of Bernalillo	10,000	02/11/2008
UNM	7,000	05/22/2007
NMDOT	10,000	04/02/2008
Total	\$47,000	
FY 08		
AMAFCA	\$10,000	10/03/2007
City of Albuquerque	10,000	09/25/2007
County of Bernalillo	10,000	03/18/2008
UNM	7,000	12/10/2007
NMDOT	10,000	04/02/2008
Total	\$47,000	
FY 09 Expected Contributions		
AMAFCA	\$10,000	
City of Albuquerque	10,000	
County of Bernalillo	10,000	
UNM	7,000	
NMDOT	10,000	
SSCAFCA	10,000	
Ciudad	10,000	
Total	\$67,000	

**Intergovernmental Agreement Regarding the Operation, Function,
and Funding of the Storm Water Team**

Storm Water Team Intergovernmental Agreement – Attachment B

STORM WATER TEAM CONTACT ADDRESSES

Christy Burton
AMAFCA
2600 Prospect Ave NE
Albuquerque, NM 87107

cc Irene Jeffries (same address)
on invoices

Storm Drainage Section
Dept. of Municipal Development
Attn: Kathy Verhage
P.O. Box 1293, Rm. 301
Albuquerque, NM 87103

cc Roland Penttila (same address)
on invoices

Vern Hershberger
Safety & Risk Services
1 University of New Mexico
MSC07 4100
Albuquerque, NM 87131

Send original invoices to:
Accounts Payable
1 University of New Mexico
MSC01 1290
Albuquerque, NM 87131

Carol Moritz, Administrative Manager
Ciudad Soil & Water Conservation District
6200 Jefferson NE, Room 125
Albuquerque, NM 87109

Kathy Trujillo
New Mexico Department of Transportation
District 3
PO Box 91750
Albuquerque, NM 87199-1750

Patricia Dominguez
Bernalillo County
Public Works Division
2400 Broadway Blvd SE
Bldg N
Albuquerque, NM 87102

cc Mary Murnane (same address)
on invoices

David Stoliker
SSCAFCA
1041 Commerical N.E.
Rio Rancho, New Mexico 87124

Middle Rio Grande Stormwater MS4 Compliance Monitoring Cooperative

INTERGOVERNMENTAL AGREEMENT

AN INTERGOVERNMENTAL AGREEMENT, CREATING THE MIDDLE RIO GRANDE MS4 COMPLIANCE MONITORING COOPERATIVE, IN SUPPORT OF COMPLIANCE EFFORTS FOR A STORMWATER DISCHARGE PERMITTING SYSTEM FOR THE MIDDLE RIO GRANDE VALLEY IN ACCORDANCE WITH THE FEDERAL CLEAN WATER ACT.

RECITALS

WHEREAS, the United States Environmental Protection Agency (EPA), Region 6 regulates the discharge of stormwater from municipal separate storm sewer systems (MS4s) in central New Mexico through the issuance of an MS4 permit for the Middle Rio Grande valley urbanized area, under the authority of the National Pollutant Discharge Elimination System (NPDES) regulations (40CFR122); and

WHEREAS, the Middle Rio Grande valley urbanized area is comprised of many diverse local, state, federal and tribal entities, each with separate and distinct authority and responsibilities; and

WHEREAS, the Middle Rio Grande valley urbanized area entities that are eligible for authorization under NPDES General Permit No. NMR04A000 (hereinafter "MS4 Permit"), and therefore eligible to enter into this Intergovernmental Agreement (hereinafter "Agreement") in furtherance of the requirements of the MS4 Permit, are the City of Albuquerque, Albuquerque Metropolitan Arroyo Flood Control Authority (AMAFCA), University of New Mexico, New Mexico Department of Transportation District 3, Bernalillo County, Sandoval County, Village of Corrales, City of Rio Rancho, Village of Los Ranchos de Albuquerque, Kirtland Air Force Base, Town of Bernalillo, State Fairgrounds/Expo New Mexico, Southern Sandoval County Arroyo Flood Control Authority (SSCAFCA), Eastern Sandoval County Arroyo Flood Control Authority (ESCAFCA), Sandia National Laboratories/Department of Energy, Pueblo of Sandia, Pueblo of Isleta, and Pueblo of Santa Ana (collectively "Co-permittees"); and

WHEREAS, the proposed MS4 Permit requires each Co-permittee to obtain and report stormwater compliance monitoring results in their MS4 Annual Report; and

WHEREAS, the proposed MS4 Permit encourages cooperative efforts among the Co-permittees, including compliance monitoring activities, to reduce the amount of pollutants discharged with stormwater into the Rio Grande; and

WHEREAS, cooperation among the Co-permittees in the MS4 Permit through the Middle Rio Grande Compliance Monitoring Cooperative ("CMC"), with regard to monitoring requirements, offers the opportunity to reduce each individual Co-permittee's monitoring costs by cooperatively developing, funding, and executing a common monitoring plan without reducing the effectiveness of the monitoring plan.

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a Members cash contribution, provided however, that participation in the CMC shall not be considered in-kind contributions. The value of in-kind contributions will be determined by the membership of the CMC by equating the value of the service to the cost that would be paid by the membership of the CMC to have the in-kind service performed by a third party (non-CMC member) contractor. The Contribution Schedule is located in Attachment 1 to this Agreement. This Contribution Schedule may be modified by the CMC annually without requiring modification to this agreement, provided however, that it shall be adopted by unanimous vote of the Members. Any funds remaining at the end of the Agreement Year will be carried into the next Calendar Year of this agreement. In such event, the CMC may either elect to retain the excess funds from the prior Calendar Year as a contingency fund, or may lower the annual contribution schedules for that year for all Members in equal proportion, based on the total amount carried forward. In the event a Member does not have the resources to provide full payment for any funds required by the Contribution Schedule, the remaining Members may agree, by unanimous vote, amend the Contribution Schedule if it is in the best interest of the CMC. Each Member's obligations under this Agreement are contingent upon sufficient appropriations being made therefor by such Member's governing body sufficient to fulfill such Member's said obligations. If such appropriations are insufficient to such Member's obligations hereunder, such Member's shall promptly notify the other Members, and this Agreement shall terminate forthwith with respect to such Member.

7. **FISCAL AGENT.** The Members shall select one (1) Co-permittee to act as Fiscal Agent for the CMC for the purposes of this Agreement. The Fiscal Agent shall act as the custodian of the CMC's funds, securities, and property. All funds will be held in a separate bank account for the purposes of this Agreement. All CMC funds shall be deposited promptly by the Fiscal Agent to the credit of the CMC. The CMC shall adhere to the Fiscal Agent's accounting and procurement procedures, provided such procedures comply with law. The Fiscal Agent shall make available to any interested Member, all records, receipts, and other documentation with respect to all matters concerning this agreement and shall have this account included in its annual audit. The Fiscal Agent shall maintain funds in accordance with all applicable state and Federal statutes. The Fiscal Agent shall be authorized on the CMC's behalf to sign checks, drafts, or other instruments for payment of money, acceptances, notes, or other evidences of indebtedness, to enter into contracts, or to execute and deliver other documents and instruments. This authority to enter into any contract or negotiated agreement shall be subject to approval by the CMC and subject to any limitations as set forth in this Agreement. Subject to the provisions of this Agreement, no loans shall be contracted on behalf of the CMC and no evidence of indebtedness shall be issued in its name unless authorized by a unanimous vote of the CMC Members. In consideration of the in-kind contributions anticipated from the Fiscal Agent, the total financial contribution requirements of the Fiscal Agent's Member agency, under any applicable agreement, shall be credited by the sum of one thousand dollars (\$1,000.00) for the term of the permit in which that Member serves as the Fiscal Agent.

8. **PAYMENTS.** The Fiscal Agent will invoice each Member for their respective participation, minus the values of any CMC approved in-kind contributions at the start of each member entity's Fiscal Year. Each Member will pay such invoices to the Fiscal Agent within

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standing of the CMC, contracts may be used, with concurrence from all Members of the CMC, that have been issued by Members to perform elements of the monitoring program. If a contractor is used that has been procured by a Member in good standing of the CMC instead of the Fiscal Agent, then, with concurrence of the other Members of the CMC, an entity that is not the Fiscal Agent for the CMC may contract to have the services performed and upon successful completion of the services, submit an invoice, with no mark-up, to the Fiscal Agent for reimbursement. Reimbursement shall only be authorized for reasonable and necessary costs. All contractor's utilized for the purposes identified in this Agreement shall be procured in accordance with the State Procurement Code. Contractors will be agents of the Member issuing the contract. Other Members of the CMC shall not be bound by the terms of the contract.

13. **EVALUATION.** The Members agree that the Stormwater Monitoring contract is an ongoing program. The effectiveness of the Stormwater Monitoring contract, with regard to permit compliance, will be evaluated by the CMC prior to annual renewal(s) or request for proposals.

14. **LIMITATION ON SAMPLING ACTIVITIES.** The contractor's scope of services will be limited to the CMC-developed and EPA approved sampling plan and associated reporting. If, in the event of an exceedence during routine monitoring events, additional investigation is required by the EPA to identify the source of a potential contaminant, the CMC may expand monitoring activities to the degree necessary to locate the likely entry point of the potential contaminants. Once the likely entry point is identified, further investigation into the source of the potential contaminant will become the responsibility of the specific Co-permittee(s) having jurisdiction at the location where the likely entry occurred. The CMC shall have no responsibility, fiscal or otherwise, to investigate potential sources of contamination outside of the river or its affiliated Middle Rio Grande Conservancy District-owned water conveyances.

15. **PARTICIPATION AFFECTED.** If any situation arises which adversely affects any Member's participation in this Agreement, said Member will immediately, and in writing, notify the other Members. Any circumstance that materially affects this Agreement will be promptly and equitably resolved by all Members and if necessary, an amendment to this Agreement shall be executed.

16. **COMPLIANCE WITH GOVERNING LAWS.** The obligations of each Member under this Agreement shall be performed in compliance with all applicable laws, statues, and ordinances. Nothing herein is intended to constitute any agreement for the Members to perform any activity in violation of the Constitution or Laws of the State of New Mexico or the Ordinances of any Co-permittee that is a Member of this Agreement.

17. **SEVERABILITY.** If any clause or provision of this Agreement is illegal, invalid or unenforceable, under present or future laws effective during the term of this Agreement, then and in that event, it is the intention of the Members hereto that the remainder of this Agreement shall not be affected thereby.

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04-26-2016

EACH ENTITY WILL EXECUTE AGREEMENT INDIVIDUALLY. SIGNATURE PAGES
WILL BE CONSOLIDATED INTO SINGLE DOCUMENT

**Albuquerque Metropolitan Arroyo
Flood Control Authority**

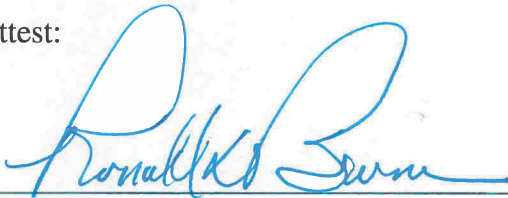


Bruce M. Thomson, Chair
Board of Directors



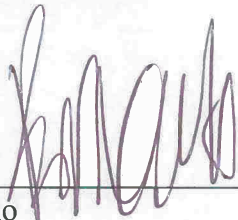
Date

Attest:



Ronald D. Brown, Secretary-Treasurer
Board of Directors

Approved as to Form:



Randy Autio
AMAFCA Attorney

Date: 

MIDDLE RIO GRANDE STORMWATER
MS4 COMPLIANCE MONITORING COOPERATIVE
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5-24-2016

City of Rio Rancho




Keith Riesberg
City Manager

5/27/16

Date

Approved as to Form:



Jennifer Vega-Brown
City Attorney

Date: 5/26/16

Date for of beginning of Fiscal Year: July 1

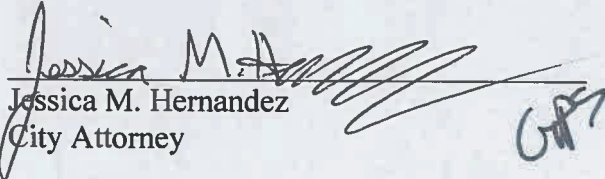
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City of Albuquerque

Approved as to Form


Jessica M. Hernandez
City Attorney

6/15/16
Date

Purchasing Approval


Ramona Martinez
Chief Procurement Officer

6/16/16
Date

Recommended By:


Melissa Lozoya
Director, Department of Municipal Development

6/16/16
Date

Approved By


Robert J. Perry
Chief Administrative Officer

6/17/16
Date

Date for of beginning of Fiscal Year: July 1

ATTACHMENT 1

CONTRIBUTION SCHEDULE

County of Bernalillo:


APPROVED BY:


Julie M. Baca Date
Bernalillo County Manager

RECOMMENDED BY:


Roger A. Paul, P.E. Date
Deputy County Manager for Public Works

APPROVED AS TO FORM ONLY:


for Deputy County Attorney Date
4-24-2016

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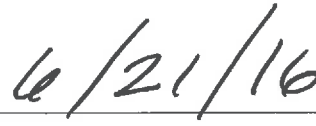
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Village of Los Ranchos de Albuquerque

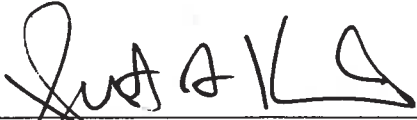
A handwritten signature in cursive script, reading "Kelly S. Ward", written over a horizontal line.

Kelly Ward
Administrator

Date

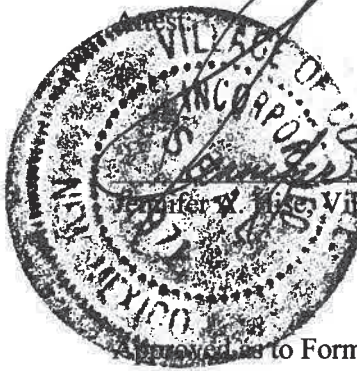

A handwritten date "6/21/16" written in cursive script over a horizontal line.

Village of Corrales




Scott A. Rominiak, Mayor

5/26/16
Date

Jennifer W. Wise, Village Clerk

Approved as to Form:



John L. Appel
Coppler Law Firm P.C.
Village of Corrales Attorney

5/26/16
Date


Date for beginning of Fiscal Year: July 1

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Town of Bernalillo



Jack Torres, Mayor
Board of Directors

5/23/2016

Date

Attest:



Ida Fierro, Town Clerk

Date for of beginning of Fiscal Year: July 1

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**Southern Sandoval County Arroyo
Flood Control Authority**


James Fahey, M.D., Chair
Board of Directors

5/20/16
Date

Approved as to Form:


Bernard Metzgar
SSCAFCA Attorney

Date: 5/20/16

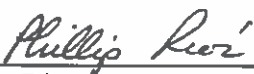
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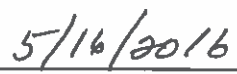
04-26-2016

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**Sandoval County, New Mexico
Flood Control Authority**



Phillip Rios
County Manager




Date

Approved as to Form:



Patrick Trujillo
Sandoval County Attorney

Date: 

Date for of beginning of Fiscal Year: July 1

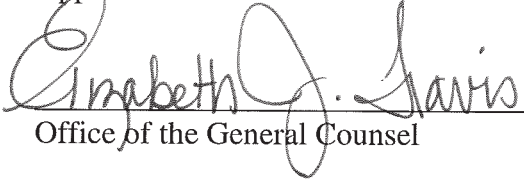
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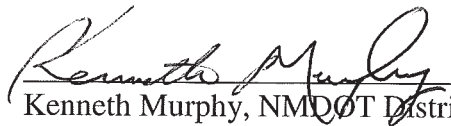
**New Mexico Department of Transportation -
District 3**

Approved as to Form:


Office of the General Counsel

6.29.2016
Date

Approved By:


Kenneth Murphy, NMDOT District Three Engineer

7/2/16
Date

Date for of beginning of Fiscal Year: July 1

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University of New Mexico


for David W. Harris *Univ. Controller* 7-19-16
Executive Vice President for Administration, COO & CFO Date

Approved:


Carla P. Domenici 7-14-16
Director, Safety and Risk Services Date

Approved as to Form:


for Elsa K. Cole, Esq.
University Counsel 7/15/2016
Date

Date for of beginning of Fiscal Year: July 1

ATTACHMENT 1

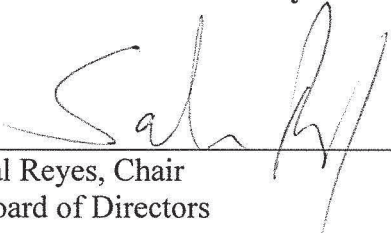
CONTRIBUTION SCHEDULE

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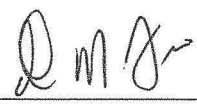
**Eastern Sandoval County Arroyo
Flood Control Authority**



Sal Reyes, Chair
Board of Directors

Date May 25, 2016

Attest:



Ida Fierro, Secretary
Board of Directors

Approved as to Form:



Bernie Metzgar
ESCAFCA Attorney

Date: _____

ATTACHMENT 1

Sampling Cooperative Cost Allocation Determination (CAD) Tool

28-Apr-16

Number	Participant				ENTITY PAYMENT	FISCAL AGENT CREDIT (\$1k)
1	City of Albuquerque	1.38	\$	132,000.00	\$45,600.00	
2	AMAFCA	0.43	\$	14,319.39	\$14,400.00	\$ (1,000.00)
3	UNM	0.41	\$	13,553.53	\$13,600.00	
4	NMDOT	0.12	\$	3,865.56	\$3,900.00	
5	Bernalillo County	0.59	\$	19,549.95	\$19,600.00	
6	Sandoval County	0.46	\$	15,094.20	\$15,100.00	
7	Village of Corrales	0.04	\$	1,393.20	\$1,400.00	
8	City of Rio Rancho	0.42	\$	13,997.46	\$14,000.00	
9	Los Ranchos de Albuquerque	0.02	\$	705.79	\$1,000.00	
10	Town of Bernalillo	0.03	\$	903.81	\$1,000.00	
11	ESCAFCA	0.01	\$	338.88	\$500.00	
12	SSCAFCA	0.08	\$	2,703.72	\$2,900.00	
	Ratio Check (Sum = Weighting Factor)	4.00			\$132,000.00	