NPDES Permit #IDS027561
Permit Appendix B - Annual Report Form

This Annual Report is due no later than January 30 of each year, beginning in Calendar Year 2023, and reflects the relevant reporting period, starting October 1, 2021. See Permit Part 6.4.2

Annual Reports and any attachments must be sent to IDEQ by U.S. Postal Mail to the following address:

Regional Administrator
Idaho Department of Environmental
Quality Attn: Water Quality Program
Boise Regional Office
1445 N. Orchard St.
Boise, ID 83706

Complete Sections 1 through IV. Do not leave any questions blank.

MS4 Permittee Name/Organization: Idaho Transportation Dept District 3

Permit Number: IDS027561

Reporting Period:

- ○ **Year 1 Reporting Period:** Oct. 1, 2021 – Sept. 30, 2022 – **Annual Report due date:** January 30, 2023
- ○ **Year 2 Reporting Period:** Oct. 1, 2022 – Sept. 30, 2023 – **Annual Report due date**: January 30, 2024
- ○ **Year 3 Reporting Period** Oct. 1, 2023 – Sept. 30, 2024 – **Annual Report due date:** January 30, 2025
- ◉ **Year 4 Reporting Period** Oct. 1, 2024 – Sept. 30, 2025 – **Annual Report due date:** January 30, 2026
- ○ **Year 5 Reporting Period** Oct. 1, 2025 – Sept. 30, 2026 – **Annual Report due date: September 30, 2026**
- ○ Other

Certification: *"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 gather and evaluate 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 have no personal knowledge that the information submitted is other than 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."*

APPROVED

Signature: Greg Vitley
01/29/2026 1:14:46 PM

Printed Name: Greg Vitley

Title: District Environmental Planner

Date: 01/23/2026

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Section I. General Information

MS4 Facility Site Name: ITD D3

MS4 Facility Organization Formal Name: Idaho Transportation Department District 3

MS4 Facility Contact Name: Greg Vitley

Title: Environmental Planner Senior

MS4 Contact Telephone: 208-334-8952

MS4 Contact Email Address: Greg.Vitley@itd.idaho.gov

MS4 Facility Contact Type (all that apply): ☐ Owner ☐ Operator ☑ Main Contact

MS4 Facility Site Address: 8150 Chinden Blvd

MS4 Facility Site City, State, Zip Code: Boise, Idaho 83714

MS4 Facility Site Mailing Address: ***if different from above***

Is the MS4 Facility Site Located On Tribal Land? ◯ **Yes** ◉ **No**

MS4 Facility Jurisdiction Type (check all that apply):

- ☐ Federal
- ☑ State
- ☐ College or University
- ☐ State Highway Department
- ☐ Municipal:
- ☐ County
- ☐ City or Town
- ☐ Highway District
- ☐ Tribal
- ☐ Other

List All Receiving Water(s) For the MS4 Discharges:

Boise River (2)
Ridenbaugh Canal
Thurman Mill Canal

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Section II. Permittee Responsibility:
Please answer all questions. If the answer is "No," or "Not Applicable" and no other direction is provided, use the Comments field at the end of this section to explain the reason and the expected date(s) that the requirement will be met, and/or to explain why the requirement does not apply.

1. **This Permittee organization shares implementation responsibility for Permit compliance with one or more Permittees.**
   (●) *Yes* ( ) *No* ( ) *Not Applicable*

   Is the agreement between the Permittees described/cited in the Stormwater Management Program (SWMP) Document?

   (●) *Yes* ( ) *No* ( ) *Not Applicable*

2. **This Permittee organization shares implementation responsibility for Permit compliance with one or more outside (non-Permittee) entities.**

   Is the agreement with these other entity(ies) described/cited in the SWMP Document?

   ( ) *Yes* (●) *No* ( ) *Not Applicable*

3. **This Permittee organization maintains relevant ordinances or other regulatory mechanisms to control pollutant discharges into and from the MS4 to meet the requirements of the permit.**
   (●) *Yes* ( ) *No* ( ) *Not Applicable*

   (If "No," use the Comment field to specify on overall progress to adopt adequate ordinances or utilizing available regulatory mechanisms.)

4. **This Permittee organization's SWMP Document is posted on a publicly accessible website**.
   (●) *Yes*

   Identify the URL for the webpage where the SWMP Document can be accessed:

   http:// https://itd.idaho.gov/environmental/stormwater/

   ( ) *No*

   ( ) *Not Applicable*

5. **The Permittee provided a summary of total costs associated with the SWMP implementation over the reporting period.**

   (●) *Yes*

   Note: Permit Part 6.4.2.2.5 requires Permittees to provide annual expenditures for the reporting period, and estimated budget for the reporting period following each Annual Report.

   ( ) *No*

   ( ) *Not Applicable*

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6. **This Permittee organization regularly tracks certain activities to set priorities and assess compliance with the Permit requirements.**

(●) *Yes* ( ) *No* ( ) *Not Applicable*

7. During the reporting period, responsibility for SMWP implementation has changed due to a Transfer of Ownership or Operational Authority over a geographic portion of the MS4.

This Permittee's SWMP Document has been updated to reflect these changes in responsibility for any new or transferred areas served by the MS4.

( ) *Yes*

If yes, use the Comments field to provide a brief statement summarizing the change in ownership or operational authority.

(●) *No*

( ) *Not Applicable*

Section II Comments:

During the reporting period there has been no transfer of SWMP implementation, therefore, no changes are discussed in the SWMP update.

The ITD D3 spent $32,000 on the MS4 in 2025 and expects to pay $35,000.00 in 2026. This estimate does not include lab fees.

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Section III. Status of SWMP Control Measures
Please answer all questions for each SWMP control measure and associated component activity. In the Comments field, cite any relevant information and/or statistics that helps illustrate the Permittee's implementation of the required action/activity.

If the answer is "No," use the Comments field to explain the reason, and outline the expected dates that the requirement will be met.

If the requirement does not apply to the Permittee's organization, mark "NA" and explain why it does not apply in the Comments field.

Public Education, Outreach and Involvement Program (Permit Part 3.1)

8. **This Permittee organization conducts an education, outreach, and public involvement program based on stormwater issues of significance in the Permittee's jurisdiction.**

   ○ *Yes, this organization conducts the education, outreach, and involvement activities required by the Permit*

   ◉ *Yes, this organization works through contract with other entities to conduct the education, outreach, and involvement activities required by the Permit*

   ○ *No*

   ○ *Not Applicable*

9. **Target Audience: During the reporting period, this Permittee organization focused its education, outreach, and public involvement messages to the following audience(s):**

   ☑ ***General Public*** *(including homeowners, homeowner's associations, landscapers, and property managers)*

   ☑ ***Business/Industrial/Commercial/Institutions*** *(including home based and mobile businesses)*

   ☑ ***Construction/Development*** *(e.g., Engineers, Contractors, Developers, Landscape Architects, Site Design Professionals)*

   ☑ ***Elected Officials, Land Use Policy and Planning Staff***

   ☐ Other *(describe in Comments section below)*

10. **Topics: During the reporting period, this Permittee organization focused its education, outreach, and public involvement messages on the following topics** *(select all that apply):*

    ☑ General impacts of stormwater flows into surface water, and appropriate actions to prevent adverse impacts;

    ☑ Impacts from impervious surfaces, techniques to avoid adverse impacts;

    ☑ Yard care techniques protective of water quality, such as composting;

    ☑ Proper use, application & storage of pesticides, herbicides, and fertilizers;

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- [x] Litter & trash control and recycling programs;
- [x] BMPs for power washing, carpet cleaning, auto repair &maintenance;
- [x] Low Impact Development/green infrastructure techniques, including site design, pervious paving, retention of mature trees/vegetation, landscaping and vegetative buffers;
- [x] Maintenance of landscape features providing water quality benefits;
- [x] Stormwater treatment and volume control practices;
- [x] Technical standards for stormwater site plans; including appropriate selection, installation, and use of required construction site control measures
- [x] Source control BMPs and environmental stewardship;
- [x] Impacts of illicit discharges and how to report them;
- [x] Actions and opportunities for pet waste control/disposal,
- [x] Water wise landscaping, water conservation, water efficiency
- [x] BMPs for use and storage of automotive chemicals, hazardous cleaning supplies, vehicle wash soaps and other hazardous materials;

11. During the reporting period, this Permittee organization began and/or continued distribution of the selected messages/activities to the intended target audience.

(●) *Yes*

Please summarize the message/activity conducted during the reporting period in the Comments section below.

( ) *No*

Note: Permit Part 3.1.3 requires Permittees to conduct at least eight (8) educational messages or activities no later than ***September 30, 2026.***

( ) *Not Applicable*

12. During this reporting period, this Permittee organization assessed, or participated in efforts to assess, the understanding and adoption of intended behaviors by the target audience.

(●) *Yes; In the Comments section below, please summarize efforts to assess the selected education, outreach and public involvement activities conducted during the reporting period. If information is available, describe how this information is used to improve the education/outreach efforts.*

( ) *No*

( ) *Not Applicable*

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13. During this reporting period, this Permittee organization offered (or worked with others to offer) training/education regarding construction site runoff control measures to site operators working in the Permittee's jurisdiction.

(●) *Yes*

( ) *No*

Note: Permit Part 3.1.7.1 requires Permittees to offer outreach/training on construction site control measures at least once per year during the permit term, no later than ***September 30, 2026.***

( ) *Not Applicable*

14. During this reporting period, this Permittee organization offered (or worked with others to offer) training/education regarding permanent stormwater controls to audiences working in the Permittee's jurisdiction.

(●) *Yes*

( ) *No*

Note: Permit Part 3.1.7.2 requires Permittees to offer outreach/training on permanent stormwater controls at least once per year during the permit term, no later than ***September 30, 2026.***

( ) *Not Applicable*

15. This Permittee organization maintains and promotes a publicly-accessible website that provides current SWMP-related information cited in Permit Part 3.1.8. This website was recently updated prior to submitting this Report.

(●) *Yes*

URL for the Permittee's webpage:

http:// https://itd.idaho.gov/environmental/stormwater/ AND Partnersforcleanwater.org

( ) *No*

( ) *Not Applicable*

Comments on Public Education, Outreach, and Involvement Program:
Use this Comments field to explain or discuss unique implementation schedules, summarize nature of the education, outreach, and public involvement activities conducted during the reporting period

The City of Boise is responsible for all public education and outreach requirements. The Department participates in the planning and implementation of the activities as needed. Additionally, the ITD D3 works to promote clean storm water in the District. ITD D3 defaults to the local jurisdictions requirements when designing permanent stormwater controls.

Information regarding the City of Boise's public education and outreach program, target audiences, activities, stormwater pollution prevention messaging, assessment and tracking, etc. can be found in Attachment A.

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Illicit Discharge Detection and Elimination Program (Permit Part 3.2)

16. **To the extent allowable pursuant to authority granted under Idaho law, this Permittee organization conducts and enforces a program to detect and eliminate illicit discharges into the MS4.**

- (●) *Yes*
- ( ) *No*

  Note: Permit Part 3.2 requires Permittees to revise and update their existing programs as necessary to comply with Permit Parts 3.2.2 through 3.2.9 no later than ***April 3, 2026.***

- ( ) *Not Applicable*

17. **This Permittee organization maintains a current MS4 Map and Outfall Inventory as described in Permit Part 3.2.2.**

- (●) *Yes*
- ( ) *No*

  Note: Permit Part 3.2 requires Permittees to update their Map(s) and Inventory no later than ***April 3, 2026.***

- ( ) *Not Applicable*

18. **To the extent allowable pursuant to authority granted under Idaho law, this Permittee organization prohibits non-storm water discharges into the MS4 (*except those identified in Permit Part 2.4*) through an ordinance or other regulatory mechanism.**

- (●) Yes – if yes, please provide citation/web address to the ordinance/regulatory mechanism:

  https://adminrules.idaho.gov/rules/current/39/390342.pdf

- ( ) *No*

  Note: Permit Part 3.2 requires Permittees to revise and update their existing programs as necessary no later than ***April 3, 2026.***

- ( ) *Not Applicable*

19. **This Permittee organization maintains a dedicated telephone number, email address, and/or other means for the public to report illicit discharges,**

- (●) *Yes – if yes, please provide phone number/web address :*

  Hotline: 208-395-8888 District: 208-334-8300, https://www.partnersforcleanwater.org/report-an-issue/

- ( ) *No*

  Note: Permit Part 3.2 requires Permittees to revise and update their existing programs as necessary no later than ***April 3, 2026.***

- ( ) *Not Applicable*

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20. This Permittee organization responds and investigates illicit discharge complaints or reports within two working days.

- (●) *Yes*
- ( ) *No*

  Note: Permit Part 3.2 requires Permittees to revise and update their existing programs as necessary no later than ***April 3, 2026.***

- ( ) *Not Applicable*

21. Number of public Complaints/Reports Received During this Reporting Period:

0

22. Number of Illicit Discharge Complaints/Reports Investigated through field visits, sampling or other follow-up action [0]

23. Number of Illicit Discharge Complaints/Reports Resolved [0]

24. This Permittee organization conducts a dry weather analytical and field screening monitoring program to identify non-stormwater flows from MS4 outfalls.

(●) *Yes* ( ) *No* ( ) *Not Applicable*

25. During the reporting period, this Permittee organization used its written protocols to prioritize and identify MS4 outfalls for dry weather discharge investigation.

(●) *Yes* ( ) *No* ( ) *Not Applicable*

26. Total Number of MS4 Outfalls in the Permittee's jurisdiction of the Permit Area:

[4]

27 During the reporting period, this Permittee organization completed visual dry weather screening on at least 20 percent of MS4 outfalls.

- (●) *Yes— Total # outfalls < 7, so only one outfall screened this reporting period.*
- ( ) *No*
- ( ) *Not Applicable*

28. Of the 20 percent of outfalls screened during the reporting period:

How many outfalls were discharging during dry weather? [1]

How many of these identified dry weather discharges were sampled or otherwise investigated to determine the discharge source? [1]

How many of the identified dry weather discharges resulted in the Permittee action to address and eliminate the discharge source? [0]

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29. **During this reporting period, how many of the Permittee's MS4 outfalls have been identified as having dry weather flows caused by irrigation return flow or ground water seepage?**
Number of outfalls identified this reporting period 0
Total number of MS4 outfalls identified to date, as having dry weather flows from irrigation or groundwater seepage 1

Note: Permit Part 3.2.6 requires Permittees to provide a complete list of MS4 outfalls locations identified as having dry weather flows caused by irrigation return flow or ground water seepage as part of the Permit Renewal Application no later than ***April 3, 2026.***

30. **This Permittee organization maintains written spill response procedures and coordinates appropriate spill prevention, containment and response activities with other organizations in the Permit Area to ensure maximum water quality protection at all times.**

(●) *Yes* ( ) *No* ( ) *Not Applicable*

31. **This Permittee organization coordinates with appropriate local entities to educate employees and the public of the proper management and disposal or recycling of used oil, vehicle fluids, toxic materials, and other household hazardous wastes.**

(●) *Yes* ( ) *No* ( ) *Not Applicable*

32. **This Permittee organization's staff responsible for investigating, identifying and eliminating illicit discharges, spills, and illicit connections into the MS4 are trained to conduct such activities**

(●) *Yes* ( ) *No* ( ) *Not Applicable*

Comments on Illicit Discharge Detection and Elimination Program:
Use this Comments field to explain any unique implementation schedules, highlight investigation results or follow-up actions, discuss subsequent enforcement actions, etc. that were conducted during the relevant reporting period.

Of the Boise River Americana outfalls (2), one had a discharge and the other had no discharge during dry weather. The Ridenbaugh Canal outfall did have a discharge (See Attachment F). The Americana outfalls are shared outfalls and are monitored by ACHD for wet and dry weather.

The Thurman Drain Outfall was not sampled because it has been determined that discharge from the D3 Yard does not discharge there.

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Construction Site Runoff Control Program (Permit Part 3.3)

33. This Permittee organization uses an ordinance or other regulatory mechanism to require erosion, sediment, and waste material management controls at construction project site activity that results in land disturbance of one (1) or more acres and discharges to the MS4.

- (●) *Yes*
- ( ) *No*

  Note: Permit Part 3.3 requires Permittees to update their construction site runoff control requirements no later than ***April 3, 2026.***

- ( ) *Not Applicable*

34. This Permittee organization requires construction site operators to submit construction site plans for Permittee review.

- (●) *Yes*
- ( ) *No*

  Note: Permit Part 3.3 requires Permittees to update their construction site runoff control requirements no later than ***April 3, 2026.***

- ( ) *Not Applicable*

35. This Permittee organization inspects construction sites to ensure compliance with applicable requirements for erosion, sediment and waste material management controls.

- (●) *Yes*
- ( ) *No*

  Note: Permit Part 3.3 requires Permittees to update their construction site runoff control requirements no later than ***April 3, 2026.***

- ( ) *Not Applicable*

36. This Permittee organization inspects construction sites using an inspection prioritization system.

- (●) *Yes*
- ( ) *No*

  Note: Permit Part 3.3 requires Permittees to update their construction site runoff control requirements no later than ***April 3, 2026.***

- ( ) *Not Applicable*

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37. **This Permittee organization implements a written escalating enforcement response policy or plan (ERP) for construction site runoff control.**

- (●) *Yes*
- ( ) *No*

  Note: Permit Part 3.3 requires Permittees to update their construction site runoff control requirements no later than ***April 3, 2026.***

- ( ) *Not Applicable*

38. This Permittee organization ensures that all persons responsible for preconstruction site plan review, site inspections, and enforcement of construction site runoff control requirements are appropriately trained to conduct such activities – specifically, this organization provides orientation and training for new staff working on construction runoff control issues within the first six (6) months of employment.

- (●) *Yes*
- ( ) *No*

  Note: Permit Part 3.3 requires Permittees to update their construction site runoff control requirements no later than ***April 3, 2026.***

- ( ) *Not Applicable*

Comments on Construction Site Runoff Control:
Use this Comments field to explain unique implementation schedules, summarize the number of site inspections, follow-up actions, and/or any subsequent enforcement actions, etc that were conducted during the relevant reporting period.

ITD did not have any projects within the permit area this permit cycle.

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Post Construction Stormwater Management in New Development & Redevelopment (Permit Part 3.4)

39. Through ordinance or other regulatory mechanism, this Permittee organization requires the installation and long-term maintenance of permanent stormwater controls at new development and redevelopment project sites that result from land disturbance of 5,000 square feet or more, excluding individual one- or two-family dwelling development or redevelopment and the infill or redevelopment of public pedestrian infrastructure projects. Required controls are sufficient to retain onsite the runoff volume produced from the first 0.6 inches of rainfall from a 24-hour event preceded by 48 hours of no measurable precipitation, and/or require runoff treatment providing equal or greater level of water quality benefit as this onsite retention standard.

(●) *Yes*

Please cite to the ordinance containing the permanent stormwater control requirements:

ITD defaults to the local jurisdiction standards within Boise City Limits.

( ) *No*

Note: Permit Part 3.4 requires Permittees to update their permanent stormwater control requirements no later than ***April 3, 2026.***

( ) *Not Applicable*

40. This Permittee organization requires permanent storm water controls through written specifications.

(●) *Yes*

Please cite to the document containing the permanent stormwater control requirements:

ITD defaults to the local jurisdiction standards within Boise City Limits.

( ) *No*

Note: Permit Part 3.4 requires Permittees to update their permanent stormwater control requirements no later than ***April 3, 2026.***

( ) *Not Applicable*

41. This Permittee organization requires preconstruction site plan review and approval for permanent storm water controls at new development and redevelopment sites.

(●) *Yes*

( ) *No*

Note: Permit Part 3.4 requires Permittees to update their permanent stormwater control requirements no later than ***April 3, 2026.***

( ) *Not Applicable*

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41.b This Permittee organization cooperates in the implementation of the Green Infrastructure Strategy to employ innovative approaches to control stormwater quality and quantity in the Lower Boise River watershed.

Use this field below to describe any relevant Permittee actions during the reporting period, as applicable.

See Attachment B for ACHD GSI Program Activities and Project Descriptions 2024-2025.

ITD D3 designs permanent storm water facilities to meet the local jurisdiction standards. When there are no local jurisdiction standards we use best management practices and/or refer to the Idaho Roadside Design Manual or the AASHTO Green Book.

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42. This Permittee organization has identified high priority locations in the jurisdiction where the Permittee regularly inspects the installation, and long-term operation, of permanent stormwater controls.

- (●) *Yes*
- ( ) *No*

  Note: Permit Part 3.4 requires Permittees to update their permanent stormwater control requirements no later than ***April 3, 2026.***

- ( ) *Not Applicable*

43. This Permittee organization has an enforcement strategy to ensure and maintain the functional integrity of permanent stormwater controls within this jurisdiction.

- (●) *Yes*
- ( ) *No*

  Note: Permit Part 3.4 requires Permittees to update their permanent stormwater control requirements no later than ***April 3, 2026.***

- ( ) *Not Applicable*

44. This Permittee organization uses a database inventory to track and manage the operational condition of permanent stormwater controls within this jurisdiction.

- ( ) *Yes*
- (●) *No*

  Note: Permit Part 3.4 requires Permittees to update their permanent stormwater control requirements no later than ***April 3, 2026.***

- ( ) *Not Applicable*

45. This Permittee organization requires enforceable and transferable O&M Agreements, where parties other than this Permittee organization are responsible for operation and maintenance of permanent storm water controls?

- (●) *Yes*
- ( ) *No - Note: Permit Part 3.4 requires Permittees to update their permanent stormwater control requirements no later than* ***April 3, 2026.***
- ( ) *Not Applicable*

46. This Permittee organization ensures that all persons responsible for reviewing site plans for permanent stormwater controls and/or for inspecting the installation and operation of permanent controls are trained to conduct such activities

- (●) *Yes*
- ( ) *No - Note: Permit Part 3.4 requires Permittees to update their permanent stormwater control requirements no later than* ***April 3, 2026.***
- ( ) *Not Applicable*

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Comments on Post Construction Stormwater Management in New Development and Redevelopment

Use this Comments field as necessary to explain any unique implementation schedules, summarize inspections, actions, etc. that were conducted during the relevant reporting period.

While ITD uses an asset tracking database it does not yet have the ability to track operational condition of permanent storm water structures. ITD is working on the development of such a database. Currently ITD regularly visits these sites at least once per year. Priority is based on past issues, potential impacts to receiving waters, and public safety.

Our plan reviewers are trained to review the permanent storm water controls and/or operations. Many projects are done by consultant with proper training.

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Stormwater Infrastructure and Street Management (Permit Part 3.5)

47. This Permittee organization inspects all MS4 catch basins and inlets in the jurisdiction at least once every two years and takes appropriate maintenance or cleaning action based on those inspections.

- (●) *Yes*
- ( ) *No – Permittee uses an alternate inspection & maintenance schedule as outlined in the SWMP Document.*
- ( ) *No*

  Note: Permit Part 3.5 requires Permittees to update their pollution prevention and good housekeeping *as needed to properly operate and maintain their MS4s no later than* ***April 3, 2026.***
- ( ) *Not Applicable*

Total Number of catch basins and inlets inspected this reporting period 0.0

48. This Permittee organization operates and maintains Streets, Roads, Highways and/or Parking Lots in its jurisdiction in a manner that protects water quality and reduces the discharge of pollutants through the MS4.

- (●) *Yes*
- ( ) *No*

  Note: Permit Part 3.5 requires Permittees to update their requirements pollution prevention/good housekeeping for MS4 Operations no later than ***April 3, 2026***
- ( ) *Not Applicable*

49. This Permittee organization operates all street/road maintenance material storage locations in a manner that prevents pollutants in stormwater runoff from discharging to the MS4 or into any receiving waterbody. A description of each Material Storage Location is included in the SWMP Document, as required by Permit Part 3.5.4

- (●) *Yes*
- ( ) *No*

  Note: Permit Part 3.5 requires Permittees to update their requirements pollution prevention/good housekeeping for MS4 Operations no later than ***.***
- ( ) *Not Applicable*

50. This Permittee organization sweeps all streets, roads, highways, and parking lots according to a sweeping management plan and the sweeping schedule outlined in Permit Part 3.5.5.

- (●) *Yes*
- ( ) *No*

  Note: Permit Part 3.5 requires Permittees to update their requirements pollution prevention/good housekeeping for MS4 Operations no later than ***April 3, 2026***

- ( ) *Not Applicable*

51. This Permittee organization has reviewed its operation and maintenance activities for the types of activities listed below and confirms that all such activities are conducted in a manner that protects water quality and reduces the discharge of pollutants through the MS4. Municipal Activities to be addressed include: *grounds/park and open space maintenance operations; fleet maintenance and vehicle washing operations; building maintenance; snow disposal site operation and maintenance; solid waste transfer activities; municipal golf course maintenance; materials storage; hazardous materials storage; used oil recycling; and spill control and prevention measures for municipal refueling facilities.*

- (●) *Yes*
- ( ) *No*

  Note: Permit Part 3.5 requires Permittees to update their requirements pollution prevention/good housekeeping for MS4 Operations no later than ***April 3, 2026***

- ( ) *Not Applicable*

52. **This Permittee organization ensures appropriate practices to reduce the discharge of pollutants to the MS4 associated with the application, storage and disposal of pesticides, herbicides and fertilizers. All employees or contractors applying pesticides, etc. are instructed to follow all label requirements, including those regarding application methods, rates, number of applications allowed, and disposal of the pesticide/herbicide/fertilizer and rinsate.**

- (●) *Yes*
- ( ) *No*

  Note: Permit Part 3.5 requires Permittees to update their requirements pollution prevention/good housekeeping for MS4 Operations no later than ***April 3, 2026.***

- ( ) *Not Applicable*

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53. This Permittee organization uses site specific Storm Water Pollution Prevention Plans for all Permittee-owned material storage facilities, heavy equipment storage areas, and maintenance yards located in the Permit Area.

- (●) *Yes*
- ( ) *No*

  Note: Permit Part 3.5 requires Permittees to update their requirements pollution prevention/good housekeeping for MS4 Operations no later than ***April 3, 2026.***

- ( ) *Not Applicable*

54. This Permittee organization ensures that all persons responsible for municipal operations and maintenance activities are trained to conduct such activities

- (●) *Yes*
- ( ) *No*

  Note: Permit Part 3.5 requires Permittees to update their requirements pollution prevention/good housekeeping for MS4 Operations no later than ***April 3, 2026.***

- ( ) *Not Applicable*

Comments on Stormwater Infrastructure and Street Management
Use this Comments field as necessary to explain any unique implementation schedules, summarize inspections, actions, etc. that were conducted during the relevant reporting period

ITD operates an Adopt-a-Highway Program and this year ITD collected 66 tons of garbage from I-184 and I-84. ITD swept up 672 cubic yards of material in the permit area this year.

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Industrial and Commercial Stormwater Discharge Management (Permit Part 3.6)

55. ***This Permittee organization maintains an inventory of industrial & commercial facilities within the Permit Area, and inspects such facilities on a prioritized basis as required by Permit Part 3.6.***

Use this comment box to summarize Permittee activities related to Permit Part 3.6.

ITD has mapped industrial and commercial areas adjacent to state highways, U.S. highways, and interstate within the permit area. ITD is developing does not inspect industrial and commercial facilities because it doesn't have authority, unless there is a potential discharge from a facility. ITD did not have any discharges from a commercial or industrial facility this permit year.

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Section V. Response To Excursions Above Idaho Water Quality Standards

56. During this or any prior reporting period, did the Permittee submit written notification to EPA and IDEQ regarding MS4 discharge that are causing or contributing to an excursion above the WQS as directed by Permit Part 5.1?

- ○ *Yes – if yes, proceed to Q.56*
- ◉ *No*
- ○ *Not Applicable*

57. During this or any prior reporting period, did the Permittee submit an Adaptive Management Report to EPA and IDEQ, as directed by Permit Part 5.2?

- ○ *Yes – if yes, proceed to Q.57*
- ◉ *No*
- ○ *Not Applicable*

58. Provide a summary of the Permittee's efforts to date that address the MS4 discharges contributing to the original water quality excursion, including the results of any monitoring, assessment, or evaluation efforts conducted during the reporting period.

Additional monitoring activities included in reporting year 2024-2025 includes an update to the ACHD Storm Water Outfall Monitoring (Attachment C), ACHD Stormwater Outfall Summary (Attachment D), the ACHD Temperature Monitoring (Attachment E). add ITD dry weather monitoring (Attachment F).

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59. List any attachments submitted as part of this Annual Report:

Note: Part 6.2.1 requires an updated *Stormwater Outfall Monitoring Plan* to be submitted as part of the Year 1 Annual Report, due January 30, 2023.

Attachment A: Public Education, Outreach Summary and Involvement Program.
Attachment B: ACHD GSI Program Activities and Project Descriptions
Attachment C: ACHD Stormwater Outfall Monitoring Summary
Attachment D: ACHD American Subwatershed Summary
Attachment E: ACHD Temperature Monitoring Summary,
Attachment F: ITD Dry Weather Monitoring.

Attachment A

Public Education, Outreach and Involvement Program

1. Overview

The City of Boise, Ada County Highway District, Garden City, Ada County Drainage District #3, Idaho Transportation Department District #3, and Boise State University formed Partners for Clean Water (Partners) to develop a cooperative approach to educating the public on stormwater and water quality issues and ensure compliance with the Permit. The City of Boise is the lead agency for this control measure of the Permit with support from the other Partners. The overarching goal of the program is to educate the public on stormwater issues to change specific behaviors that contribute to nutrient, bacteria, temperature, and sediment pollution to the MS4 and local receiving waters.

The City's Stormwater Public Education and Outreach Program is guided by a step-by-step process when developing educational opportunities.

1. Define goals and desired outcomes
2. Identify and analyze target audiences
3. Create messaging for selected audiences
4. Distribute message through chosen methods of outreach
5. Assess the results in order to direct future efforts

The Partners conduct multiple outreach activities and messaging campaigns each year, designed to reach the various target audiences identified in the Permit and focus on stormwater issues of significance in the Permit area. The permittees collaborate each year on which topics and relevant messages the program will focus their efforts on. These activities and messages are further developed and built upon based on feedback and public participation.

Target audiences in Permit Year 4 included the general public, businesses, homeowners, neighborhood associations, pet owners, landscapers, property managers, engineers, contractors, developers, plan review staff, and students. Specific details that meet Permit Part 3.1 requirements can be found below.

2. Ongoing Efforts (throughout Permit term):

Annual Media Campaign

The Partners continue to participate in an annual media campaign which utilize messaging opportunities with radio advertisements, public service announcements, and online ads. The media campaign reaches all target audiences with general messages on water quality with a focus on pet waste, fertilizer reduction, and illicit discharge reporting in 2025.

Manuals and Reference Materials

Manuals, fact sheets and other education and outreach reference materials are available on the Partners for Clean Water website. These materials are targeted, based on content, to all our targeted audiences. Examples of

these documents include 'Stormwater Facility Maintenance Best Management Practices', 'Stormwater Pollution Prevention: Commercial Landscaping', 'Operation and Maintenance of Stormwater Systems', 'Drainage Plan Checklist' and 'Stormwater Management Resource Guide', among others.

Website

The website (partnersforcleanwater.org) reaches all target audiences within the Treasure Valley with specific messaging based on audience. More information can be found in section 7 below.

Boise WaterShed Environmental Education Center

In 2025, The Boise WaterShed reopened as the nation's first climate and water science center, after an extensive remodel. The all-ages, hands-on exhibits explore themes of our changing watershed and how the community can take action to help make our community more resilient to the effects of climate change. The facility is designed to promote water stewardship by teaching people of all ages how to protect and conserve our water resources for future generations.

The staff at the Boise WaterShed incorporates stormwater pollution prevention and stormwater management information into the programs, water renewal facility tours, and lessons offered to visitors. Education of personal impacts to water quality via stormwater, wastewater and pollution prevention tips are integrated throughout most exhibits, lessons, tours, and the center's library resources.

The facility also provides an outdoor River Campus which presents a new dimension to water education with exterior exhibits that show the big picture of the Treasure Valley's water resources. Presented to simulate the workings of the Lower Boise Watershed, the interactive, walk-able, park-like setting takes visitors on a journey from Lucky Peak Reservoir and Dam, through Boise's urban streets, and the Water Renewal Facility. From here they watch cleaned water returned to the Boise River and see it flow downstream to the agricultural zone that sustains our food industry. Ultimately, visitors realize that what we do upstream not only affects downstream users, but also ultimately the overall health of the Snake River and beyond.

Social Media

The City of Boise and other Partners regularly posts messaging on Twitter, Facebook, and Instagram regarding stormwater, water quality, household hazardous waste collection, leaf litter pick up information, etc. to help distribute these messages to the community through a variety of avenues.

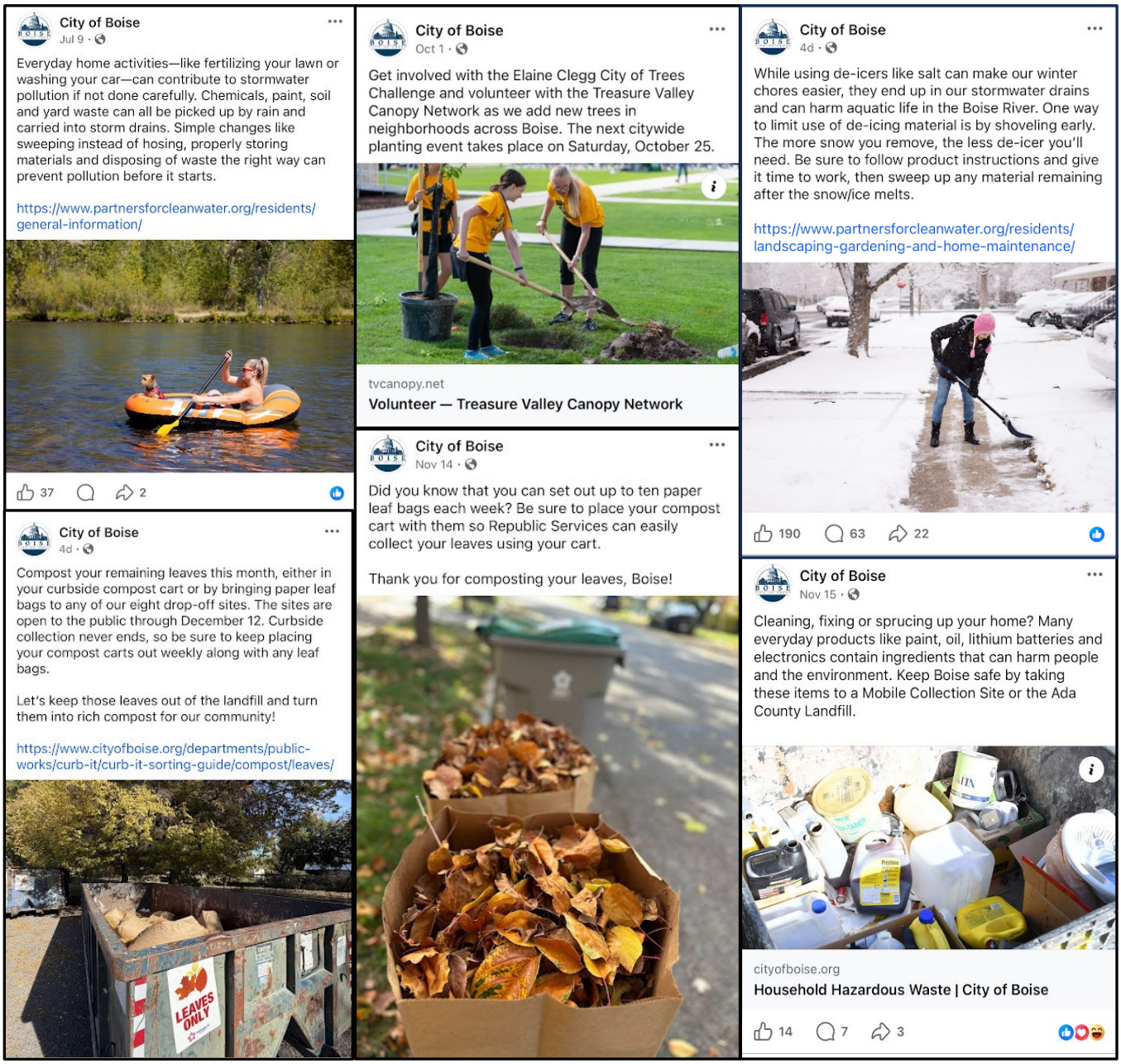


Figure 1. Examples of 2025 educational social media posts

3. 2025 Outreach Events and Activities:

Media Campaign

The media campaign for 2025 included radio ads, social media posts, and online ads on websites such as BoiseDev and Google.

Themes highlighted in 2025 include picking up pet waste, illicit discharge reporting, and proper fertilizer use, seen in Figure 2 below.

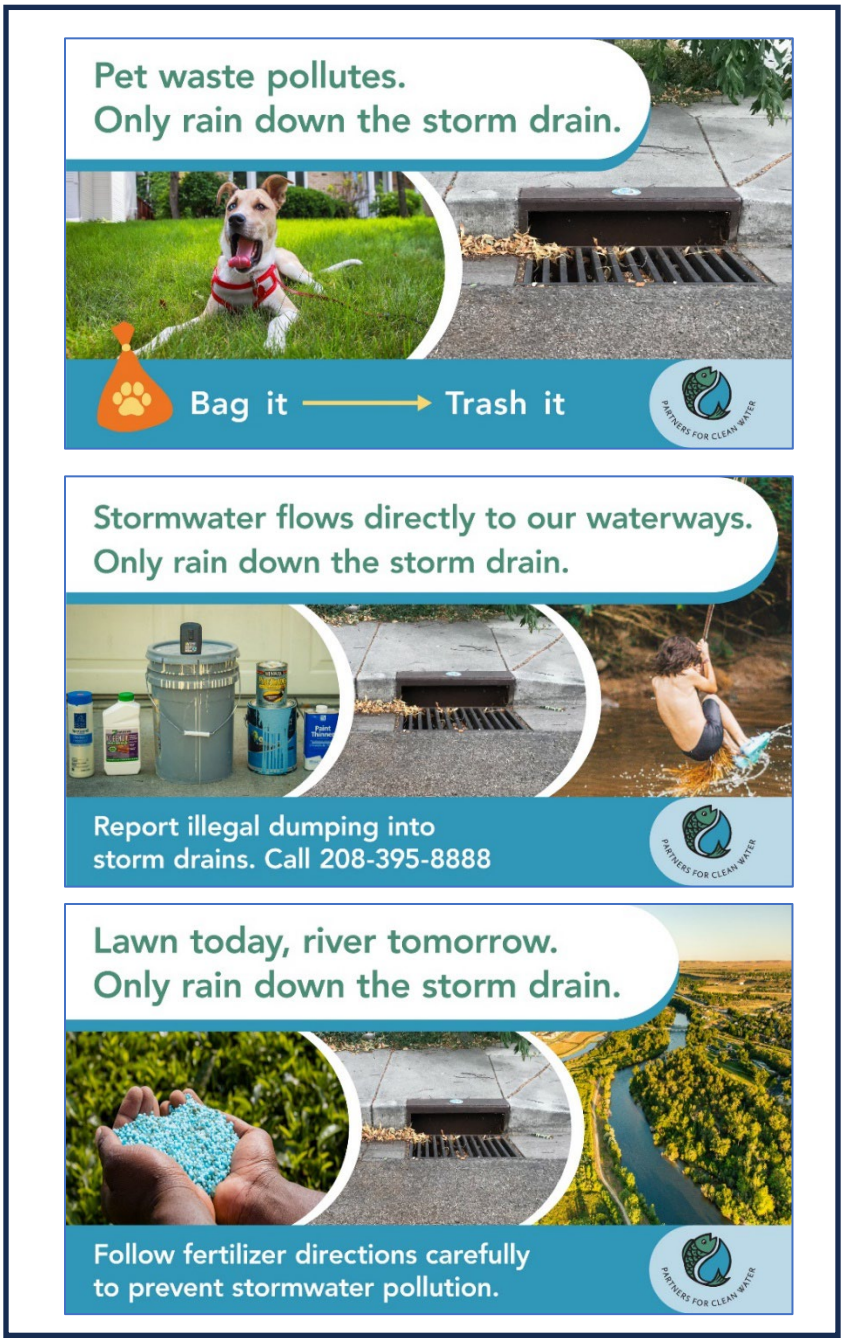


Figure 2. 2025 Stormwater Educational Graphics

Radio ads featuring Partners outreach messages were aired on radio stations including KJOT, KRVB, KXLT, KKOO, KIZN, KKGL, LA GRAND, and LA PONDEROSA. Radio ads were broadcast in English and Spanish.

2025 Outreach Events

Several events were held during Permit Year 4 for stormwater education and outreach purposes. Each event targeted the general public and focused on general stormwater awareness, illicit discharge reporting, stormwater pollution prevention tips for homes and businesses, and water quality.

City of Boise Earth Day:



Figure 3. Partners outreach tent at the 2025 Earth Day celebration

Neighborhood Concert Series:



Figure 4. Partners outreach tent at the Neighborhood Concert Series

City of Boise Water Jamboree:

In August, the City of Boise hosted a Water Jamboree at Ann Morrison Park. This event was organized to celebrate 75 years of Water Renewal Services in Boise. This event gathered over 20 local organizations focused on water quality and environmental sustainability, along with food trucks, face painting, and live music. Many families and Boise River floaters were in attendance to participate in the Jamboree.



Figure 5. Partners outreach tent at the City of Boise Water Jamboree

2025 Treasure Valley Stormwater Conference

In September 2025, Partners for Clean Water co-hosted a regional stormwater conference with the International Erosion Control Association (IECA). The conference successfully brought together over 80 stormwater professionals, regulators, engineers, and contractors for a full day of learning and collaboration focused on one central theme: "Diving Into What Clean Really Means for Idaho Watersheds."

The conference featured technical presentations and case studies covering water-quality trends in the Lower Boise River, revegetation on large construction projects, municipal stormwater volume reduction, advanced treatment BMPs, and

stormwater compliance in challenging environments. Hands-on learning was emphasized through an afternoon workshop on underground modular detention design and construction.

Attendees also connected with exhibitors and sponsors throughout the day, gaining exposure to innovative products and practical solutions for stormwater compliance and water-quality goals. Optional post-conference activities included a field tour of the Warm Springs Creek Aquatic Habitat Improvements and a stormwater trivia networking event at Lucky 13.



Figure 6. Southwest Idaho Stormwater Conference 2025

4. Assessment

The Partners are consistently assessing the public's understanding of our public outreach messages and the adoption of behaviors that reduce stormwater pollution by our target audiences.

Assessment includes surveys at events that measure general stormwater knowledge to evaluate which topics are being conveyed already, and which topics need additional messaging and awareness. These surveys also resolve which media avenues are most useful to the respondents to guide our outreach in the future.

Data from website usage is also used to assess which programs and messages are reaching the most people and which media avenues generate the most

viewership. The Partners website is updated based on which pages are most viewed and clicked on, in order to make popular topics more accessible (Appendix A).

The results of these continual assessments constantly shape the future of our public outreach and education programming. Focus will be given to programs and efforts that are successful in changing the public's behaviors and practices to reduce stormwater pollution.

Survey Assessment

Surveys given at events help us gauge what messages should be given more or less emphasis in our outreach program and how to best reach community members with our outreach campaigns. A summary of survey results from the last four years (142 total) and their associated impact to the program are included below.

Surveys can be helpful, but also have sampling bias and response bias, which is why surveys are just one tool to use when assessing outreach efforts.

TABLE 1: ASSESSMENT OF WEBSITE VIEWERSHIP

Question	Answer Options	Total Response #	Conclusions of Results
Stormwater has a negative effect on water quality in the Boise River	Strongly disagree	2	- The general public seems to understand that stormwater negatively affects surface waters - Continue to communicate negative effects of stormwater pollution
	Disagree	8	
	Neutral	25	
	Agree	84	
	Strongly Agree	23	
Stormwater gets treated at Boise's wastewater facilities	True	68	- We need to better communicate that stormwater does not get treated at a facility
	False	74	
Circle the activities you currently practice at home to reduce stormwater pollution	Pick up dog poop	65	- These results will guide future outreach efforts based on the number of people that report doing or not doing each activity - This question also has bias since not everyone has a dog, irrigates, has a car, has a yard, etc., which can be taken into account when developing outreach materials
	Rake leaves	114	
	Irrigate Efficiently	97	
	Xeriscaping	31	
	Take car to car wash	103	
	Clean oil/grease spills	51	
	Follow fertilizer directions	72	

How familiar are you with Partners for Clean Water?	Not at all	13	- Partners will continue promoting our organization and our stormwater pollution hotline, where the community can report illicit discharges and stormwater complaints.
	Unfamiliar	25	
	Somewhat familiar	78	
	Very Familiar	26	
Are you interested in learning more about stormwater?	Yes	130	- The general public seems very interested in stormwater topics
	No	12	
What is the best way for you to receive information?	Social media	98	- The general public receives information depending on various factors such as age, profession, socioeconomic status, etc. - Continue promoting the Partners website and social media outlets - Since these were given at public events, this answer is biased, but still relevant - Continue to create outreach materials such as brochures and items to hand out.
	Websites	107	
	Mailers	54	
	Brochures	92	
	Events	113	
	TV/Radio	91	

Website Assessment

TABLE 2: ASSESSMENT OF WEBSITE VIEWERSHIP

Permit Year	Total Viewers	Total Views	Source of Click					
			Direct	Google	Boise Dev	City of Boise	Boise Newsletter	Other
Year 1 (2022)	2,790	3,376	58.20%	22.90%	--	--	--	18.90%
Year 2 (2023)	3.360	5,113	29.30%	8.20%	53.60%	6.00%	--	2.90%
Year 3 (2024)	5,046	32,775	23.50%	13.70%	38.60%	4.00%	7.50%	12.70%
Year 4 (2025)	5,161	6,792	46.00%	40.80%	2.70%	4.00%	2.00%	4.50%

This website data will help direct our media campaign by determining which avenues are most engaging to our viewers. In Year 3, most of our outreach budget was given to our media campaign, as well as the longest amount of time ads appeared on Boise Dev. This is reflected in the numbers of clicks and views that year. We will continue having a strong media presence in the future, as well as using budget to create new ways to promote our website.

Central Rim Neighborhood Assessment

A more targeted pilot program was started in Permit Year 2 in the Central Rim Neighborhood. The primary goal of this pilot project is to increase stormwater awareness, engage the target audience, and effectively promote proper leaf disposal. By isolating public education and outreach in this neighborhood, we are aiming to achieve higher participation in proper leaf disposal in the Central Rim Neighborhood.

In October 2023, postcards were sent out that outlined the benefits of raking your leaves such as flooding prevention and improved water quality. It also gave instructions for leaf pickup and provided a link to sign up for a free yard sign to encourage neighbors to rake leaves. Signs were displayed in the yards of Central Rim Neighborhood residents.



Figure 4. Outreach postcard sent to Central Rim Neighborhood residents

Outreach continued in 2024 and 2025 at the Central Rim's National Night Out. More signs were given to residents and stormwater educational messaging and post cards were provided at a Partners for Clean Water table. Many residents exhibited enthusiasm and interest in the program.

Mailers sent to the Central Rim Neighborhood with post-outreach surveys did not provide enough data to make quantifiable conclusions about the impact of

signage on reported behavior changes. Only four surveys were returned, limiting the potential assessment for this type of outreach. However, we also attained even more quantifiable data from Republic Services of leaf collection amounts from Central Rim neighborhood from the fall seasons of 2021-2024. This data shows a clear increase in leaf litter picked up in this neighborhood over the course of the permit term. It is difficult to conclude that this is the result of Partners outreach, increased Curb It outreach, or another public education factor. This project ultimately concludes that local, neighborhood engagement is successful based on feedback received at neighborhood events and supporting leaf litter data.

Year	Leaf litter collected in Central Rim Neighborhood (in tons)
2021	293
2022	298
2023	307
2024	372

5. Tracking

A tracking spreadsheet is used by the City of Boise to track and maintain all records of our stormwater education and outreach activities, events, and trainings. This spreadsheet is shared with other permittees during regularly scheduled permittee meetings and is open to feedback and discussion. The tracking spreadsheet is used to compile the annual report.

6. Education on SWMP Control Measures

Construction Site Runoff Control Training

To provide the regional construction community with erosion and sediment control and stormwater pollution prevention education, the City and our Partners have developed the Erosion and Sediment Control (ESC) Responsible Person (RP) training and certification program. The class promotes awareness of the impact of polluted construction site runoff and soil erosion on the MS4 and the Boise River. The class curriculum covers local and state stormwater regulations, principles of ESC Best Management Practices (BMPs), installation and maintenance of common erosion and sediment controls, fugitive dust control, stormwater pollution prevention practices, dewatering, how to conduct the required construction site inspections and updating the ESC plan or SWPPP for the site.

The instructors for the City Responsible Person classes must be qualified and approved by the City. Instructors are required to submit a resume to the City detailing their educational history and experience in erosion control. They must also be able to demonstrate knowledge of the principles of erosion; sediment transport; erosion and sediment control technology, implementation, and maintenance; and local and federal ordinances regulating erosion and sediment control.

Courses are offered through third party entities: Engineering with a Mission LLC, Eagle One LLC, Jones Erosion Control, the College of Western Idaho, and Syman Company throughout the year in various locations in the Treasure Valley as well as online offerings. Boise State University's Construction Management Program also presents the class material to their students, who may receive certification if desired. Additionally, the Nampa school district has a vocational construction site program that utilizes the ESC training presentation. The ESC Inspectors also present the RP course quarterly to train local agency personnel involved in construction projects so that they may implement BMPs on public projects and notify ESC Inspectors if they see runoff pollution and other violations at construction sites. As part of the training participants receive education materials including an illustrated ESC Field Guide to Best Management Practices specific to Idaho.

Construction site operators and contractors must renew their RP certification every 3 years by attending the training and passing an examination. The class is updated regularly to present new ideas and methods in ESC and SWPPP. The Planning and Development permitting system maintains a database of certified RPs. The database is utilized by the City of Boise, ACHD, Garden City, the City of Nampa, and City of Caldwell to verify that construction sites have an individual with ESC training onsite. The RP name and contact information is required to be listed prior to permit issuance, and the RP must have operational control to make corrective actions and knowledge to implement BMPs and work with ESC Inspectors to keep sites in compliance.

In 2025, 511 Responsible Person licenses were issued or renewed..

City staff provide ongoing awareness, education and outreach through the website, annual events, and also can provide site specific training as needed to interested parties and industry groups.

Permanent Stormwater Controls Training

The September SW Idaho Stormwater Conference fulfilled the requirement to conduct an annual public training focused on permanent stormwater

controls. While the conference covered a lot of other topics, we ensured that O&M of permanent stormwater controls was included in the agenda.



Figure 5. Conference promotional image

7. Publicly Accessible Website

The City of Boise, on behalf of the Partners for Clean Water, maintains a website that educates the public on stormwater issues for multiple audiences. The website is a key source for stormwater information in Boise and the Treasure Valley.

The website contains relevant contacts for each permittee, as well as each permittee's annual reports, SWMPs, and other relevant compliance and regulation materials. The Intergovernmental Agreement (IGA) that outlines permittee responsibilities is posted, as well as the IPDES permit and the MS4 map. Regularly scheduled permittee meeting agendas and meeting notes are also posted.

The website has topics for varying target audiences, such as homeowners, pet owners, engineers, surveyors, developers, mobile businesses, landscapers, and property maintenance companies. Manuals, checklists, fact sheets and guidance documents are organized into the target audience's respective pages. Individual permittee sites are also linked for more information. Information regarding training, events, and other topics pertinent to educating the community on how to reduce stormwater pollution is easily accessible.

The website continues to be an important way to educate our target audiences and provide a central location for public education and permit compliance information. The Partners continuously develop new outreach materials to post on the website and hand out at events. QR codes that link to the Partners website are often printed on outreach materials.

Attachment B

ACHD GSI Program Activities and Project Descriptions

Table 1. Phase I ACHD-Owned Vegetated Basins and Bioretention Swales 2016 – 2025

#	STORMWATER FACILITY ID	FACILITY TYPE	NEAREST INTERSECTION	AREA (SQFT)	YEAR BUILT	STRUCTURAL RETROFIT DATE	VEGETATION RETROFIT DATE	NEW GSI VEGETATION INSTALLATION DATE	CITY
1	Basin 63	Detention-Dry	W Albion St & S Garden St	10,924	1997	-	2019	-	Boise
2	Basin 65	Detention-Wet	W Ustick Rd & N Curtis Rd	143,161	1997	-	TBD	-	Boise
3	Basin 322	Detention-Dry	W Airway Ct & S Cole Rd	37,764	2003	-	2018	-	Boise
4	Basin 327	Retention-Wet	E Boise Ave & S Betsy Ross Wy	15,199	1976	2022	2022	-	Boise
5	Basin 331	Detention-Dry	N Steelhead Wy & W Emerald St	21,432	2007	-	2018	-	Boise
6	Basin 332	Detention-Dry	W Irving St & N Maple Grove Rd	23,462	2007	-	2018	-	Boise
7	Basin 333	Detention-Wet	N Maple Grove & Hyatt Wetlands Park	20,856	2006	-	TBD	-	Boise
8	Basin 334	Retention-Dry	W Ustick Rd & N Chatterton Wy	38,883	2006	-	2019	-	Boise
9	Basin 371	Retention - Dry	W Victory Rd & S Fry St	157,482	2004	-	TBD	-	Boise
10	Basin 628	Retention-Dry	N Five Mile Rd & W Milclay St	19,531	2012	-	2016	-	Boise
11	Basin 674	Retention-Dry	858 N Whitewater Park Blvd	18,764	2013	-	2018	-	Boise
12	Basin 677	Detention-Dry	N Pierce Park Ln & W Hammermill Dr	14,680	2013	-	2017	-	Boise
13	Basin 685	Detention-Dry	W Emerald St Dr & N Five Mile Rd	17,508	2014	-	2017	-	Boise
14	Basin 694/695	Retention-Dry	W Hill Rd & W Catalpa Dr	8,013	2013	-	2018	-	Boise
15	Basin 696	Retention-Dry	W Hill Rd & N 36th St	5,757	2016	-	2017	-	Boise
16	Basin 697	Retention-Dry	E Gowen Rd & S Eisenman Rd	5,144	2016	-	2018	-	Boise
17	Basin 882	Retention-Dry	E Gowen Rd & S Eisenman Rd	3,586	2016	-	2018	-	Boise
18	Basin 883	Retention-Dry	E Gowen Rd & S Eisenman Rd	3,440	2016	-	2018	-	Boise
19	Basin 1321	Detention-Wet	N Veterans Memorial Pkwy & W Glendale Rd	31,652	2019	-	2019	-	Boise
20	Basin 1324	Detention-Dry	N Cloverdale Rd & W Bowmont St	11,992	2019	2022	2019	-	Boise
21	Basin 1338	Retention-Dry	W Glendale St & N Stilson Rd	4,399	2019	-	2018	-	Boise
22	Basin 1339	Retention-Dry	W Alameda St & N Veterans Memorial Pkwy	14,951	2019	-	2018	-	Boise
23	Basin 1370	Retention-Dry	N Arthur St & W State St	2,115	2019	-	2018	-	Boise
24	Basin 1372	Retention-Dry	S Cole Rd & W Lake Hazel Rd	45,619	2019	-	2020	-	Boise
25	Basin 1373	Retention-Dry	W Franklin Rd & N Cole Rd	32,400	2019	-	2020	-	Boise
26	Basin 1374	Retention-Dry	N Cloverdale Rd & W Edna St	18,370	2019	-	2019	-	Boise
27	Basin 1440	Retention-Dry	N Collister Dr & Collister Access	2,786	2019	-	2019	-	Boise

#	STORMWATER FACILITY ID	FACILITY TYPE	NEAREST INTERSECTION	AREA (SQFT)	YEAR BUILT	STRUCTURAL RETROFIT DATE	VEGETATION RETROFIT DATE	NEW GSI VEGETATION INSTALLATION DATE	CITY
28	Basin 1441	Retention-Dry	N Collister Dr & Collister Access	3,207	2019	-	2019	-	Boise
29	Collister Swales	Bioretention Swales	N Collister Dr & W State St	4,746	2019	-	2019	-	Boise
30	Heron Park Swales	Bioretention Swales	E Heron Park & N Adams St	3,661	2023	-	-	2023	Garden City

TBD = To be determined

Table 2. GSI Projects Designed or Constructed 2020 - 2025

#	PROJECT NAME	GSI TYPE	GSI (COUNT)	DESIGNED	CONSTRUCTED	AREA TREATED (ACRES)
1	12th & Idaho	Stormwater Tree Cell	2	2022	In Progress	0.34
2	16th & State	Stormwater Tree Cells	2	2024	In progress	0.29
3	28th St. Extension	Stormwater Tree Cell	4	2022	2024	0.66
4	3rd St Streetscape Improvement Project (CCDC)	Stormwater Tree Cells	12	2024	In progress	0.34
5	8th Street Bikeway & Streetscapes (CCDC)	Stormwater Tree Cells	1	2024	In progress	0.07
6	9th Street Improvements Set 2	Stormwater Tree Cells	1	2024	In Progress	0.34
7	Bannock Street - 16th to 12th Streetscape Improvements (CCDC)	Stormwater Tree Cells	3	2024	In progress	0.82
8	Boise Fire Station No 5	Stormwater Tree Cell	2	2023	2024	0.09
9	Capital Student Housing	Stormwater Tree Cell	4	2022	2024	1.04
10	Downtown Boise YMCA	Stormwater Tree Cells	3	2025	Pending	1.17
11	Finch on 27th	Stormwater Tree Cells	1	2025	In progress	0.33
12	Fulton Street Improvement	Stormwater Tree Cell	10	2022	2024	1.26
13	Idaho Wheat Commission	Stormwater Tree Cells	2	2025	In progress	0.12
14	Linen Blocks on Grove Street	Stormwater Tree Cell	24	2022	In Progress	3.17
15	Lusk Street Apartments	Stormwater Tree Cell	1	2022	2024	0.12
16	Old Boise Blocks on Grove Street	Stormwater Tree Cell	7	2022	In Progress	0.63
17	Saratoga Apartments	Stormwater Tree Cell	4	2022	In Progress	1.80
18	State & Pierce Park	Bioretention Basin	1	2024	In Progress	0.81
19	State & Pierce Park	Bioretention Swale	28	2024	In Progress	6.39
20	State St Corridor Improvements A	Bioretention Curb Extension	8	2020	2024	0.5
21	State Street Improvement B	Bioretention Curb Extension	9	2023	2025	1.01
22	State Street Improvement B	Bioretention Planters	7	2023	2025	0.34

Note: Capital City Development Corporation (CCDC)

Table 3. Phase I ACHD GSI Program Updates 2024 - 2025

GSI PROGRAM AREA	GSI PROGRAM ACTIVITY	DESCRIPTION
Facility Maintenance	Permeable Paver Maintenance Equipment	Tested the cleaning capabilities of 4 different mechanical sweepers under varying paver conditions to determine the most effective sweeper and settings for maintaining permeable pavers.
	Permeable Paver Assessments	Conducted assessments of all of ACHD's permeable paver systems to determine the overall condition and maintenance needs of each facility. This information will be used to prioritize maintenance activities going forward.
Inventory	Mapping	Continued to update ArcGIS's GSI layers to improve readability, remove outdated and redundant information, add new GSI types, and complete information to enhance record keeping and maintenance efforts.
Design & Construction	Policy Update	Continued to update ACHD Stormwater Design Tools and approved BMPs to improve stormwater management.
Training & Coordination	Project Manager GSI Training	Hosted an ACHD Project Manager GSI tour and provided fact sheets to train ACHD Project Mangers on the function, placement, key design components, and general maintenance practices for each type of GSI.
	Inspector Training	Provided on-site training for inspecting stormwater tree cells during installation.
	Collaboration	Worked with stakeholders to improve communication and collaboration regarding the design, construction, and maintenance of stormwater tree cells.

Attachment C:

ACHD Stormwater Outfall Monitoring Summary

Stormwater Outfall Monitoring Summary

Water Year 2025

Prepared by
Ada County Highway District
November 18, 2025

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1 Introduction

Ada County Highway District (ACHD), Boise State University, City of Boise, City of Garden City, Drainage District #3, and the Idaho Transportation Department District #3 (Permittees) were issued a third-cycle National Pollutant Discharge Elimination System (NPDES) Phase Permit #IDS027561 (Permit) on October 1, 2021. The Permit authorizes the Permittees to discharge from municipal separate storm sewer system outfalls to the Boise River and its tributaries. According to Permit Part 6.2.1, Wet Weather Stormwater Outfall Monitoring, Permittees are required to monitor wet weather stormwater discharges according to the NPDES Phase I Stormwater Outfall Monitoring Plan (ACHD, 2022). The following summary covers wet weather outfall monitoring activities during water year (WY) 2025 (October 1, 2024–September 30, 2025). WY 2025 represents the fourth year of monitoring under the new Permit cycle.

The Stormwater Outfall Monitoring Plan (SWOMP) was developed in line with the Quality Assurance Project Plan for NPDES Stormwater Permit Monitoring (QAPP) (ACHD, 2023) and describes the overall approach to stormwater outfall monitoring. Details about specific site characteristics, equipment, data collection and sample handling procedures, analytical methods, and quality assurance/quality control methodology are found in the SWOMP.

In WY 2025, data collection for the Stormwater Outfall Monitoring Program included precipitation, flow, and water quality samples. Four outfall monitoring sites within the Permit area (Lucky, Whitewater, Main, and Americana) were monitored for flow and water quality. The water quality samples were collected from wet weather discharges and included grab samples with corresponding field parameters and composite samples, which were collected throughout the duration of a storm. A flowmeter was installed up-pipe at the Main Alternate site when high river flows surcharged the Main outfall monitoring site in spring 2025. Grab samples and associated flow data were collected during one storm event at this location. Additionally, four rain gauge sites (East, Front, Cynthia Mann, and Whitewater) were maintained to provide localized precipitation data. Each rain gauge location represents at least one of the monitored subwatersheds and was used to verify that storm criteria were met.

2 Monitoring Sites, Equipment, and Sample Type

The Stormwater Outfall Monitoring Program consists of four monitored subwatersheds: Lucky, Whitewater, Main, and Americana. Monitoring stations for each subwatershed are located near the outfalls with dedicated equipment installed at each location. Table 2-1 depicts the equipment types and referenced rain gauge site for each subwatershed. A vicinity map illustrating the location of each subwatershed, monitoring station, and rain gauge site is found in Figure 1 (Appendix A).

Table 2-1. Monitoring Station Equipment

Monitoring Site	Lucky	Whitewater	Main/ Main Alt	Americana
Sampler type	Hach AS950	ISCO 6712	ISCO 6712	ISCO 6712
Flowmeter type	Hach AV9000	ISCO Signature	ISCO Signature	ISCO Signature
Referenced rain gauge	Cynthia Mann	Whitewater	Front	Front and East
Rain gauge equipment types	Global Water tipping bucket/HOBO event logger	Hach tipping bucket/ISCO Signature	Global Water tipping bucket/HOBO event logger	Global Water tipping bucket/HOBO event logger

2.1 Sample Types

The sample types collected during WY 2025 included grab samples and composite samples. Grab samples represent a discrete measurement from the overall storm discharge while composite samples represent the entire discharge.

Grab samples were manually collected using a swing sampler. The grab samples were submitted to the Boise City Public Works Water Quality Laboratory (WQL) and analyzed for *E. coli*. At the time that the *E. coli* grab samples were collected, field parameters (temperature, pH, dissolved oxygen [DO], and conductivity) were measured using In-Situ AquaTROLL 400 multiparameter probes.

Composite samples were collected using automatic samplers, which worked in conjunction with flowmeters. After a predetermined volume of flow was discharged, the flowmeters triggered the samplers to collect a subsample. Each subsample was deposited into a 15-liter carboy, resulting in a flow-proportional composite sample. The composite samples were submitted to the WQL, where they were split for analysis. The following constituents were analyzed during WY 2025: biological oxygen demand, 5-day (BOD_5); chemical oxygen demand (COD); chloride; hardness as calcium carbonate ($CaCO_3$); turbidity; total suspended solids (TSS); total dissolved solids (TDS); total phosphorus as P (TP); orthophosphate, as P (ortho-P); ammonia, as N; nitrate + nitrite, as N; total Kjeldahl nitrogen (TKN); total arsenic; dissolved and total cadmium; dissolved copper; dissolved and total lead; total mercury; and dissolved zinc.

3 Stormwater Outfall Monitoring Results

Wet weather stormwater samples were collected according to the procedures listed in the SWOMP. One of the goals in the SWOMP is to collect three accepted (unqualified) grab and composite samples from each monitoring station during each water year. In WY 2025, samples were attempted during six storms to meet this goal. A summary of the storm dates and sample types collected is shown in Table 3-1. Storm setup and sampling information are included in Table 1 (Appendix B). Storm Event Reports were created after each stormwater sampling event to monitor the status of the SWOMP and discuss the hydrological and analytical data from the grab and composite samples. These Storm Event Reports include details about the storm and weather monitoring, hydrographs, sample collection times, and water quality results. Individual Storm Event Reports for the six sampling events during WY 2025 are included in Appendix C.

Table 3-1. Storm Events and Sample Types

Date	Lucky	Whitewater	Main	Main Alt	Americana
December 14, 2024	G, --	G, C	G, C	--, --	G, FD, FB, C
January 31, 2025	--, C	--, C[1]	--, C	--, --	--, C[1]
February 23, 2025	G, C[2]	G, FD, FB, --	G, C	--, --	G, C[1]
May 17, 2025	G, C	--, C	--, --	G, FD, FB, --	G, C
August 26, 2025	--, C[2]	G[3], FD[3], FB[3], --	--, --	--, --	--, --
September 29, 2025	--, --	--, C[1,2]	--, --	--, --	--, C[2]

-- = No data

Sample types: G = grab, C = composite

QC Sample types: FD = field duplicate, FB = field blank

[1] Composite sample qualified due to lack of representativeness (50%–75%).

[2] *Composite sample qualified due to exceedance of 6.0°C.*

[3] *E. coli sample qualified due to exceeded hold time (>8 and <16 hours).*

3.1 Wet Weather Analytical Results

Field parameter results are presented in Table 2 and analytical results are presented in Table 3 (Appendix B). Graphical representation of the analytical results is provided in Figures 2–5 (Appendix A). The following assessment provides minimum and maximum measured values for WY 2025. Qualified data are included in the range of measured/reported values as well as the data analysis. All measurements were recorded in accordance with QAPP and SWOMP procedures.

DO and oxygen demand

- DO ranged from 4.33 to 10.95 milligrams per liter (mg/L).
- Biological oxygen demand, 5-day (BOD_5) concentrations ranged from 2.77 to 56.6 mg/L.
- Chemical oxygen demand (COD) concentrations ranged from 22.0 to 244 mg/L.

pH, temperature, conductivity, and hardness

- pH values ranged from 6.48 to 8.96 standard units (S.U.).
- Temperature ranged from 6.34 to 23.67 degrees Celsius (C).
- Conductivity ranged from 107.63 to 912.49 micro-siemens per centimeter (µS/cm).
- Hardness ranged from 16.2 to 107 mg/L as calcium carbonate ($CaCO_3$).

Bacteria

- *E. coli* ranged from 17.3 to 5,210 most probable number per 100 milliliters (MPN/100mL).

Sediment

- Turbidity ranged from 13.9 to 113 nephelometric turbidity units (NTU).
- TSS ranged from 12.6 to 171 mg/L.
- TDS ranged from 39.0 to 378 mg/L.

Nutrients

- Ammonia, as N ranged from 0.0779 to 2.11 mg/L.
- Chloride ranged from 1.67 to 176 mg/L
- Nitrate + nitrite, as N ranged from 0.133 to 0.902 mg/L.
- TKN ranged from 0.546 to 4.78 mg/L.

Phosphorus

- TP ranged from 0.100 to 0.992 mg/L.
- Ortho-P ranged from 0.0395 to 0.519 mg/L.

Metals

- Total arsenic ranged from 0.89 to 4.0 micrograms per liter (µg/L).
- Dissolved cadmium ranged from below the method detection limit (MDL) (< 0.0100) to 0.034 µg/L.
- Total cadmium ranged from below the MDL (<0.0200) to 0.18 µg/L.
- Dissolved copper ranged from 1.9 to 7.3 µg/L.
- Dissolved lead ranged from 0.026 to 0.22 µg/L.
- Total lead ranged from 0.61 to 11.7 µg/L.
- Total mercury ranged from below the MDL (< 0.0100) to 0.0249 µg/L.

- Dissolved zinc ranged from 10.2 to 95.8 µg/L.

3.2 Monitored Event Pollutant Loading Results

Pollutant loading estimates in pounds per acre (lbs/ac) were calculated for the following constituents of concern: TSS; TP; ammonia, as N; nitrate + nitrite, as N; and TKN. The reported concentrations were combined with runoff volumes measured during the storm event at each monitoring station. Formulas that were used, including conversion factors to estimate the loading in lbs/ac, are described in the SWOMP. Table 4 (Appendix B) presents the estimated pollutant loading of the constituents for each monitored storm. The pollutant loading contributions for each site are shown graphically in Figure 6 (Appendix A). Table 5 (Appendix B) is a summary of event loading estimates in pounds per acre for comparison between monitored drainage areas. A summary of the estimated ranges of pollutant loading for the storm events monitored during WY 2025 is presented below.

- TSS loading estimates ranged from 0.158 to 5.098 lbs/ac.
- TP loading estimates ranged from 0.000878 to 0.0173 lbs/ac.
- Ammonia, as N loading estimates ranged from 0.00116 to 0.0352 lbs/ac.
- Nitrate + nitrite, as N loading estimates ranged from 0.00117 to 0.0152 lbs/ac.
- TKN loading estimates ranged from 0.00686 to 0.0945 lbs/ac.

3.3 Precipitation Results

Precipitation data from the Front, East, Cynthia Mann, and Whitewater rain gauges were used to validate all targeted storms during WY 2025. Each monitoring station is associated with a rain gauge. Precipitation data recorded for each of the targeted storms can be found in Table 1 (Appendix B). Monthly totals for WY 2025 are shown in Figure 7 (Appendix A).

4 Quality Assurance/Quality Control

Quality assurance (QA) and quality control (QC) measures for the Stormwater Outfall Monitoring Program are presented in detail in the QAPP and SWOMP. No deviations from the QAPP and SWOMP occurred during WY 2025. QA and QC measures conducted during the water year are discussed below.

4.1 Data Quality Discussion

A data validation review process was used to evaluate the analytical and field parameter results. These checklists were used to compare monitoring methods and monitoring data collected against performance criteria established to meet the data quality objectives described in the QAPP. Analytical results that were qualified are identified in Table 3 (Appendix B). Further information regarding qualified samples is included in the Storm Event Reports located in Appendix C.

The following program criteria are used to identify storm events and representative composite samples.

- Storm criteria are met when the precipitation amount is greater than 0.10 inch, and the storm was preceded by a minimum 72 hours of dry weather from the previous measurable storm event (rainfall greater than 0.10 inch).
- Composite samples are considered representative of stormwater runoff when aliquots represent greater than 75 percent of total runoff volume from the storm or greater than 6 hours of the storm, including the first hour of runoff.

For WY 2025, samples collected during the following storm events were qualified for reasons discussed

below:

January 31, 2025

- The composite samples collected at the Whitewater and Americana monitoring stations on January 31 were qualified due to lack of representativeness.

February 23, 2025

- The composite sample collected at the Lucky monitoring station on February 23 was qualified due to exceeding the temperature preservation maximum of 6.0℃.
- The composite sample collected at the Americana monitoring station was qualified due to lack of representativeness.

August 26, 2025

- The *E. coli* grab sample collected at the Whitewater monitoring station on August 26 was qualified due to exceeded hold time.
- The composite collected at the Lucky monitoring station was qualified due to exceeding the temperature preservation maximum of 6.0℃.

September 29, 2025

- The composite sample collected at the Whitewater monitoring station was qualified due to lack of representativeness and exceeding the temperature preservation maximum of 6.0℃.
- The composite sample collected at the Americana monitoring station was qualified due to exceeding the temperature preservation maximum of 6.0℃.

4.2 QC Sample Results

QC sampling during WY 2025 consisted of a combination of field QC samples and equipment QC samples. Field QC sampling intervals followed a predetermined schedule, included in the SWOMP. Equipment QC samples were collected during fall maintenance. Sample results for all field QC samples are included in Table 6 (Appendix B).

4.2.1 Field QC Samples

Field QC samples include field duplicates, field blanks, and composite blanks.

Field duplicates are field grab samples that were taken alongside a parent grab sample to compare the accuracy of the data. For *E. coli,* the allowable logarithmic relative percent difference (RPD) between the duplicate sample and the parent sample is 40 percent for values where the parent and duplicates are greater than 10 MPN/100mL. All field duplicate samples collected during WY 2025 met the RPD standard.

Analytical results from field blanks and composite blanks are expected to be less than the MDL. If a water quality parameter is detected in a field blank or composite blank, all analytical results associated with the blank that exhibit a concentration of less than five times the concentration detected in the blank, are qualified. All field blank samples collected had results less than the MDL. No composite blanks were collected or analyzed in WY 2025.

4.2.2 Equipment QC Samples

Equipment QC samples include an equipment blank and a rinsate blank, both serving as a check on equipment decontamination procedures.

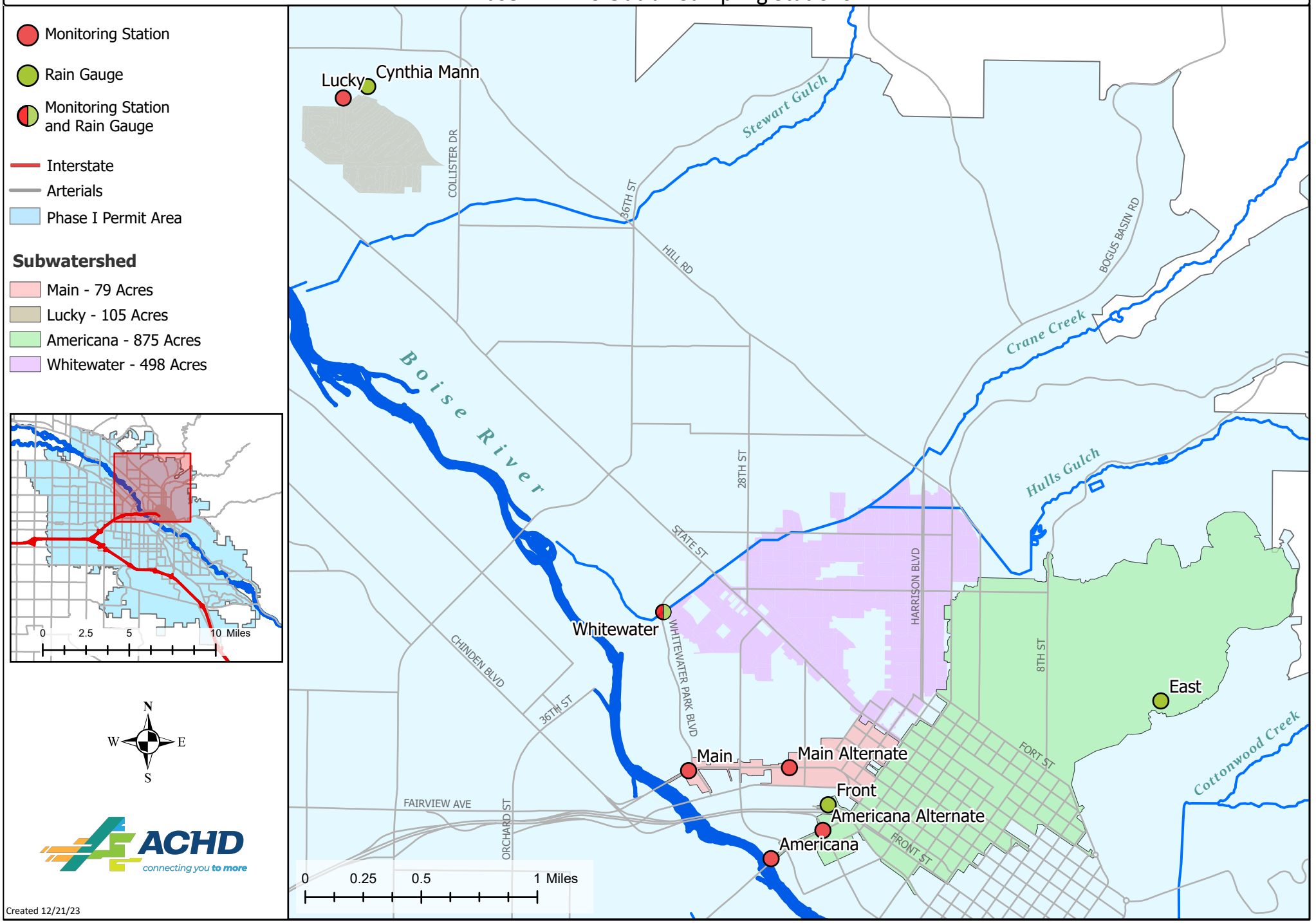
The equipment blank is collected before sampling for the water year begins and when new equipment is installed. For WY 2025, the equipment blanks were collected on September 9, 10, and 17, 2024, at the Lucky, Main, Whitewater, and Americana monitoring stations. Dissolved copper and dissolved zinc were detected in all blank samples. Dissolved copper and dissolved zinc results throughout WY 2025 that are less than five times the value detected in the blank have been qualified and are considered estimates. Total lead was detected in the blank at Main. However, all total lead samples collected throughout the WY were greater than five times the values detected in the blank and are unqualified. All other results were greater than five times the detected value in the equipment blank and are unqualified.

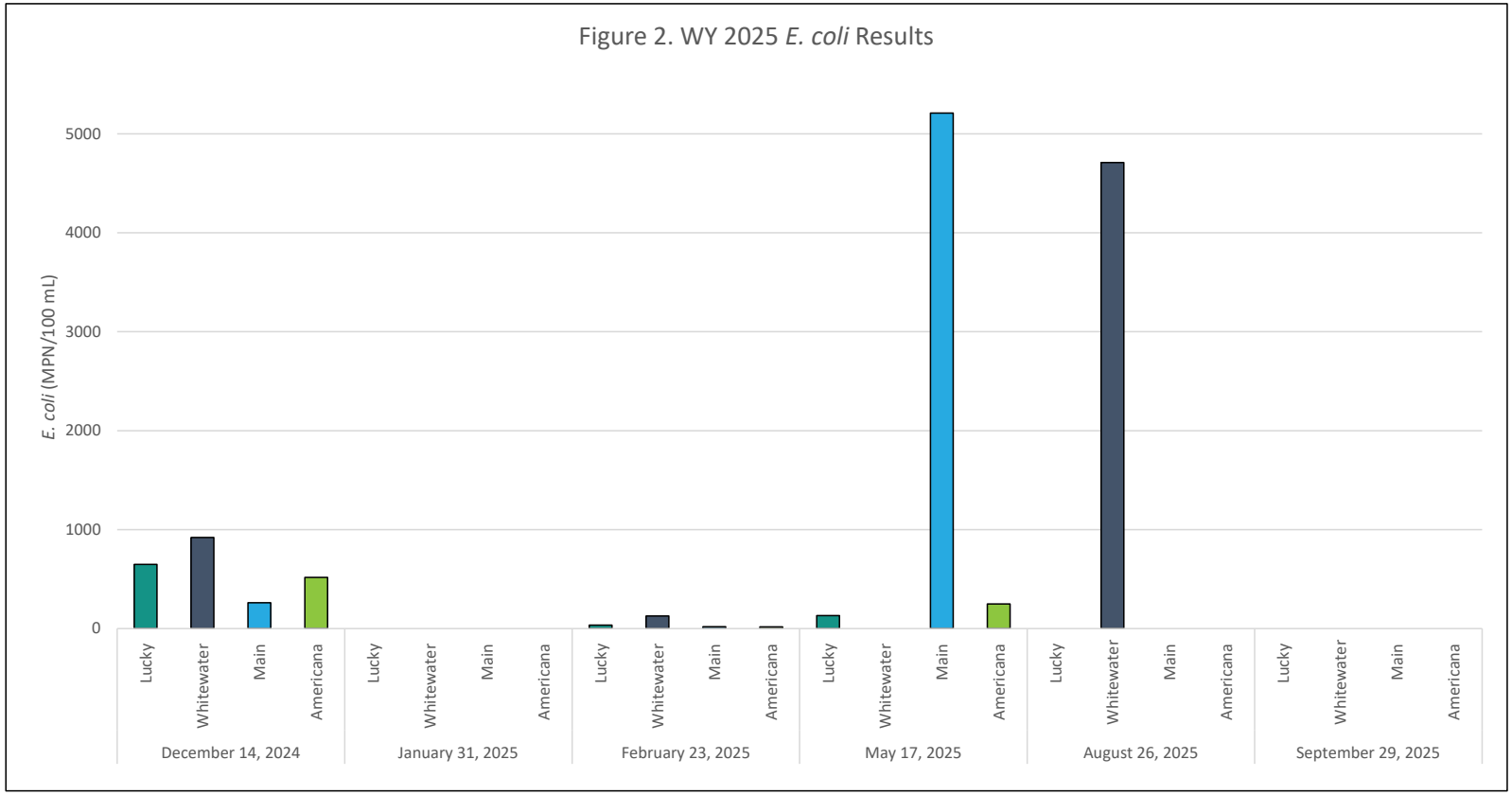
The rinsate blank is collected after sampling for the water year has been completed. The rinsate blanks for WY 2025 were collected on September 8 and 9, 2025, at the Lucky, Whitewater, and Americana monitoring stations. Total arsenic was detected in the Lucky blank. Total lead, dissolved copper, and dissolved zinc were detected in the Whitewater blank, and total lead, dissolved copper, and turbidity were detected in the Americana blank. However, all results collected throughout the WY were greater than five times the values detected in the blanks and are unqualified.

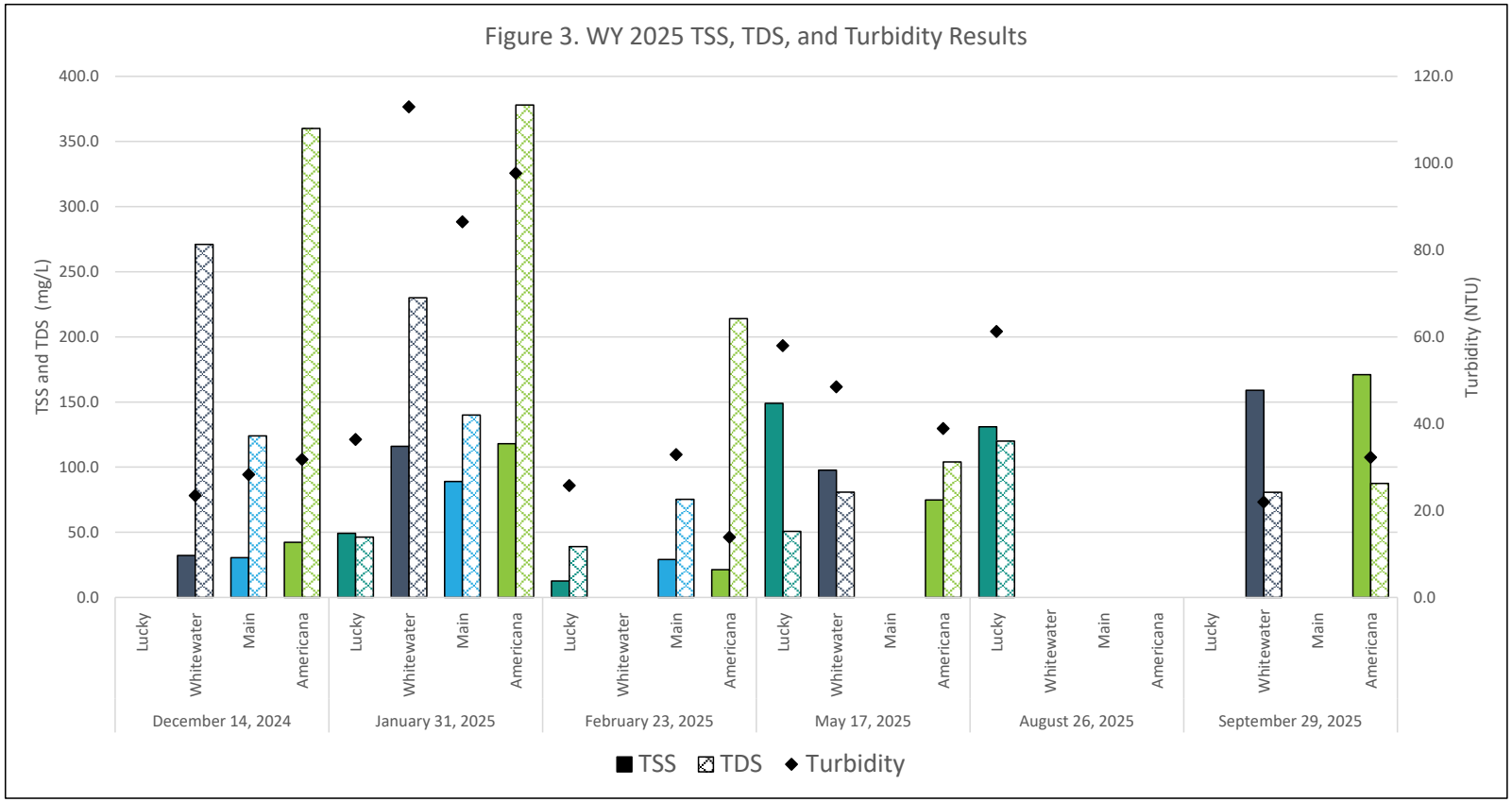
Appendix A: Figures

Figure 1. Vicinity Map
Figure 2. WY 2025 *E. coli* Results
Figure 3. WY 2025 TSS, TDS, and Turbidity Results
Figure 4. WY 2025 Ammonia, Nitrate + Nitrite, and TKN Results
Figure 5. WY 2025 Total Phosphorus and Orthophosphate Results
Figure 6. WY 2025 Pollutant Loadings
Figure 7. WY 2025 Monthly Precipitation

Figure 1. Vicinity Map
Phase I NPDES Outfall Sampling Stations




Figure 2. WY 2025 E. coli Results
E. coli (MPN/100 mL)
5000
4000
3000
2000
1000
0
Lucky
Whitewater
Main
Americana
December 14, 2024
January 31, 2025
February 23, 2025
May 17, 2025
August 26, 2025
September 29, 2025


Figure 3. WY 2025 TSS, TDS, and Turbidity Results
TSS and TDS (mg/L)
Turbidity (NTU)
400.0
350.0
300.0
250.0
200.0
150.0
100.0
50.0
0.0
120.0
100.0
80.0
60.0
40.0
20.0
0.0
Lucky
Whitewater
Main
Americana
December 14, 2024
January 31, 2025
February 23, 2025
May 17, 2025
August 26, 2025
September 29, 2025
TSS
TDS
Turbidity

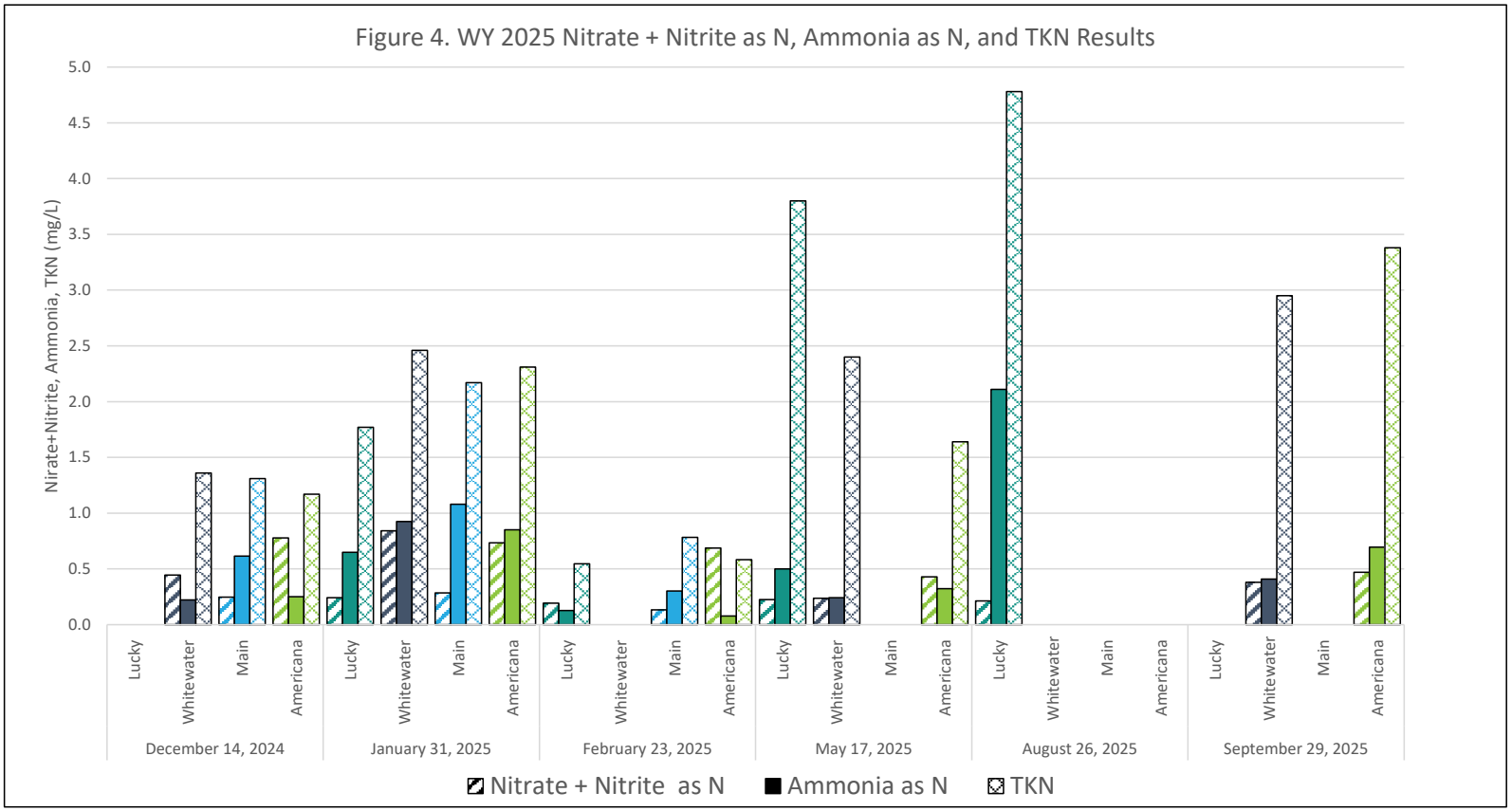
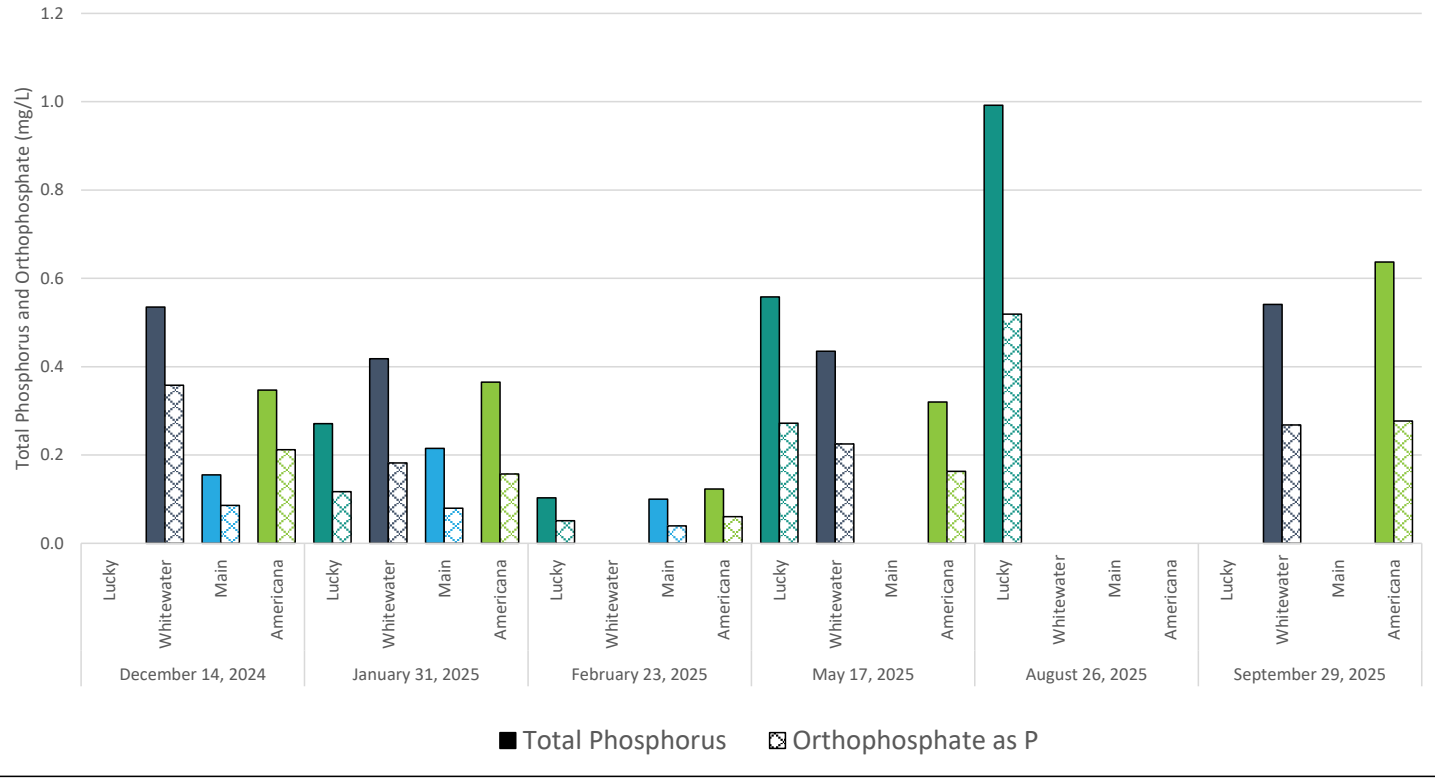
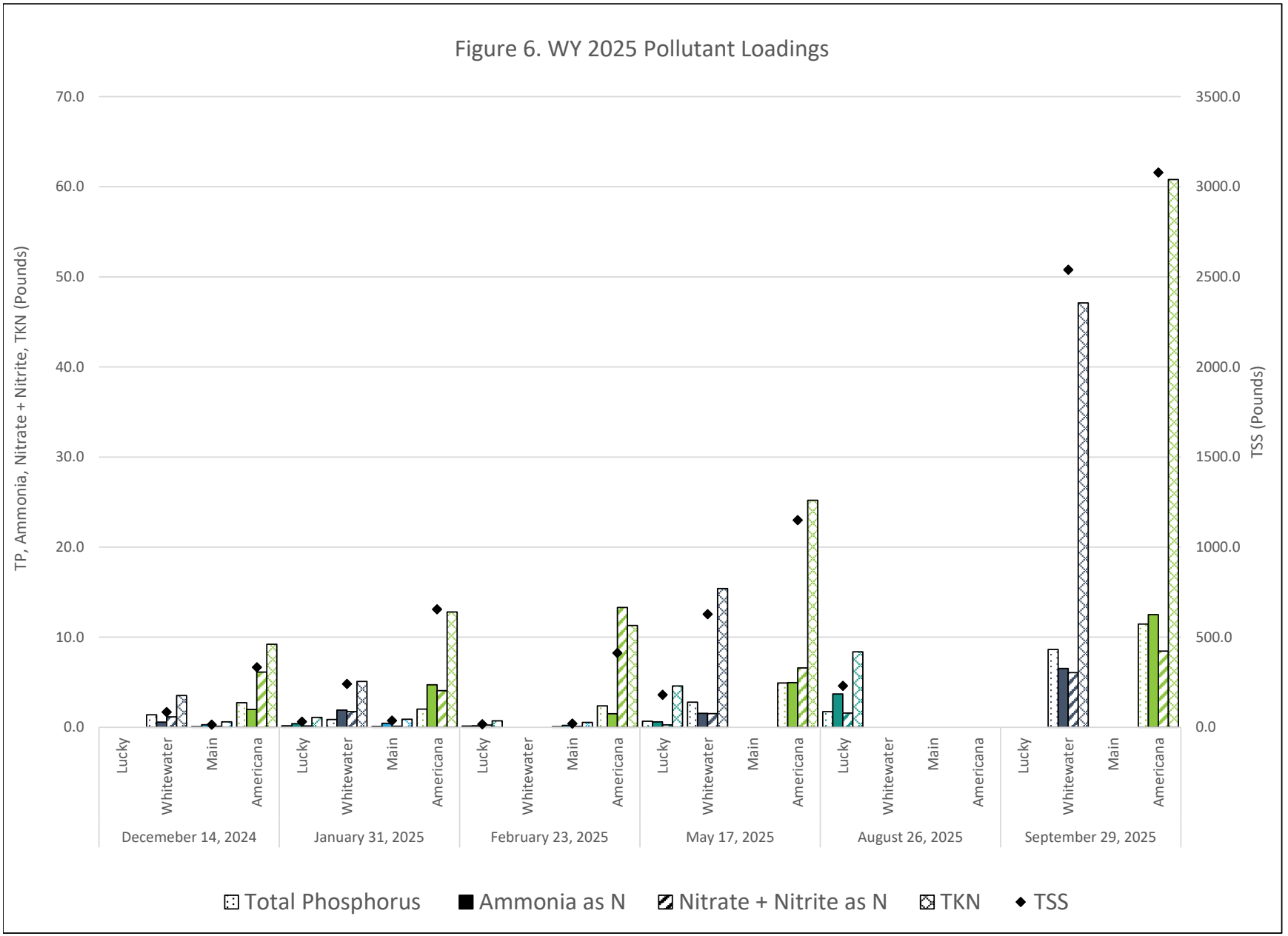
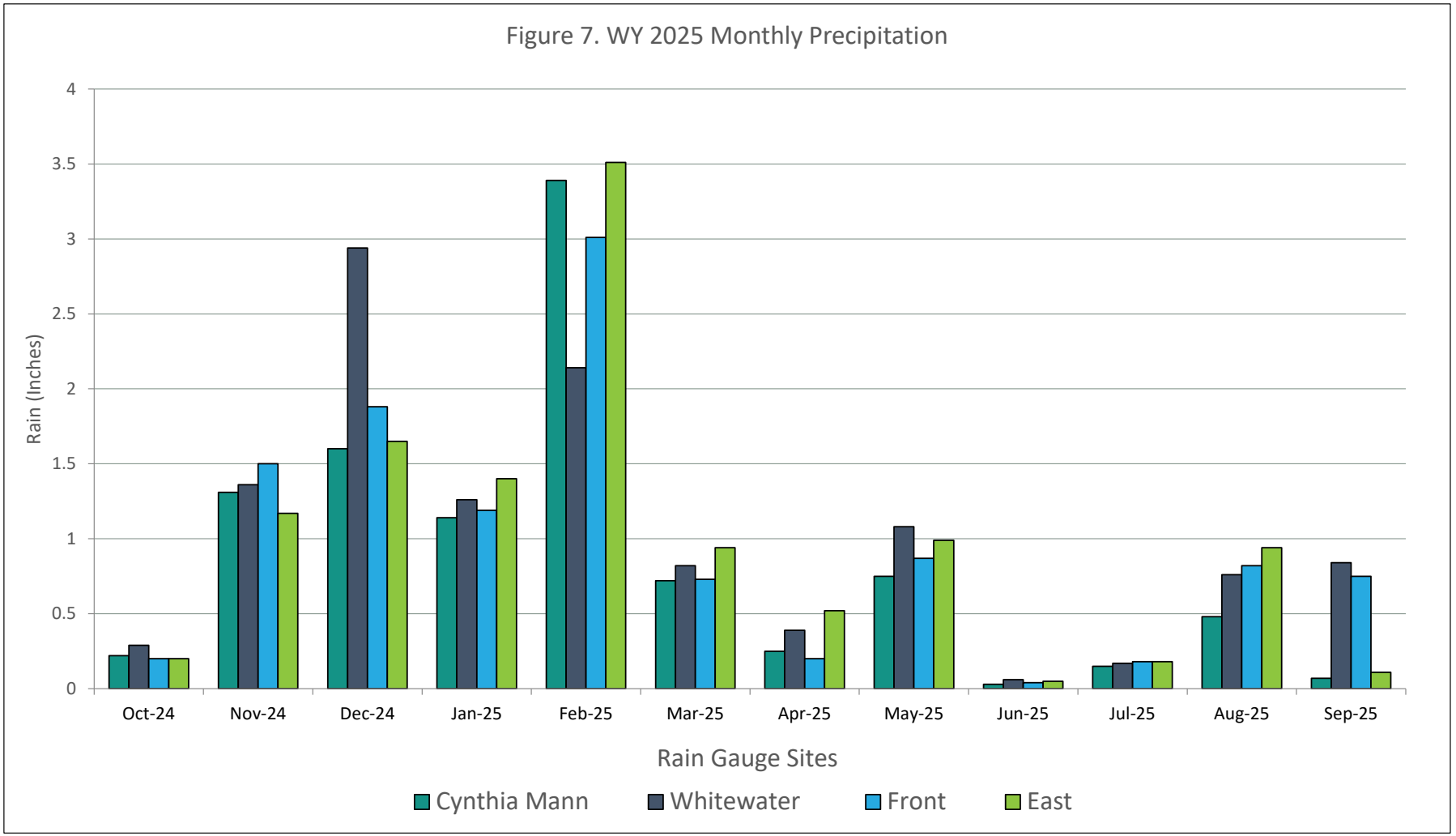

Figure 4. WY 2025 Nitrate + Nitrite as N, Ammonia as N, and TKN Results
Nirate+Nitrite, Ammonia, TKN (mg/L)
5.0
4.5
4.0
3.5
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Lucky
Whitewater
Main
Americana
December 14, 2024
January 31, 2025
February 23, 2025
May 17, 2025
August 26, 2025
September 29, 2025
Nitrate + Nitrite as N
Ammonia as N
TKN

Figure 5. WY 2025 Total Phosphorus and Orthophosphate as P Results




Figure 6. WY 2025 Pollutant Loadings
TP, Ammonia, Nitrate + Nitrite, TKN (Pounds)
TSS (Pounds)
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
3500.0
3000.0
2500.0
2000.0
1500.0
1000.0
500.0
0.0
Lucky
Whitewater
Main
Americana
Decemeber 14, 2024
January 31, 2025
February 23, 2025
May 17, 2025
August 26, 2025
September 29, 2025
Total Phosphorus
Ammonia as N
Nitrate + Nitrite as N
TKN
TSS



Note:

1. No data was collected at the Cynthia Mann and East rain gauges from 9/11/2025 to 10/1/2025.

Appendix B: Tables

Table 1. Monitored Storms and Samples Collected

Table 2. Field Parameter Summary

Table 3. Analytical Results Summary

Table 4. Event Loading for Monitored Drainages in Pounds

Table 5. Event Loading in Pounds per Acre

Table 6. QC Sample Summary

Table 1. Monitored Storms and Samples Collected					
Event Date	Sampling Information	Lucky	Whitewater	Main/ Main Alt	Americana
December 14, 2024	Grab samples collected and submitted?	YES	YES	YES	YES
	Composite samples collected and submitted?	NO	YES	YES	YES
	Trigger volume	2,895 gal	801 cf	456 cf	2,960 cf
	Sampler enable condition (in)	Level >2.11	Level >2.9	Level >1.74	Level >5.5
	Percent of storm flow sampled	--	85%	92%	89%
	Composite sample duration (hrs.)	--	8	7	8.5
	Storm precipitation (in)	0.21	0.23	0.19	0.19/0.26
January 31, 2025	Grab samples collected and submitted?	NO	NO	NO	NO
	Composite samples collected and submitted?	YES	YES	YES	YES
	Trigger volume	2,895 gal	801 cf	456 cf	2,960 cf
	Sampler enable condition (in)	Level >2.61	Level >3.15	Level >2.4	Level >5.09
	Percent of storm flow sampled	93%	54%	98%	74%
	Composite sample duration (hrs.)	4	1.5	6	3.5
	Storm precipitation (in)	0.20	0.18	0.21	0.21/0.23
February 23, 2025	Grab samples collected and submitted?	YES	YES	YES	YES
	Composite samples collected and submitted?	YES	NO	YES	YES
	Trigger volume	3,950 gal	1,093 cf	622 cf	4,036 cf
	Sampler enable condition (in)	Level >2.69	Level >2.57	Level >2.2	Level >6.0
	Percent of storm flow sampled	92%	--	90%	71%
	Composite sample duration (hrs.)	11.5	--	10	11.5
	Storm precipitation (in)	0.37	0.31	0.27	0.27/0.38
May 17, 2025	Grab samples collected and submitted?	YES	NO	YES	YES
	Composite samples collected and submitted?	YES	YES	NO	YES
	Trigger volume	3,950 gal	1,093 cf	--	4,036 cf
	Sampler enable condition (in)	Level >2.62	Level >5.25	--	Level >7.0
	Percent of storm flow sampled	90%	69%	--	86%
	Composite sample duration (hrs.)	7	8	--	17
	Storm precipitation (in)	0.42	0.44	0.45	0.45/0.51
August 26, 2025	Grab samples collected and submitted?	NO	YES	NO	NO
	Composite samples collected and submitted?	YES	NO	NO	NO
	Trigger volume	3,950 gal	1,093 cf	--	4,036 cf
	Sampler enable condition (in)	Level >2.29	Level >6.3	--	Level >6.8
	Percent of storm flow sampled	89%	--	--	--
	Composite sample duration (hrs.)	4.5	--	--	--
	Storm precipitation (in)	0.41	0.69	0.80	0.80/0.91
September 29, 2025	Grab samples collected and submitted?	NO	NO	NO	NO
	Composite samples collected and submitted?	NO	YES	NO	YES
	Trigger volume	--	801 cf	--	2,960 cf
	Sampler enable condition (in)	--	Level >7.0	--	Level >5.75
	Percent of storm flow sampled	--	52%	--	90%
	Composite sample duration (hrs.)	--	3.5	--	7
	Storm precipitation (in)	--	0.73	0.62	0.62/--

Notes:

-- = No data.

Table 2. Field Parameter Results					
Event Date	Monitoring Station	Field Parameters			
		Dissolved Oxygen	pH	Conductivity	Temperature
		mg/L	S.U.	µS/cm	C
Decemeber 14, 2024	Lucky	10.37	8.96	107.63	6.96
	Whitewater	9.10	8.07	912.49	7.09
	Main	10.95	7.94	485.43	6.56
	Americana	10.69	7.60	596.06	7.48
January 31, 2025	Lucky	--	--	--	--
	Whitewater	--	--	--	--
	Main	--	--	--	--
	Americana	--	--	--	--
February 23, 2025	Lucky	10.03	7.99	114.81	8.01
	Whitewater	10.22	7.64	180.45	6.34
	Main	10.87	7.98	203.06	7.74
	Americana	5.59	8.04	714.07	12.19
May 17, 2025	Lucky	4.33	7.36	285.77	13.97
	Whitewater	--	--	--	--
	Main Alt	7.30	6.48	194.17	17.60
	Americana	8.39	6.93	385.45	15.56
August 26, 2025	Lucky	--	--	--	--
	Whitewater	6.537	6.513	112.4	23.67
	Main	--	--	--	--
	Americana	--	--	--	--
September 29, 2025	Lucky	--	--	--	--
	Whitewater	--	--	--	--
	Main	--	--	--	--
	Americana	--	--	--	--

Notes:

-- = No data.

Table 3. Analytical Results Summary

Event Date	Monitoring Station	Sample ID	Analytical Parameters																			
			E. coli	BOD_5	COD	Chloride	Hardness as CaCO3	Turbidity	TSS	TDS	Total Phosphorus	Orthophosphate as P	Ammonia as N	Nitrate + Nitrite as N	TKN	Arsenic, total	Cadmium, dissolved	Cadmium, total	Copper, dissolved	Lead, dissolved	Lead, total	Mercury, total	Zinc, dissolved
			MPN/100 mL	mg/L	mg/L	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
Decemeber 14, 2024	Lucky	241214-03-WG	648.8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Whitewater	241214-11-WG/WC	920.8	21.6	94.0	100	74.9	23.5	32.2	271	0.535	0.358	0.222	0.445	1.36	2.2	<0.0100	0.045	2.4[4]	0.22	2.6	<0.0100	17.3
	Main	241214-12-WG/WC	261.3	9.48	66.0	50.5	25.6	28.3	30.5	124	0.155	0.0859	0.615	0.247	1.31	0.90	0.018	0.058	3.5	0.14	3.3	<0.0100	31.0
	Americana	241214-14-WG/WC	517.2	14.8	75.0	150	107	31.8	42.3	360	0.347	0.212	0.251	0.778	1.17	3.4	0.034	0.091	3.2[4]	0.15	3.8	0.0119	24.3
January 31, 2025	Lucky	250131-03-WC	--	14.5	89.0	6.07	17.4	36.4	49.2	46.3	0.271	0.117	0.649	0.242	1.77	1.4	<0.0100	0.055	2.3[4]	0.083	1.5	0.0111	28.1
	Whitewater	250131-11-WC	--	20.1[1]	140[1]	83.2[1]	95.2[1]	113[1]	116[1]	230[1]	0.418[1]	0.182[1]	0.925[1]	0.842[1]	2.46[1]	4.0[1]	0.012[1]	0.12[1]	3.5[1]	0.083[1]	7.7[1]	0.0115[1]	22.0[1]
	Main	250131-12-WC	--	15.8	134	59.4	34.6	86.5	89.0	140	0.215	0.0795	1.08	0.285	2.17	2.0	0.019	0.12	4.7[4]	0.063	7.2	0.0138	40.8
	Americana	250131-14-WC	--	22.6[1]	153[1]	176[1]	98.5[1]	97.7[1]	118[1]	378[1]	0.365[1]	0.157[1]	0.851[1]	0.734[1]	2.31[1]	3.7[1]	0.024[1]	0.14[1]	3.8[1,4]	0.091[1]	7.0[1]	0.0144[1]	35.0[1]
February 23, 2025	Lucky	250223-03-WG/WC	35.0	2.77[2]	22.0[2]	3.93	16.2	25.8[2]	12.6[2]	39.0[2]	0.103[2]	0.0512[2]	0.127[2]	0.193[2]	0.546[2]	0.89	<0.0100[2]	<0.0200	1.9[2,4]	0.026[2]	0.61	<0.0100	10.2[2]
	Whitewater	250223-11-WG	127.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Main	250223-12-WG/WC	18.9	4.66	51.0	28.0	20.8	32.9	29.1	75.3	0.100	0.0395	0.302	0.133	0.783	0.90	0.016	0.047	2.9[4]	0.044	2.3	<0.0100	24.0
	Americana	250223-14-WG/WC	17.3	3.56[1]	31[1]	72.4[1]	87.8[1]	13.9[1]	21.3[1]	214[1]	0.123[1]	0.0604[1]	0.0779[1]	0.687[1]	0.583[1]	3.4[1]	0.012[1]	0.032[1]	2.0[1,4]	0.036[1]	1.9[1]	<0.0100[1]	15.4[1,4]
May 17, 2025	Lucky	250517-03-WG/WC	131.4	37.8	188	1.67	20.3	58.0	149	50.7	0.558	0.272	0.500	0.225	3.80	2.0	<0.0100	0.12	5.4	0.086	3.1	0.0138	32.9
	Whitewater	250517-11-WC	--	31.6	135	8.01	31.9	48.5	97.7	80.8	0.435	0.225	0.242	0.237	2.40	2.0	<0.0100	0.078	4.3	0.19	5.1	0.0146	20.8
	Main	250517-12-WG	5210	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Americana	250517-14-WG/WC	248.9	25.4	132	17.2	53.9	38.9	74.8	104	0.320	0.163	0.323	0.429	1.64	3.0	0.012	0.070	5.0	0.10	4.1	<0.0100	26.8
August 26, 2025	Lucky	250826-03-WC	–	56.6[2]	244[2]	2.58	33.9	61.3[2]	131[2]	120[2]	0.992[2]	0.519[2]	2.11[2]	0.902[2]	4.78[2]	3.7	0.019[2]	0.12	7.3[2]	0.15[2]	3.8	0.0203	95.8[2]
	Whitewater	250826-11-WG	4710[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Main	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Americana	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
September 29, 2025	Lucky	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Whitewater	250929-11-WC	--	39.6[1,2]	146[1,2]	5.11[1]	29.3[1]	22.0[1,2]	159[1,2]	80.7[1,2]	0.541[1,2]	0.268[1,2]	0.409[1,2]	0.380[1,2]	2.95[1,2]	3.0[1]	<0.0100[1,2]	0.093[1]	3.9[1,2]	0.21[1,2]	8.4[1]	0.0229[1]	15.5[1,2]
	Main	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Americana	250929-14-WC	--	46.4[2]	215[2]	6.64	35.1	32.3[2]	171[2]	87.5[2]	0.637[2]	0.277[2]	0.695[2]	0.470[2]	3.38[2]	3.9	<0.0100[2]	0.18	5.3[2]	0.18[2]	11.7	0.0249	31.0[2]

Notes:

-- = No data.

[1] Data qualified due to lack of representativeness (50%–75%).

[2] Composite sample qualified due to exceedance of 6.0°C.

[3] E. coli sample qualified due to exceeded hold time (>8 and <16 hours).

[4] Analytical parameter is qualified due to being less than five times the value detected in the equipment blank. See Table 6 for equipment blank results.

WG = Wet grab sample.

WC = Wet composite sample.

Table 4. Event Loading for Monitored Drainages in Pounds						
Event Date	Monitoring Station	TSS	Total Phosphorus	Ammonia as N	Nitrate + Nitrite as N	TKN
Decemeber 14, 2024	Lucky	--	--	--	--	--
	Whitewater	83.6	1.39	0.576	1.16	3.53
	Main	14.1	0.0718	0.285	0.114	0.607
	Americana	333	2.73	1.98	6.13	9.22
January 31, 2025	Lucky	30.6	0.169	0.404	0.151	1.10
	Whitewater	240[1]	0.865[1]	1.91[1]	1.74[1]	5.09[1]
	Main	36.7	0.0886	0.445	0.117	0.894
	Americana	654[1]	2.02[1]	4.72[1]	4.07[1]	12.8[1]
February 23, 2025	Lucky	16.6[2]	0.136[2]	0.168[2]	0.255[2]	0.720[2]
	Whitewater	--	--	--	--	--
	Main	20.2	0.0694	0.210	0.0923	0.543
	Americana	412[1]	2.38[1]	1.51[1]	13.3[1]	11.3[1]
May 17, 2025	Lucky	180	0.675	0.605	0.272	4.59
	Whitewater	627	2.79	1.55	1.52	15.4
	Main Alt	--	--	--	--	--
	Americana	1149	4.92	4.96	6.59	25.2
August 26, 2025	Lucky	230[2]	1.739[2]	3.70[2]	1.581[2]	8.38[2]
	Whitewater	--	--	--	--	--
	Main	--	--	--	--	--
	Americana	--	--	--	--	--
September 29, 2025	Lucky	--	--	--	--	--
	Whitewater	2538.9[1,2]	8.639[1,2]	6.531[1,2]	6.069[1,2]	47.105[1,2]
	Main	--	--	--	--	--
	Americana	3078[2]	11.46[2]	12.51[2]	8.459[2]	60.8[2]

Notes:

-- = No data

[1] *Data qualified due to lack of representativeness (50%–75%).*

[2] *Composite sample qualified due to exceedance of 6.0°C.*

Table 5. Event Loading in Pounds/Acre						
Event Date	Monitoring Station	TSS	Total Phosphorus	Ammonia as N	Nitrate + Nitrite as N	TKN
Decemeber 14, 2024	Lucky	--	--	--	--	--
	Whitewater	0.168	0.00279	0.00116	0.00233	0.00709
	Main	0.178	0.000909	0.00361	0.00144	0.00768
	Americana	0.381	0.00312	0.00226	0.00701	0.0105
January 31, 2025	Lucky	0.291	0.00161	0.00385	0.00144	0.0105
	Whitewater	0.482[1]	0.00174[1]	0.00384[1]	0.00349[1]	0.0102[1]
	Main	0.465	0.00112	0.00563	0.00148	0.0113
	Americana	0.747[1]	0.00231[1]	0.00539[1]	0.00465[1]	0.0146[1]
February 23, 2025	Lucky	0.158[2]	0.00130[2]	0.00160[2]	0.00243[2]	0.00686[2]
	Whitewater	--	--	--	--	--
	Main	0.256	0.000878	0.00266	0.00117	0.00687
	Americana	0.471[1]	0.00272[1]	0.00173[1]	0.0152[1]	0.0129[1]
May 17, 2025	Lucky	1.71	0.00643	0.00576	0.00259	0.0437
	Whitewater	1.26	0.00560	0.00311	0.00305	0.0309
	Main	--	--	--	--	--
	Americana	1.31	0.00562	0.00567	0.00753	0.0288
August 26, 2025	Lucky	2.19[2]	0.0166[2]	0.0352[2]	0.0151[2]	0.0798[2]
	Whitewater	--	--	--	--	--
	Main	--	--	--	--	--
	Americana	--	--	--	--	--
September 29, 2025	Lucky	–	–	–	–	–
	Whitewater	5.098[1,2]	0.0173[1,2]	0.0131[1,2]	0.0122[1,2]	0.0945[1,2]
	Main	–	–	–	–	–
	Americana	3.52[2]	0.0131[2]	0.0143[2]	0.00967[2]	0.0695[2]

Notes:

-- = No data.

[1] *Data qualified due to lack of representativeness (50%–75%).*

[2] *Composite sample qualified due to exceedance of 6.0°C.*

Table 6. QC Sample Summary

Event Date	Parent Sample	Sample ID	QC Sample Type	Analytical Parameters																		
				E. coli	BOD_5	COD	Chloride	Hardness as $CaCO_3$	Turbidity	TSS	TDS	Total Phosphorus	Orthophosphate as P	Ammonia as N	Nitrate + Nitrite as N	TKN	Arsenic, total	Cadmium, dissolved	Cadmium, total	Copper, dissolved	Lead, dissolved	Lead, total	Mercury, total	Zinc, dissolved
				MPN/100 mL	mg/L	mg/L	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
September 9, 2024	--	240909-03-003	Equipment blank	--	<2.00	<7.00	--	<0.100	<0.3	<0.900	<25.0	<0.0120	<0.003	<0.0450	<0.0250	< 0.100	< 0.0500	<0.0100	<0.0200	0.59	<0.0100	<0.0100	<0.0100	1.3
September 10, 2024	--	240910-11-003	Equipment blank	--	<2.00	<7.00	--	<0.100	<0.3	<0.900	<25.0	<0.0120	<0.003	<0.0450	<0.0250	< 0.100	< 0.0500	<0.0100	<0.0200	0.59	<0.0100	<0.0100	<0.0100	2.5
	--	240910-14-003	Equipment blank	--	<2.00	<7.00	--	<0.100	<0.3	<0.900	<25.0	<0.0120	<0.003	<0.0450	<0.0250	< 0.100	< 0.0500	<0.0100	<0.0200	0.93	<0.0100	<0.0100	<0.0100	4.0
September 17, 2024	--	240917-12-003	Equipment blank	--	<2.00	<7.00	--	<0.100	<0.3	<0.900	<25.0	<0.0120	<0.003	<0.0450	<0.0250	< 0.100	< 0.0500	<0.0100	<0.0200	1.4	<0.0100	0.023	<0.0100	1.7
December 14, 2024	Americana grab	241214-14-001	Field blank	< 1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Americana grab	241214-14-101	Field duplicate	727.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Calculated parent/duplicate RPD			**4%**	–	–	--	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
February 23, 2024	Whitewater grab	250223-11-001	Field blank	<1.0	–	–	--	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Whitewater grab	250223-11-101	Field duplicate	98.7	–	–	--	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Calculated parent/duplicate RPD			**5%**	–	–	--	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
May 17, 2025	Main grab	250517-12-001	Field blank	<1.0	–	–	--	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Main grab	250517-12-101	Field duplicate	6,090	–	–	--	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Calculated parent/duplicate RPD			**2%**	–	–	--	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
August 26, 2025	Whitewater grab	250826-11-001	Field blank	<1.0[3]	–	–	--	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Whitewater grab	250826-11-101	Field duplicate	4710[3]	–	–	--	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	Calculated parent/duplicate RPD			**0%**	–	–	--	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
September 8, 2025	-	250908-03-004	Rinsate blank	–	<2.00	<7.00	<0.500	<0.100	<0.3	<0.900	<25.0	<0.0120	<0.003	<0.0450	<0.0250	<0.100	0.078	<0.0100	<0.0100	<0.140	<0.005	<0.0100	<0.0100	<0.500
September 9, 2025	–	250909-14-004	Rinsate blank	–	<2.00	<7.00	<0.500	<0.100	0.4	<0.900	<25.0	<0.0120	<0.003	<0.0450	<0.0250	<0.100	<0.0500	<0.0100	<0.0100	0.29	<0.005	0.030	<0.0100	<0.500
	–	250909-11-004	Rinsate blank	–	<2.00	<7.00	<0.500	<0.100	<0.3	<0.900	<25.0	<0.0120	<0.003	<0.0450	<0.0250	<0.100	<0.0500	<0.0100	<0.0100	0.16	<0.005	0.024	<0.0100	2.8
Allowable RPD				40%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%

-- = No data.

[3] *E. coli sample qualified due to exceeded hold time (>8 and <16 hours).*

Appendix C: Storm Event Reports

Storm Event Report No. 1: December 14, 2024

Storm Event Report No. 2: January 31, 2025

Storm Event Report No. 3: February 23, 2025

Storm Event Report No. 4: May 17, 2025

Storm Event Report No. 5: August 26, 2025

Storm Event Report No. 6: September 29, 2025

Technical Memorandum

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Prepared for: Ada County Highway District

Project Title: NPDES Phase I Stormwater Support WY 2025

Project No.: 196784

Technical Memorandum

Subject: ACHD Phase I Storm Event Report for December 14, 2024

Date: February 19, 2025

To: Monica Lowe

Cc: Steven Turner

Kristen Jolliffe

From: Zuly Lapa, Project Engineer

Prepared by: Reghan Hodges, Project Engineer

Reviewed by: Zuly Lapa, EIT, Project Engineer

Nikki McDonald, PE, Project Manager

Limitations:

This document was prepared solely for ACHD in accordance with professional standards at the time the services were performed and in accordance with the contract between ACHD and Brown and Caldwell dated September 14, 2024. This document is governed by the specific scope of work authorized by ACHD; it is not intended to be relied upon by any other party except for regulatory authorities contemplated by the scope of work. We have relied on information or instructions provided by ACHD and other parties and, unless otherwise expressly indicated, have made no independent investigation as to the validity, completeness, or accuracy of such information.

Section 1: Introduction

The Environmental Protection Agency Region 10 reissued a Municipal Separate Storm Sewer System Phase I National Pollutant Discharge Elimination System Permit (NPDES Permit), effective October 1, 2021, to Ada County Highway District (ACHD), Boise City, Ada County Drainage District No. 3, Idaho Transportation Department District 3, Boise State University, and Garden City. Under the NPDES Permit, Permittees are required to continue to conduct wet weather stormwater outfall monitoring and subwatershed monitoring. Four outfall monitoring sites (Lucky, Whitewater, Main, and Americana) and one subwatershed monitoring site (AS_6) have been established. The AS_6 site represents a subwatershed located within the Americana watershed. At each site, a minimum of three composite and three grab samples will be collected during Water Year (WY) 2025 (October 1, 2024, through September 30, 2025). The following storm event report summarizes stormwater sampling results from the December 14, 2024, storm event.

Section 2: Project Status

Table 2-1 is a summary of the sample types collected to date for WY 2025 Phase I Stormwater Outfall Monitoring. When samples are qualified, additional samples will be attempted from subsequent storms to collect unqualified samples.

Table 2-1. WY 2025 Samples Collected

Date	Lucky	Whitewater	Main	Americana	AS_6
December 14, 2024	G, C[1]	G, C	G, C	G, C	G, C
Unqualified Samples:	1G	1G, 1C	1G, 1C	1G, 1C	1G, 1C
Samples Remaining:	2G, 3C	2G, 2C	2G, 2C	2G, 2C	2G, 2C

Notes:

-- = no samples taken

C = composite sample

G = grab sample

[1] Equipment installation error resulted in negative flow and velocity; therefore, no composite subsamples were taken.

Section 3: Storm Event Summary

The December 14, 2024, storm event and the subsequent preparation and sampling efforts are detailed in the following sections.

3.1 Storm Detail

A summary of the forecast on which monitoring decisions were based is detailed below. The sampling event communication form that describes the forecast and summarizes the decision-making process from December 14, 2024, is included in Attachment A for reference.

Friday, December 13, 2024 (Sampling Event Communication & Set Up)

- On the morning of December 13, the National Weather Service issued a forecast for widespread rain in the Boise area, starting December 13 at 2000 and ending on December 14 at 0600. The chance of

precipitation was 100%, with 80% projected to be more than 0.1 inches over 12 hours. The forecasted precipitation for this event was 0.5 to 0.75 inches.

- Setup was accomplished on the afternoon of December 13. An expected precipitation depth of 0.11 inches was used to set trigger volumes at monitoring stations. A runoff calculations worksheet showing how the trigger volumes were calculated is included in Attachment A.

Saturday, December 14, 2024 (Storm Event)

- The runoff started approximately on December 14 at 0040 and ended on December 14 at 1549.
- Precipitation totals ranged between 0.19 and 0.26 inches at local rain gauges.

Flow measurements and precipitation data are listed in Table 1 along with a sampling summary. Hydrographs for the Whitewater, Main, Americana and AS_6 sites showing flow, rain, and sample collection data are included in Attachment B. A hyetograph of Lucky presenting rain and sample collection are also included in Attachment B.

3.2 Sampling Summary

Lucky, Whitewater, Main, Americana and AS_6 monitoring stations were set up on December 13, 2024, to collect flow-proportional composite samples during the storm. Sampler enable conditions were programmed into the Lucky, Whitewater, Main, Americana and AS_6 flowmeters. Setup and sampling information are included in Table 1. The field forms completed during setup/shutdown and sampling are included in Attachment C.

Grab Samples

Two, two-member teams mobilized to collect stormwater runoff grab samples and verify operation of the automatic sampling equipment on December 14 around 0130. Grab samples for Lucky, Whitewater, Main, Americana, AS_6 were submitted to the Boise City Public Works Water Quality Laboratory (WQL) at 0400 on December 14. Results for grab samples, including field parameter and analytical data, are included in Table 2. Laboratory analytical reports are included in Attachment D.

Composite Samples

Composite samples were collected at the Whitewater, Main, Americana and AS_6 monitoring stations and submitted to the WQL at 1246 on December 14. Analytical results are shown in Table 2 and pollutant loading estimates for the event are detailed in Table 3. Laboratory analytical reports are included in Attachment D.

Section 4: Quality Assurance/Quality Control

A summary of quality control samples collected during the December 14, 2024, storm event is presented below in Table 4-1. A field blank and a field duplicate were collected from the Americana monitoring station. The analytical results for these samples are included in Table 4-1.

Table 4-1. Quality Control Samples

Sample ID	Sample Type	Parent Sample	Conclusions
241214-14-001	Field blank	Americana grab	No *E. coli* detection was reported in the field blank.
241214-14-101	Field duplicate	Americana grab	Relative percent difference was within the acceptable range.

Data quality objectives for this storm were evaluated and tracked using the data validation review checklist included in Attachment A. An acceptable composite sample represents at least 75 percent of the total discharge or at least 6 hours of the storm duration. All composite samples collected met the criteria.

Section 5: Notes and Recommendations

Lucky

The area-velocity sensor at Lucky was installed backwards during fall maintenance. This resulted in negative flow and velocity readings, and no composite subsamples collected.

Whitewater

Two “Skipped” sample messages were recorded during the composite sample collection at Whitewater. These sample messages appear when the sampling team pauses the sampler program, stopping it from collecting the next subsample. The “Skipped” sample messages do not affect the sampling data nor is shown on the hydrograph.

The sampling team discovered the automatic sampler's date and time was not synchronized with the flowmeter. This resulted in incorrect subsample times displayed on the sampler. The team recorded composite subsample times for the first bottle (23 samples) as-is, and then restarted the program for the second bottle with the correct date and time. The data imported to the database, DataSight, has the corrected date and time for the first sample bottle.

Data Tables

Table 1. Sampling and Flow Summary					
	Lucky	Whitewater	Main	Americana	AS_6
Grab samples collected and submitted?	YES	YES	YES	YES	YES
Composite samples collected and submitted?	NO	YES	YES	YES	YES
Trigger volume (ft^3)	2,895 gal	801 cf	456 cf	2,960 cf	1,646 gal
Sampler enable condition (in) or Velocity cutoff (fps)	Level > 2.11"	Level > 2.9"	Level > 1.74"	Level > 5.5"	Level > 1.03"
Deadband/ Hysteresis (in)	1.0"	1.0"	1.0"	1.0"	1.0"
Runoff start time	--	0121	0055	0040	0143
Grab sample collection time	0148	0216	0205	0228	0259
Composite sample stop time	--	1010	0851	1018	1033
Runoff stop time	--	1549	1107	1230	1118
Volume of discharge sampled (ft^3)	--	35,204	6,853	112,666	11,227
Total runoff volume (ft^3)	--	41,608	7,419	126,267	12,292
Percent of storm flow sampled (%)	--	85%	92%	89%	91%
Composite sample duration (hrs)	--	8	7	8.5	7.5
Storm Precipitation (in)	0.21	0.23	0.19	0.19/0.26	0.19/0.26
Referenced Rain Gauge	Cynthia Mann	Whitewater	Front	Front/East	Front/East
Sampler messages (counts): Success	--	45	16	40	50
: Sample skipped	--	2	--	--	--
Number of composite bottles filled	--	2	1	2	3
Composite sample volume (Approx.; ml)	--	25,000 mL	9,500 mL	23,500 mL	39,650 mL

Notes:

-- No data.

Table 2. Field and Analytical Data Summary

Monitoring Station	Sample Date	Sample ID Grab	Field Parameters				Analytical Parameters																					
			Dissolved Oxygen	pH	Conductivity	Temperature	E. coli	Sample ID Composite	BOD_5	COD	Chloride	Hardness as $CaCO_3$	Turbidity	TSS	TDS	Total Phosphorus	Orthophosphate as P	Ammonia as N	Nitrate + Nitrite as N	TKN	Arsenic, total	Cadmium, dissolved	Cadmium, total	Copper, dissolved	Lead, dissolved	Lead, total	Mercury, total	Zinc, dissolved
			mg/L	S.U.	uS/cm	C	mpn/100 mL		mg/L	mg/L	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Lucky	12/14/2024	241214-03-WG	10.37	8.96	107.63	6.96	648.8	241214-03-WC	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
Whitewater	12/14/2024	241214-11-WG	9.10	8.07	912.49	7.09	920.8	241214-11-WC	21.6	94.0	100	74.9	23.5	32.2	271	0.535	0.358	0.222	0.445	1.36	2.2	<0.0100	0.045	2.4	0.22	2.6	<0.0100	17.3
Main	12/14/2024	241214-12-WG	10.95	7.94	485.43	6.56	261.3	241214-12-WC	9.48	66.0	50.5	25.6	28.3	30.5	124	0.155	0.0859	0.615	0.247	1.31	0.90	0.018	0.058	3.5	0.14	3.3	<0.0100	31.0
Americana	12/14/2024	241214-14-WG	10.69	7.60	596.06	7.48	517.2	241214-14-WC	14.8	75.0	150	107	31.8	42.3	360	0.347	0.212	0.251	0.778	1.17	3.4	0.034	0.091	3.2	0.15	3.8	0.0119	24.3
AS_6	12/14/2024	241214-206-WG	10.49	7.73	533.81	5.16	1,299.7	241214-206-WC	34.9	171	94.0	35.3	49.4	43.5	267	0.934	0.668	0.119	0.0960	1.74	2.2	0.019	0.069	4.7	0.59	4.5	<0.0100	26.7

Notes:

-- No data.

[1] Equipment installation error resulted in negative flow and velocity; therefore, no composite subsamples were taken.

Table 3. Event Pollutant Loading Estimates in Pounds						
Monitoring Station	Event Date	TSS	Total Phosphorus	Ammonia as N	Nitrate + Nitrite as N	TKN
Lucky	12/14/2024	--	--	--	--	--
Whitewater	12/14/2024	83.6	1.39	0.576	1.16	3.53
Main	12/14/2024	14.1	0.0718	0.285	0.114	0.607
Americana	12/14/2024	333	2.73	1.98	6.13	9.22
AS_6	12/14/2024	33.4	0.717	0.0913	0.0736	1.33

Notes:

-- No data.

Table 4. QC Sample Summary				
Date	Parent Sample	Sample ID	Type	E. coli
				mpn/100 mL
12/14/2024	241214-14-WG	241214-14-001	Field Blank	<1.0
12/14/2024	241214-14-WG	241214-14-101	Field Duplicate	727.0
Calculated parent/duplicate RPD				4%
Allowable RPD				40%

Attachment A: Supplemental Documents

Sampling Event Communication Form

Data Validation Checklist

Runoff Calculation Worksheet

SAMPLING EVENT COMMUNICATION FORM

Date: 12/13/2024	Time: 8:00 AM	Initials: ST
Is there a targeted sampling event during the next 36 hours? (Or, if it is Friday, is a targeted event expected before 5:00 PM Monday?)		Yes

Past 72 hr Precip	0.04"at Airport
Date and time of expected event	Starting between 8:00 pm and 10:00 pm on 12/13/24
Expected amount of precipitation	0.5-0.75"
Percent chance of precipitation	100%
Percent chance of >0.10" over 12 hours	80% from 4:00 pm – 4:00 am.

NWS Update

Spoke with Dave from NWS. Consistent rain is expected to start between 8:00 – 10:00 pm on 12/13/24 and continuing through 3:00 – 6:00 am on 12/14/24. 0.14" of rain is expected during this overnight period. The intensity of the rain will slow in the morning until 11:00 am – 1:00 pm and then 0.25" more until the evening.

Targeted Station & Samples

Lucky	Whitewater	Main	Americana	AS_6	State (Phase II)
☒ Grab	☒ Grab	☒ Grab	☒ Grab	☒ Grab	☐ Grab
☒ Composite	☒ Composite	☒ Composite	☒ Composite	☒ Composite	☒ Composite

Type of Forecasted Precipitation

☒ Light Rain	☒ Rain	☐ Rain on Snow
☐ Scattered Showers	☐ Thunder Showers	☐ Snowmelt
☐ Other:		

Reasons for Not Targeting a Forecasted Storm and/or Stations

☐ Holiday
☐ Waiting on Antecedent Dry Period – Expires:
☐ Equipment Concerns:
☐ Other:

Text Forecast

NWS Forecast for: 2 Miles WSW Garden City ID

Issued by: National Weather Service Boise, ID

4:05 am MST Dec 13, 2024

Air Stagnation Advisory until Dec 13, 2:00 PM MST

Today: A 30 percent chance of rain before 11am. Patchy fog before 11am. Otherwise, mostly cloudy, with a high near 42. Southeast wind 3 to 7 mph.

Tonight: Rain. Low around 39. East southeast wind 8 to 15 mph. Chance of precipitation is 100%. New precipitation amounts between a tenth and quarter of an inch possible.

Saturday: Rain. High near 46. Southeast wind 14 to 16 mph. Chance of precipitation is 100%. New precipitation amounts between a quarter and half of an inch possible.

Saturday Night: Rain. Low around 30. Southeast wind 6 to 13 mph becoming west after midnight. Chance of precipitation is 90%. New precipitation amounts between a tenth and quarter of an inch possible.

Sunday: Mostly sunny, with a high near 42. West northwest wind around 6 mph becoming calm.

Sunday Night: Mostly cloudy, with a low around 27.

Monday: A 50 percent chance of snow, mainly after 11am. Cloudy, with a high near 39. Little or no snow accumulation expected.

Monday Night: Rain and snow likely, mainly before 11pm. Cloudy, with a low around 29. Chance of precipitation is 70%.

Tuesday: A slight chance of rain and snow before 11am. Mostly cloudy, with a high near 38. Chance of precipitation is 20%.

Tuesday Night: Mostly cloudy, with a low around 26.

Wednesday: Partly sunny, with a high near 39.

Wednesday Night: Mostly cloudy, with a low around 25.

Thursday: Partly sunny, with a high near 37.

Forecast Discussion

Area Forecast Discussion

National Weather Service Boise ID
409 AM MST Fri Dec 13 2024

.SHORT TERM...Today through Sunday night...The remnants of an upper-level trough will continue moving east this morning, bringing light precipitation to southwest Idaho. Reports indicate primarily light freezing rain from Caldwell through Boise, with occasional snow mixed in. Ontario has seen mainly light snow, with minor accumulations observed on area webcams. Light snow has also been reported in the Western Magic Valley, but accumulations there have been minimal. Valley precipitation is expected to end by 4 AM, though it will persist until about 9 AM in the central mountains. Commuters should exercise caution this morning due to patchy ice and snow on side streets and sidewalks.

A stronger and warmer system will approach the coast today, bringing widespread precipitation starting this evening. Increasing winds aloft this afternoon will help erode the inversion across most areas, with the Lower Treasure Valley likely being the last to clear.

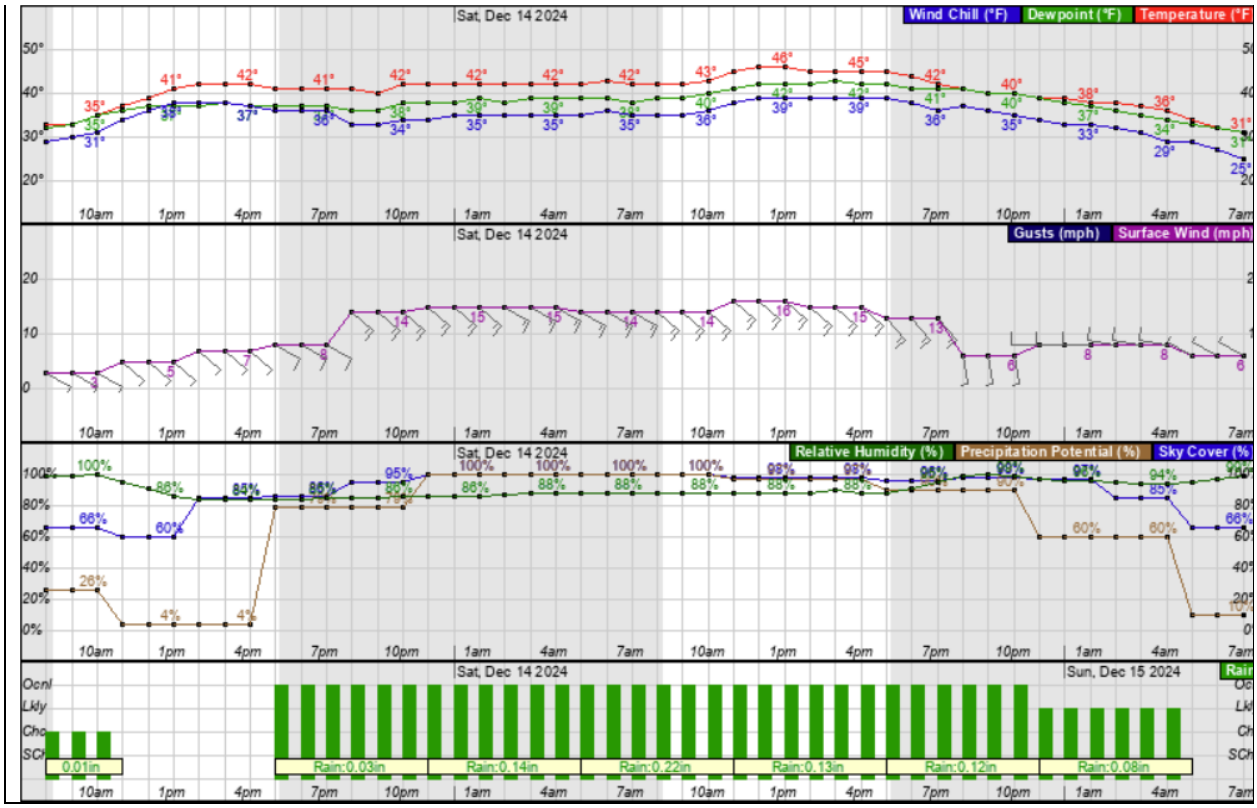
Precipitation will begin with a warm front moving southwest to northeast this evening. Snow levels are expected to rise overnight and through Saturday, potentially limiting snowfall in mountain valleys below 5,500 feet. Latest forecasts suggest significantly warmer temperatures, resulting in less snow accumulation in these areas. Current ensemble models predict 10-18 inches of snow above 7,000 feet from Friday night through Sunday morning. However, snowfall in mountain valleys below 5,500 feet remains uncertain, with totals ranging from 2 to 13 inches. Warmer temperatures could lead to snow mixing with or

changing to rain Saturday afternoon, further reducing accumulations. Current estimates for Long Valley snowfall are 4 to 6 inches from Saturday into Sunday. The Winter Weather Watch remains in effect due to uncertainties in snow amounts for the mountain valleys. However, impacts for populated areas below 5,500 feet look to be minimal.

In the lower valley, precipitation will fall entirely as rain, with totals ranging from 0.50 to 0.75 inches through Sunday morning. Temperatures will climb to the mid 40s on Saturday before returning to seasonal norms after the trough exits the region early Sunday.

LONG TERM...Monday through Friday...An upper level ridge will build over the area Monday morning, but will quickly shift eastward as a trough arrives late Monday morning. The warm frontal precipitation will spread into southeast OR and southwest ID late morning and afternoon, with rain/snow chances increasing to 50-80 percent by the afternoon. Mid-level southwesterly winds will also increase Monday, which will enhance valley shadowing effects with the initial precipitation onset. Temperature inversions should begin to erode in larger valleys with the development of breezy surface winds, and snow levels are forecast to climb to 3k-4k feet MSL for most areas during the day. The exception will be over northeast OR and w-central ID due to the proximity of the cold low center, in which snow levels will remain at valley floors. As the trough progresses eastward Monday night, both the upper level and surface winds will transition to west/northwest. This will alleviate some of the valley shadowing effects for the Snake Plain, while shower chances of 30-60 percent continue Mon night/early Tue. The colder northwest flow and nighttime temperatures will lower snow levels back down to 2500-3500 feet MSL. Overall, mountains are expected to see several inches of snowfall Monday afternoon through Tuesday morning period, while valleys could see light snow accumulations during favorable flow. Showers will taper off Tuesday as an upper level ridge builds into the region from the west. While daytime temperatures are forecast to be near-normal for the beginning of the week, strengthening inversions will create colder valley temperatures and air stagnation concerns after Tuesday.

Hourly Forecast


Sat, Dec 14 2024
Wind Chill (°F)
Dewpoint (°F)
Temperature (°F
Gusts (mph)
Surface Wind (mph)
Relative Humidity (%)
Precipitation Potential (%)
Sky Cover (%
Sun, Dec 15 2024
Ocnl
Lkly
Chc
Sch
0.01in
Rain:0.03in
Rain:0.14in
Rain:0.22in
Rain:0.13in
Rain:0.12in
Rain:0.08in
10am
1pm
4pm
7pm
10pm
1am
4am
7am

Storm Event QA/QC Checklist – Phase I

STORM DATE 12/14/2024

A. Event and Data Completeness	Yes	No	N/A	Notes
1. Field data sheets filled out completely and clearly	X			
2. Field parameters reviewed, and any problems/issues addressed	X			Whitewater FM + SA clocks weren't synced during setup.
3. All samples collected as specified	X			
4. All samples delivered to lab promptly (review chain of custody rpts)	X			
5. Inconsistencies/clarifications discussed with sampling team member			X	
6. All analytical reports from lab received	X			

B. Validation and Verification Methods	Yes	No	N/A	Notes
1. Outliers and unexpected values discussed with lab			X	
2. Appropriate analytical methods used	X			
3. All lab QA samples were within method acceptance criteria	X			
4. All samples reviewed and data qualifiers assigned if needed				
5. Data quality objective achieved	X			

C. Specific Storm and Sample QA/QC Criteria	Lucky	Whitewater	Main	Americana	AS_6	Program Criteria	Met	Qualify	Reject
1. Antecedent dry period (inches in previous 72-hours)	0.07	0.10	0.10	0.10/0.07	0.10/0.07	< 0.11" in 72 hrs	X		
2. Precipitation (inches)	0.21	0.23	0.19	0.19/0.26	0.19/0.26	> 0.10"	X		
3. Sampled amount (% of total run-off)	–	85%	92%	89%	91%	>= 75% or >= 6 hrs: no qualifier >= 50% and <75%: qualify < 50%: reject	X		
4. Composite sample duration (hours)	–	8	7	8.5	7.5				
4. Ecoli sample holding time (hours)	6.5	6	6.5	6	5.5	<=8 hrs: no qualifier >8 and <=16 hrs.: qualify >16 hrs.: reject	X		
5. Filtering of samples for dissolved parameter analysis (hours)	–	4	6	3	4	<= 24 hrs: no qualifier > 24 hrs.: reject	X		

D. Notes

Lucky – AV sensor installed backwards, resulting in negative flow & velocity values. No composite subsamples were taken.

Reviewed by Steven Turner **Date** 1/17/2025

Approved by Monica Lowe **Date** 1/22/25

Storm Runoff Estimates and Trigger Volumes

Step 1. Enter runoff coefficients in yellow cells.
Step 2. Enter expected precipitation depth (in) in blue cell.
Step 3. Read trigger volumes (**bold**) in green cells.

Expected Precipitation Depth = 0.11
Aliquots per Sample = 17

Site	Area (ac)	Using RC calculated from flow data		
		RC	Expected Vol (ft^3)	Trigger Vol (ft^3)
Lucky	105	0.157	6582.5	**387**
Whitewater	498	0.069	13621.3	**801**
Main	79	0.246	7760.0	**456**
Main Alt	60	0.200	4791.6	**282**
Americana	875	0.144	50311.8	**2960**
Americana Alt	869	0.144	49966.8	**2939**
AS_6	204	0.046	3747.0	**220**
State	34	0.127	1724.2	**101**

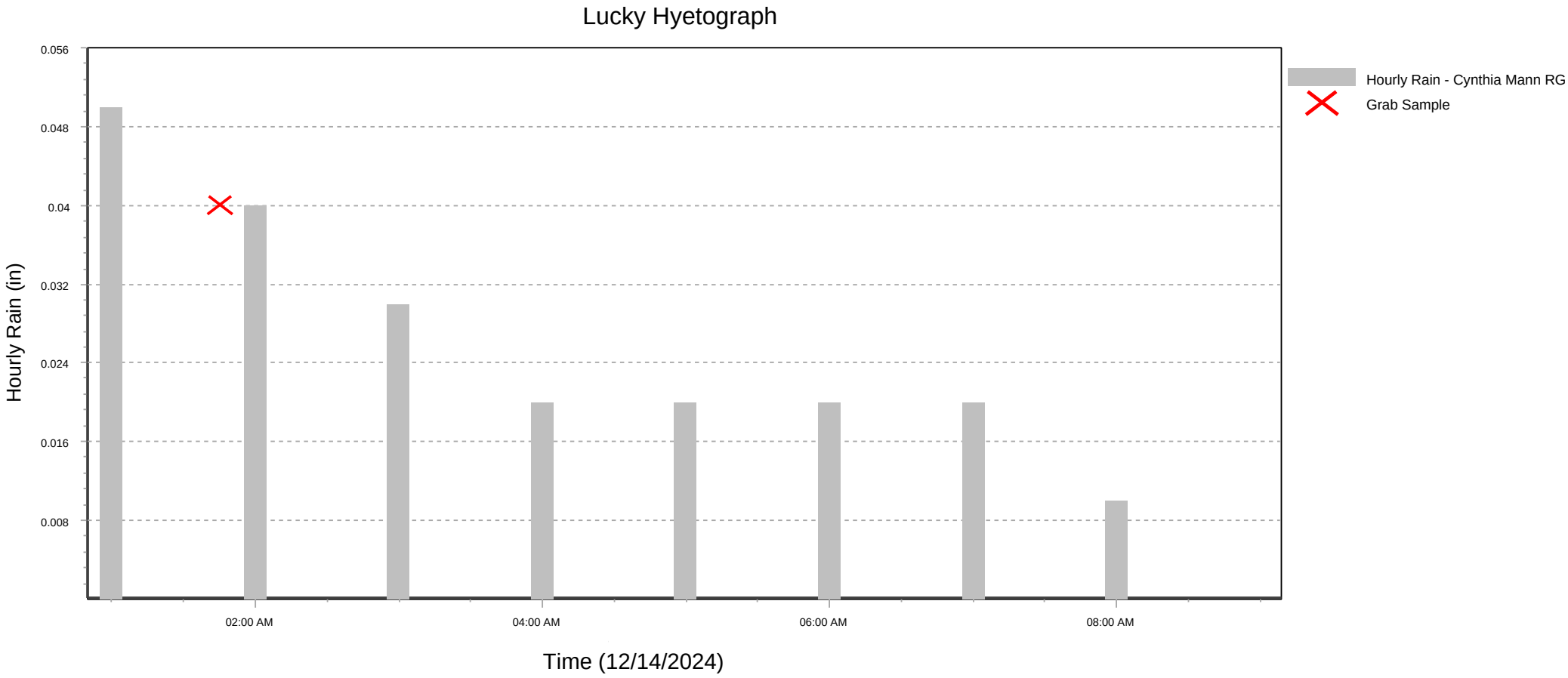
Notes:

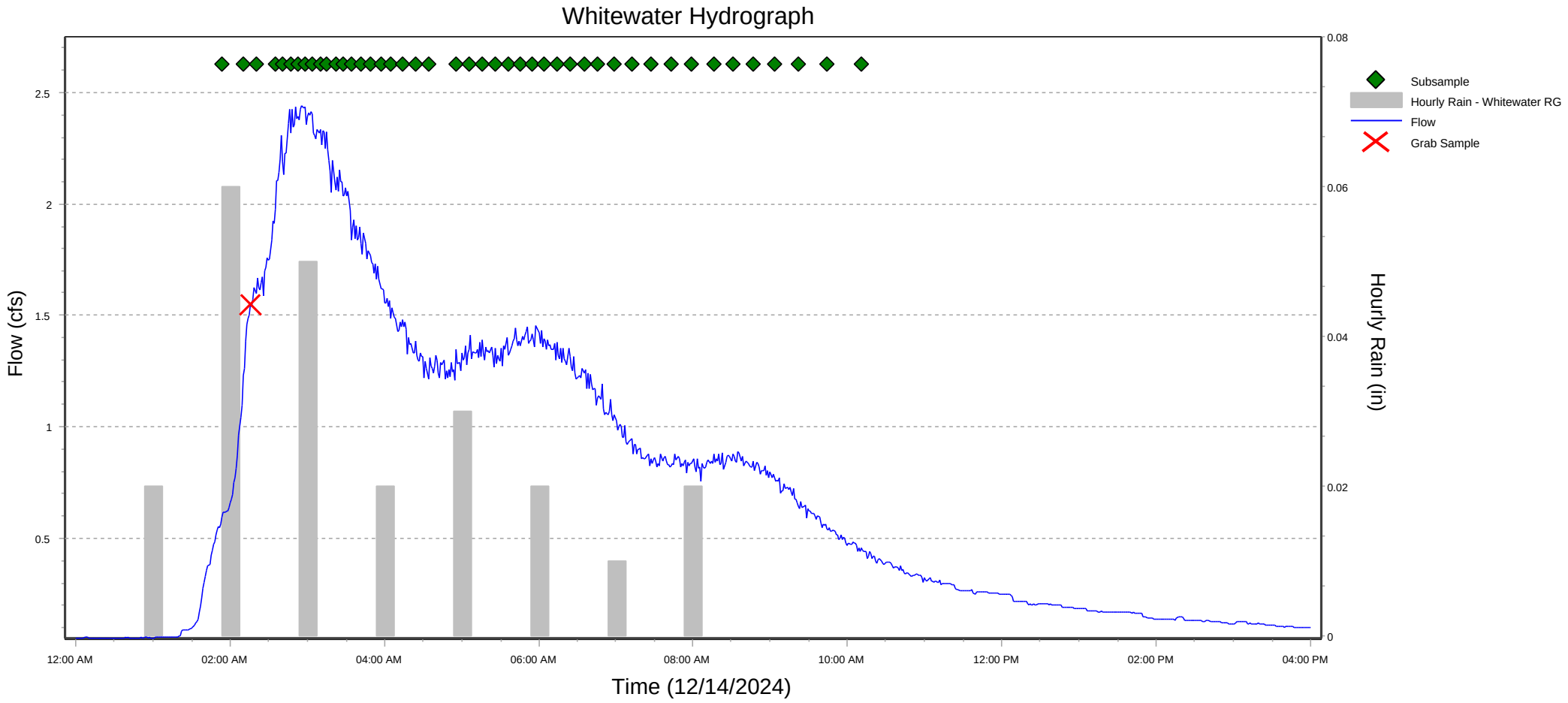
Calculated RC = runoff volume (ft^3) / [precip (ft) x area (ft^2)]

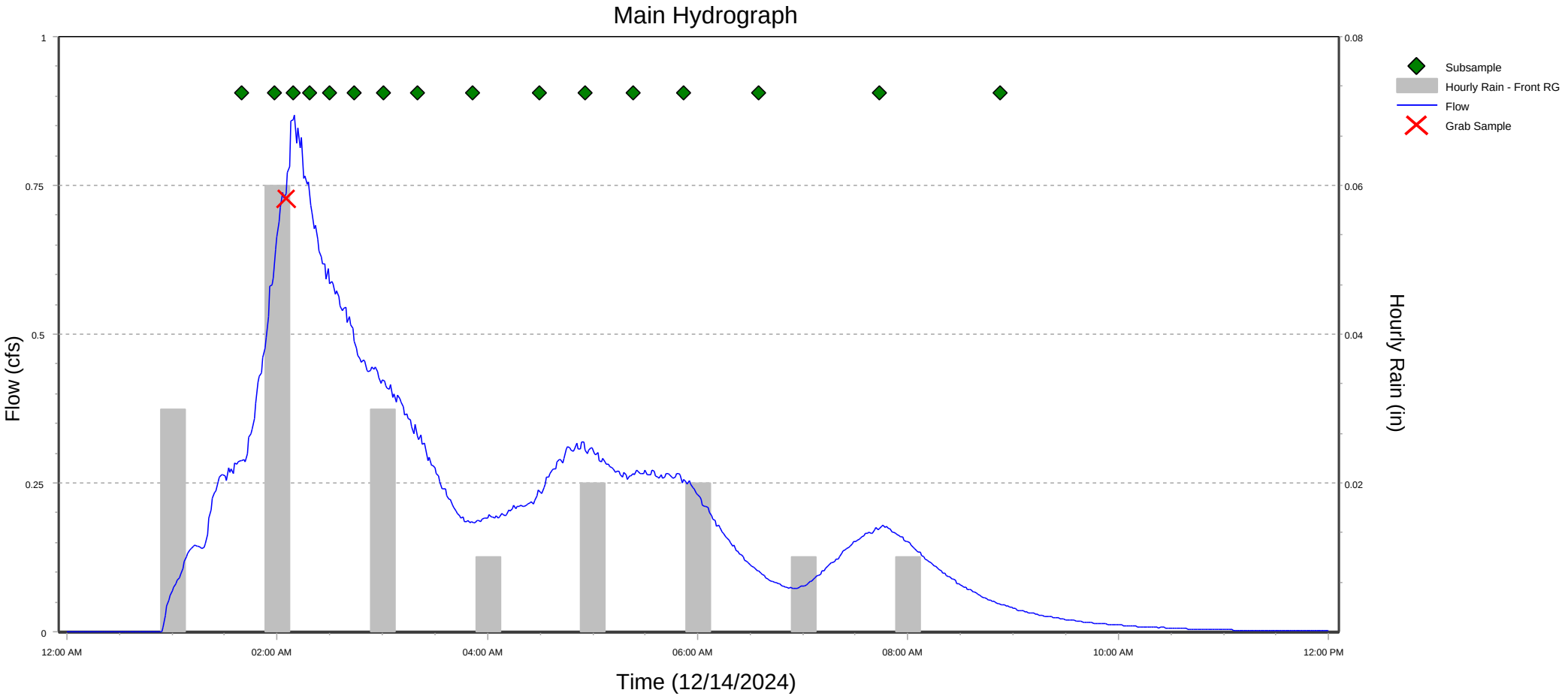
Where precip (ft) is the measured amount from local rain guage, and volume (ft^3) is the measured discharge, and area (ft^2) is the watershed area

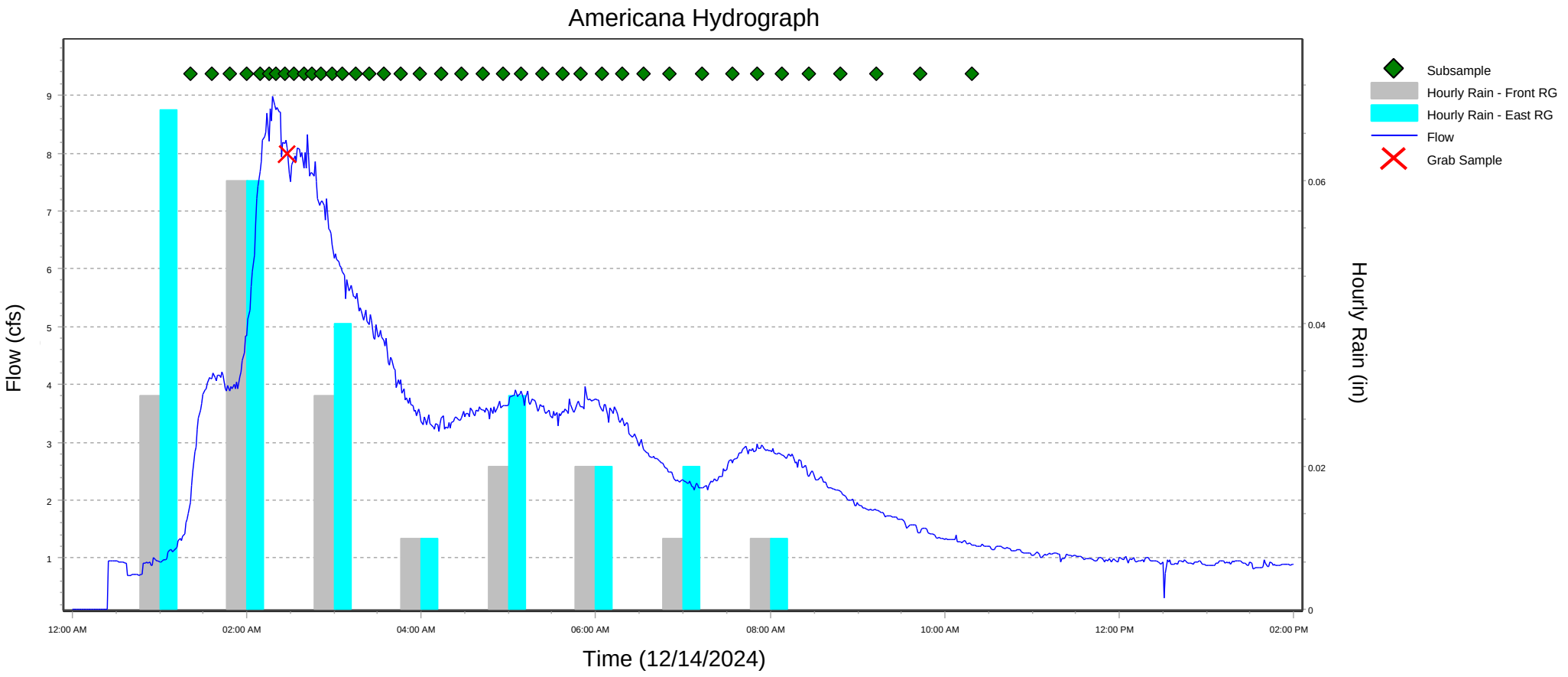
Expected volume (ft^3) = RC x expected precip (ft) x area (ft^2)

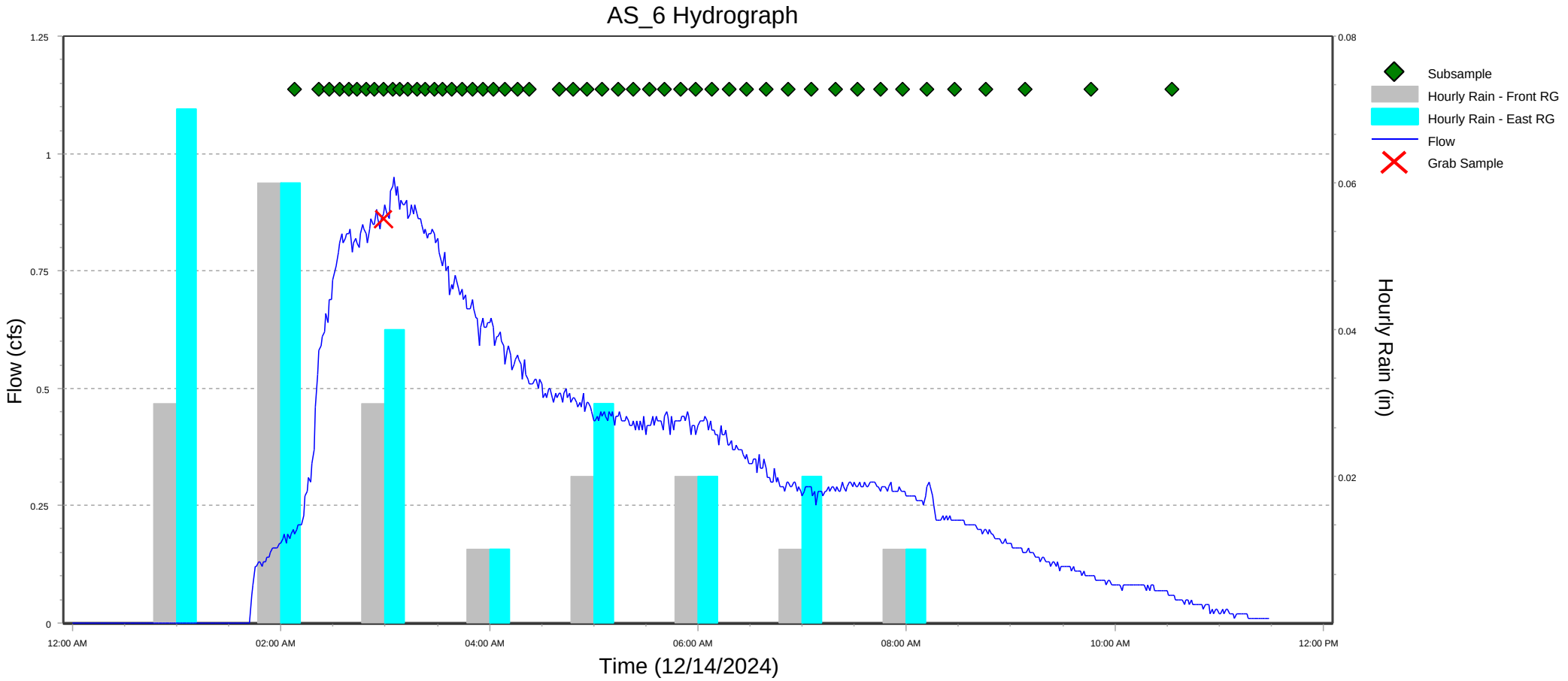
Attachment B: Storm Event Graphs


Lucky Hyetograph
0.056
0.048
0.04
0.032
0.024
0.016
0.008
Hourly Rain (in)
02:00 AM
04:00 AM
06:00 AM
08:00 AM
Time (12/14/2024)
Hourly Rain - Cynthia Mann RG
Grab Sample


Whitewater Hydrograph
Flow (cfs)
Hourly Rain (in)
Time (12/14/2024)
2.5
2
1.5
1
0.5
0.08
0.06
0.04
0.02
0
12:00 AM
02:00 AM
04:00 AM
06:00 AM
08:00 AM
10:00 AM
12:00 PM
02:00 PM
04:00 PM
Subsample
Hourly Rain - Whitewater RG
Flow
Grab Sample


Main Hydrograph
Flow (cfs)
Hourly Rain (in)
Time (12/14/2024)
1
0.75
0.5
0.25
0
0.08
0.06
0.04
0.02
12:00 AM
02:00 AM
04:00 AM
06:00 AM
08:00 AM
10:00 AM
12:00 PM
Subsample
Hourly Rain - Front RG
Flow
Grab Sample


Americana Hydrograph
Flow (cfs)
Hourly Rain (in)
Time (12/14/2024)
Subsample
Hourly Rain - Front RG
Hourly Rain - East RG
Flow
Grab Sample
12:00 AM
02:00 AM
04:00 AM
06:00 AM
08:00 AM
10:00 AM
12:00 PM
02:00 PM


AS_6 Hydrograph
Flow (cfs)
Hourly Rain (in)
Time (12/14/2024)
1.25
1
0.75
0.5
0.25
0
0.08
0.06
0.04
0.02
12:00 AM
02:00 AM
04:00 AM
06:00 AM
08:00 AM
10:00 AM
12:00 PM
Subsample
Hourly Rain - Front RG
Hourly Rain - East RG
Flow
Grab Sample

Attachment C: Field Forms

Grab Sample Data Form

STATION: Lucky

Personnel: ST, PD **Date/Time On-Site:** 12/14/24 1:30 AM

Flow Meter Current Status						
Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)	Flow Start (date/time)	Rainfall (in)
1:48	5.07	-29.61 GPM	-1.18	12.7		

Grab Information				
	Sample ID	Date	Time	Labeled?
Site *E.Coli*	241214-02 -WG	12/14/2024	1:48	☒
Field Duplicate *E.Coli*	-101			☐
Field Blank *E.Coli*	-001			☐

*Note: time on bottle for QC samples is 1200

Field Parameters					
Meter number	Time	Temp (C)	D.O. (mg/L)	pH (S.U.)	SpCond (uS/cm)
MP13	1:53	6.96	10.37	8.96	107.63

Sampler Current Status	
First Subsample Date/Time	
Last Subsample Date/Time	
# of Subsamples taken	

Comments:

Grab Sample Data Form

STATION: Whitewater

Personnel: PB, ST **Date/Time On-Site:** 12/14/24 2:13

Flow Meter Current Status						
Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)	Flow Start (date/time)	Rainfall (in)
2:13	4.99	1.48	1.59	—		

Grab Information				
	Sample ID	Date	Time	Labeled?
Site *E.Coli*	24124-11 -WG	12/14/24	2:16AM	☒
Field Duplicate *E.Coli*	-101			☐
Field Blank *E.Coli*	-001			☐

*Note: time on bottle for QC samples is 1200

Field Parameters					
Meter number	Time	Temp (C)	D.O. (mg/L)	pH (S.U.)	SpCond (uS/cm)
MP13	2:23	7.09	9.10	8.07	912.49

Sampler Current Status	
First Subsample Date/Time	1/1 21:00
Last Subsample Date/Time	1/1 21:26
# of Subsamples taken	3

Comments: Wrong date. Month and day were not set on sampler. The correct subsample times are logged on the flowmeter and will be imported to DataSight.

Grab Sample Data Form

STATION: Main

Personnel: K-C WB **Date/Time On-Site:** 12/14/24 1:33

Flow Meter Current Status						
Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)	Flow Start (date/time)	Rainfall (in)
1:38	4.554	0.28	1.07	12.6		

Grab Information				
	Sample ID	Date	Time	Labeled?
Site *E.Coli*	241214-12 -WG	12-14-24	~~1:49~~ 2:15	☑
Field Duplicate *E.Coli*	241214-12 -101	12-14-24	1:54	☑
Field Blank *E.Coli*	241214-12 -001	12-14-24	1:56	☑

*Note: time on bottle for QC samples is 1200

Field Parameters					
Meter number	Time	Temp (C)	D.O. (mg/L)	pH (S.U.)	SpCond (uS/cm)
MP14	1:56	6.56	10.95	7.94	485.43

Sampler Current Status	
First Subsample Date/Time	12/14/24 1:39
Last Subsample Date/Time	
# of Subsamples taken	1

Comments:

~~QC Duplicate + Blank were dumped.~~ ST

Alternate site QC samples discarded due to successful collection of samples at primary QC site (Americana).

Grab Sample Data Form

STATION: Americana

Personnel: KC, WB **Date/Time On-Site:** 12/14/24 2:20

Flow Meter Current Status						
Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)	Flow Start (date/time)	Rainfall (in)
2:20	11.59	9.33	3.923	12.03		—

Grab Information				
	Sample ID	Date	Time	Labeled?
Site *E.Coli*	241214 - 14 -WG	12/14/24	2:28	☑
Field Duplicate *E.Coli*	241214 - 14 -101	12/14/24	2:30	☑
Field Blank *E.Coli*	241214 - 14 -001	12/14/24	2:38	☑

*Note: time on bottle for QC samples is 1200

Field Parameters					
Meter number	Time	Temp (C)	D.O. (mg/L)	pH (S.U.)	SpCond (uS/cm)
MP14	2:38	7.48	10.69	7.60	596.06

Sampler Current Status	
First Subsample Date/Time	12/14/24 1:20
Last Subsample Date/Time	12/14/24 219
# of Subsamples taken	7

Comments:

Grab Sample Data Form

STATION: AS-6

Personnel: ST, PB **Date/Time On-Site:** 12/14/24 2142

Flow Meter Current Status						
Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)	Flow Start (date/time)	Rainfall (in)
2:45	4.72	362.84 gpm	1.64	12.5		

Grab Information				
	Sample ID	Date	Time	Labeled?
Site *E.Coli*	241214-206WG	12/14/24	2:59	☐
Field Duplicate *E.Coli*	-101			☐
Field Blank *E.Coli*	-001			☐

*Note: time on bottle for QC samples is 1200

Field Parameters					
Meter number	Time	Temp (C)	D.O. (mg/L)	pH (S.U.)	SpCond (uS/cm)
MP13	2:55	5.16	10.49	7.73	533.81

Sampler Current Status	
First Subsample Date/Time	
Last Subsample Date/Time	12/14/24 304
# of Subsamples taken	10

Comments:

Set Up/ Shut Down Form – HACH (Lucky, ~~Main~~, AS_6)

STATION: Lucky

SET UP

Personnel: ST, KC

Date/Time On-Site: 12/13/24 12:09

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
12:17	1.11	-0.86 gpm	-0.07	12.8

Enable Condition or Velocity Cutoff:	2.11 in
Deadband:	1.0 in
Trigger Volume:	2895 gal

- [x] Install batteries on flowmeter and sampler
- [x] Perform decon. cycle
- [x] Install 15L sample bottle, with ice
- [x] Leave bottle lid at site, in a clean re-sealable plastic bag
- [x] Verify all cable and tubing connections
- [x] Check date and time on flowmeter and sampler
- [x] Set flowmeter program and sampler program parameters
- [x] Set logging interval to 1 minute
- [x] Start flowmeter program and sampler program
- [x] Verify running

Comments: Changed desiccant on ST Sampler

Date/Time Off-Site: 12/13/24 12:37

SHUT DOWN

Personnel: ST

Date/Time On-Site: 12/16/24 10:37

Time	Level (in)	Flow ~~(cfs)~~ GPM	Velocity (fps)	Total (cf)	Battery (V)
10140	2.98	-92.76	-0.82	-	12.5
Downloaded to:		Stevens U53 (green)			

If flow monitoring is complete:	**If continuing to monitor flow:**
[x] Halt program on flowmeter	[ ] Replace flowmeter battery
[x] Download flowmeter data	[ ] Reset logging interval to 15 minutes
[x] Remove flowmeter battery	[ ] Change velocity cutoff to 0.02 fps
	[ ] Start program
	[ ] Verify running

Comments: AV sensor was installed backwards, resulting in negative flow and velocity values. No composite subsamples were taken.

Date/Time Off-Site: 12/16/24 10:58

Revised 240123 KC

Set Up/ Shut Down Form – ISCO (Whitewater, Americana, State, and Main)

TATION: Whitewater

SET UP

Personnel: ST, KC

Date/Time On-Site: 12/13/24 12:50

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
12:51	1.91	0.06	0.29	—

Enable Condition:	2.9 in
Hysteresis:	1"
Flow Pulse Interval:	801 cf

On-Site
- ☒ Replace flowmeter battery, install sampler battery
- ☒ Perform decon. cycle
- ☒ Install 15L sample bottle, with ice
- ☒ Leave bottle lid at site, in a clean re-sealable plastic bag
- ☒ Set sampler program parameters
- ☒ Check date/time on sampler
- ☒ Verify all cable and tubing connections
- ☒ Verify sampler program is running

Flowlink (Refer to PG 411 or PG 412, if needed)
- ☒ Direct or Remote; Date/time 12/13 13:00
- ☒ Retrieve data and review recent flow history
- ☒ Change Wireless Power Control to Storm Event
- ☒ Change Data Storage Rates to 1 minute for Level, Velocity, Total Flow, and Flow Rate
- ☒ Enable Sampler: On Trigger, and set Sampler Enable equation
- ☒ Set Sampler Pacing to Flow Paced, and set trigger volume

Comments:

offsite 12/13/24 13:17

SHUT DOWN

Personnel: ST

Date/Time On-Site: 12/16/24 11:09

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
11:12	4.36	1.01	1.32	—
	Downloaded to:	Stevens green WSB		

On-Site
- ☒ ~~Replace flowmeter battery~~
- ☒ Remove battery from sampler

Flowlink (Refer to Flowlink Instructions, if needed)
- ☒ Direct or Remote; Date/time 12/16 11:10
- ☒ Retrieve data
- ☒ Change Wireless Power Control to Dry Weather
- ☒ Change Data Storage Rates to 15 minutes for Level, Velocity, Total Flow, and Flow Rate
- ☒ Enable Sampler: Never

Comments:

offsite: 12/16/24 11:28

Composite Sample Collection

STATION: Whitewater
Personnel: SF, PB
Bottle 1 **of** 2
Date/Time On-Site: 12/14/24 2:13

☐ Halt sampler program	
☐ Put lid on sample bottle; label sample bottle	
Sample ID:	241214 - 11 -WC
Approx Sample Volume (mL):	11750 mL
Clarity (ex. Clear, Cloudy, Silty):	Cloudy
Color (ex. Clear, Gray, Tan, Brown, Black):	Black
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	1/1/24 2:00	Success	13	22:28	
2	21:17		14	22:34	
3	21:26		15	22:41	
4	21:34	Sample skipped	16	22:48	
5	21:41	Success	17	22:55	
6	21:47		18	23:03	
7	21:53		19	23:11	
8	21:59		20	23:20	
9	22:04		21	23:30	
10	22:10		22	23:40	
11	22:16		23	23:51	Sample skipped
12	22:21		24		

Comments: Sampler Date wasn't set, Real time is 2:30, Sampler says 21:36 Composite pulled at 23 sub-samples, New bottle put on, Program restarted. The correct dates and times are imported into Data Sight.

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: _____
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: Whitewater **Bottle** 2 **of** 2

Personnel: ST, KC **Date/Time On-Site:** 12/14/24 9:50

☒ Halt sampler program	
☒ Put lid on sample bottle; label sample bottle	
Sample ID:	241214 - 11 -WC
Approx Sample Volume (mL):	13,250 mL
Clarity (ex. Clear, Cloudy, Silty):	Cloudy
Color (ex. Clear, Gray, Tan, Brown, Black):	Brown
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	12/14 454	Success	13	12/14 658	Success
2	505		14	711	
3	514		15	726	
4	525		16	742	
5	535		17	758	
6	544		18	814	
7	554		19	830	
8	603		20	846	
9	613		21	902	
10	623		22	921	
11	634		23	943	
12	645		24	10:10	

Comments: The date and time was changed ~~by~~ ST before installing bottle 2. All subsample dates + times on this bottle are accurate.

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☒ Power off sampler, if separate from flowmeter ☒ Keep flowmeter running ☒ Add ice to sample transport cooler	☐ Keep flowmeter running ☐ Install new 15L bottle; add ice ☐ Restart program from beginning **Date/Time Restarted:** _____ ☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Set Up/ Shut Down Form – ISCO (Whitewater, Americana, State, Main)

TATION: Main

SET UP

Personnel: ST, IC

Date/Time On-Site: 12/13/24 1403

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
14:10	0.746	0.00	0.00	

Enable Condition:	1.74 in
Hysteresis:	1
Flow Pulse Interval:	~~465,984~~ 456cf ST

On-Site

- ☒ Replace flowmeter battery, install sampler battery
- ☒ Perform decon. cycle
- ☒ Install 15L sample bottle, with ice
- ☒ Leave bottle lid at site, in a clean re-sealable plastic bag
- ☒ Set sampler program parameters
- ☒ Check date/time on sampler
- ☒ Verify all cable and tubing connections
- ☐ Verify sampler program is running

Flowlink (Refer to PG 411 or PG 412, if needed)

- ☒ Direct or Remote; Date/time _____
- ☐ ~~Retrieve data and~~ review recent flow history
- ☐ ~~Change Wireless Power Control to Storm Event~~
- ☒ Change Data Storage Rates to 1 minute for Level, Velocity, Total Flow, and Flow Rate
- ☒ Enable Sampler: On Trigger, and set Sampler Enable equation
- ☒ Set Sampler Pacing to Flow Paced, and set trigger volume

Comments:

SHUT DOWN

Personnel: ST

Date/Time On-Site: 12/16/24 11:33

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
11:34	5.774	0.51	1.35	
Downloaded to:		Stevens green USB		

On-Site

- ☐ Replace flowmeter battery
- ☒ Remove battery from sampler

Flowlink (Refer to Flowlink Instructions, if needed)

- ☒ Direct or Remote; Date/time 12/16 11:34
- ☒ Retrieve data
- ☐ ~~Change Wireless Power Control to Dry Weather~~
- ☐ ~~Change Data Storage Rates to 15 minutes for Level, Velocity, Total Flow, and Flow Rate~~
- ☒ Enable Sampler: Never

Comments:

Off site at 11:40

Revised 231009 ML

Composite Sample Collection

STATION: Main **Bottle** 1 **of** 1

Personnel: ST, KC **Date/Time On-Site:** 12/14 11:39

☐ Halt sampler program	
☐ Put lid on sample bottle; label sample bottle	
Sample ID:	241214 - N2 -WC
Approx Sample Volume (mL):	9500
Clarity (ex. Clear, Cloudy, Silty):	Cloudy
Color (ex. Clear, Gray, Tan, Brown, Black):	Brown
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	1:39 12/14	Success	13	5:51	
2	1:57		14	6:33 ~~5:33~~ ST	
3	2:08		15	7:42	
4	2:17		16	8:51	
5	2:29		17		
6	2:42		18		
7	2:59		19		
8	3:19		20		
9	3:50		21		
10	4:28		22		
11	4:55		23		
12	5:22		24		

Comments:

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☒ Power off sampler, if separate from flowmeter	☐ Keep flowmeter running
~~☐ Keep flowmeter running~~	☐ Install new 15L bottle; add ice
☒ Add ice to sample transport cooler	☐ Restart program from beginning
	Date/Time Restarted: _____
	☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Set Up/ Shut Down Form – ISCO (Whitewater, Americana, State and Main)

ATION: Americana

SET UP

Personnel: ST, KC

Date/Time On-Site: 12/13/24 14:30

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
1430	4.00	0.11	0.209	12.09

Enable Condition:	5.5 in
Hysteresis:	1
Flow Pulse Interval:	7960 cf

On-Site
- ☒ Replace flowmeter battery, install sampler battery
- ☒ Perform decon. cycle
- ☒ Install 15L sample bottle, with ice
- ☒ Leave bottle lid at site, in a clean re-sealable plastic bag
- ☒ Set sampler program parameters
- ☒ Check date/time on sampler
- ☒ Verify all cable and tubing connections
- ☒ Verify sampler program is running

Flowlink (Refer to PG 411 or PG 412, if needed)
- ☒ Direct or Remote; Date/time 12/13 14:33
- ☒ Retrieve data and review recent flow history
- ☒ Change Wireless Power Control to Storm Event
- ☒ Change Data Storage Rates to 1 minute for Level, Velocity, Total Flow, and Flow Rate
- ☒ Enable Sampler: On Trigger, and set Sampler Enable equation
- ☒ Set Sampler Pacing to Flow Paced, and set trigger volume

Comments:

Date/Time Off-Site: 12/13/24 14:47

SHUT DOWN

Personnel: ST

Date/Time On-Site: 12/16/24 11:45

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
11:45	7.969	3.922	2.875	11.75
Downloaded to:		Desktop		

On-Site
- ☒ Replace flowmeter battery
- ☒ Remove battery from sampler

Flowlink (Refer to Flowlink Instructions, if needed)
- ☒ Direct or (Remote) Date/time 12/16/24 8:49
- ☒ Retrieve data
- ☒ Change Wireless Power Control to Dry Weather
- ☒ Change Data Storage Rates to 15 minutes for Level, Velocity, Total Flow, and Flow Rate
- ☒ Enable Sampler: Never

Comments:

Date/Time Off-Site: 12/16/24 11:50

Revised 240123 KC

Composite Sample Collection

STATION: Americana **Bottle** 1 **of** 2

Personnel: KC, WB **Date/Time On-Site:** _____

☐ Halt sampler program		
☐ Put lid on sample bottle; label sample bottle		
Sample ID:	241214 - 14	-WC
Approx Sample Volume (mL):	14000	
Clarity (ex. Clear, Cloudy, Silty):	Cloudy	
Color (ex. Clear, Gray, Tan, Brown, Black):	Black	
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	12/11/24 1:20	Success	13	2:58	
2	1:35		14	3:05	
3	1:47		15	3:14	
4	1:59		16	3:23	
5	2:08		17	3:33	
6	2:14		18	3:45	
7	2:19		19	3:58	
8	2:25		20	4:13	
9	2:31		21	4:27	
10	2:38		22	4:41	
11	2:44		23	4:55	
12	2:50		24	5:08	

Comments:

Date/Time Off-Site: _____

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: 12/14 5:10
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: Americana **Bottle** 2 **of** 2

Personnel: ST, KC **Date/Time On-Site:** _____

☒ Halt sampler program	
☒ Put lid on sample bottle; label sample bottle	
Sample ID:	241214 - 14 -WC
Approx Sample Volume (mL):	9,500mL
Clarity (ex. Clear, Cloudy, Silty):	Cloudy
Color (ex. Clear, Gray, Tan, Brown, Black):	Tan
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	12/14 522	Success	13	847	
2	536		14	912	
3	549		15	942	
4	603		16	10:18	
5	617		17		
6	632		18		
7	650		19		
8	7:12		20		
9	733		21		
10	750		22		
11	807		23		
12	826		24		

Comments:

If sampling is complete:
- ☒ Power off sampler, if separate from flowmeter
- ☒ Keep flowmeter running
- ☒ Add ice to sample transport cooler

If continuing sampling (sample bottle change-out):
- ☐ Keep flowmeter running
- ☐ Install new 15L bottle; add ice
- ☐ Restart program from beginning

Date/Time Restarted: _____

- ☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Set Up/ Shut Down Form – HACH (Lucky, Main, AS_6)

STATION: AS_6

SET UP

Personnel: ST, KC

Date/Time On-Site: 12/13/24 15:03

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
15:16	0.03	0.00	0.00	12.7

Enable Condition or Velocity Cutoff:	1.03 in
Deadband:	1
Trigger Volume:	1646 gal

- ☒ Install batteries on flowmeter and sampler
- ☒ Perform decon. cycle
- ☒ Install 15L sample bottle, with ice
- ☒ Leave bottle lid at site, in a clean re-sealable plastic bag
- ☒ Verify all cable and tubing connections
- ☒ Check date and time on flowmeter and sampler
- ☒ Set flowmeter program and sampler program parameters
- ☒ Set logging interval to 1 minute
- ☒ Start flowmeter program and sampler program
- ☒ Verify running

Comments: offsite at 15:20

SHUT DOWN

Personnel: ST

Date/Time On-Site: ~~12/16/24~~ ST 12/16/24 12:50

Time	Level (in)	Flow (cfs)	Velocity (fps)	Total (cf)	Battery (V)
12:57	4.01	0.58	1.48	–	12.7
Downloaded to:		Stevens ~~Green~~ USB 3.1v2			

If flow monitoring is complete:	**If continuing to monitor flow:**
☒ Halt program on flowmeter	☐ Replace flowmeter battery
☒ Download flowmeter data	☐ Reset logging interval to 15 minutes
☒ Remove flowmeter battery	☐ Change velocity cutoff to 0.02 fps
	☐ Start program
	☐ Verify running

Comments:

Composite Sample Collection

STATION: AS_6 **Bottle** 1 **of** 3

Personnel: KC, WB **Date/Time On-Site:** _____

☒ Halt sampler program	
☒ Put lid on sample bottle; label sample bottle	
Sample ID:	241214-206-WC -WC
Approx Sample Volume (mL):	2075ml
Clarity (ex. Clear, Cloudy, Silty):	Cloudy/silty
Color (ex. Clear, Gray, Tan, Brown, Black):	Brown
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	12/14/24 2:08	Success	13	3:18	
2	2:22		14	3:23	
3	2:28		15	3:28	
4	2:34		16	3:33	
5	2:39		17	3:38	
6	2:44		18	3:44	
7	2:49		19	3:50	
8	2:54		20	3:56	
9	2:59		21	4:02	
10	3:04		22	4:09	
11	3:08		23	4:16	
12	3:13		24	4:23	

Comments:

If sampling is complete:
- ☒ Power off sampler, if separate from flowmeter
- ☒ Keep flowmeter running
- ☒ Add ice to sample transport cooler

If continuing sampling (sample bottle change-out):
- ☐ Keep flowmeter running
- ☐ Install new 15L bottle, add ice
- ☐ Restart program from beginning

Date/Time Restarted: _____

- ☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: AS_6 **Bottle** 2 **of** 3

Personnel: KC, ST **Date/Time On-Site:** _____

☐ Halt Sampler program	
☐ Put lid on sample bottle; label sample bottle	
Sample ID:	241214-206 -WC
Approx Sample Volume (mL):	18500 mL
Clarity (ex. Clear, Cloudy, Silty):	Cloudy
Color (ex. Clear, Gray, Tan, Brown, Black):	Brown
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Sampler Message/ Subsample Result	Trigger #	Date/Time	Sampler Message/ Subsample Result
1	12/14/24 440	Success	13	628	Success
2	448		14	639	
3	456		15	652	
4	505		16	705	
5	514		17	719	
6	523		18	732	
7	532		19	745	
8	541		20	758	
9	550		21	812	
10	559		22	828	
11	608		23	846	
12	618		24	✓ 0908	

Comments:

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler	☒ Keep flowmeter running
☐ Verify flowmeter is running	☒ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
☐ Complete COC form; arrange transport to lab	**Date/Time Restarted:** 12/14/24 0911
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	3.0"	3500 mL	5.5"	7250 mL	8.0"	11000 mL	10.5"	14750 mL
1.0"	800 mL	3.5"	4250 mL	6.0"	8000 mL	8.5"	11750 mL	11.0"	15500 mL
1.5"	1400 mL	4.0"	5000 mL	6.5"	8750 mL	9.0"	12500 mL	~~11.5"~~	~~16250 mL~~
2.0"	2000 mL	4.5"	5750 mL	7.0"	9500 mL	9.5"	13250 mL	After 12"	1" = 1500 mL
2.5"	2750 mL	5.0"	6500 mL	7.5"	10250 mL	10.0"	14000 mL	Lab min	8,000 mL

Composite Sample Collection

STATION: AS 6 **Bottle** 3 **of** 3

Personnel: ST. Ice **Date/Time On-Site:** 12/14 11:27

☒ Halt Sampler program		
☒ Put lid on sample bottle; label sample bottle		
Sample ID:	241214-206	-WC
Approx Sample Volume (mL):	400mL	
Clarity (ex. Clear, Cloudy, Silty):	Clear	
Color (ex. Clear, Gray, Tan, Brown, Black):	Tan	
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Sampler Message/ Subsample Result	Trigger #	Date/Time	Sampler Message/ Subsample Result
1	12/14 9:46	Success	13		
2	1 10:33	1	14		
3			15		
4			16		
5			17		
6			18		
7			19		
8			20		
9			21		
10			22		
11			23		
12			24		

Comments:

If sampling is complete:
- ☑ Power off sampler
- ☒ Verify Flowmeter is running
- ☑ Add ice to sample transport cooler
- ☒ Complete COC form; arrange transport to lab

If continuing sampling (sample bottle change-out):
- ☐ Keep flowmeter running
- ☐ Install new 15L bottle; add ice
- ☐ Restart program from beginning

Date/Time Restarted: _____

- ☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	3.0"	3500 mL	5.5"	7250 mL	8.0"	11000 mL	10.5"	14750 mL
1.0"	800 mL	3.5"	4250 mL	6.0"	8000 mL	8.5"	11750 mL	11.0"	15500 mL
1.5"	1400 mL	4.0"	5000 mL	6.5"	8750 mL	9.0"	12500 mL	11.5"	16250 mL
2.0"	2000 mL	4.5"	5750 mL	7.0"	9500 mL	9.5"	13250 mL	After 12"	1" = 1500 mL
2.5"	2750 mL	5.0"	6500 mL	7.5"	10250 mL	10.0"	14000 mL	Lab min	8,000 mL

Attachment D: Storm Event Analytical Reports

Report Date: 12/19/2024 11:52

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Samples in this Report

Lab ID	Sample	Sample Description	Matrix	Qualifiers	Sampled	Received
AC00383-01	ACST1B	241214-03-WG	Water		12/14/24 1:48	12/14/24 7:10
AC00383-02	ACST1B	241214-11-WG	Water		12/14/24 2:16	12/14/24 7:10
AC00383-03	ACST1B	241214-12-WG	Water		12/14/24 2:05	12/14/24 7:10
AC00383-04	ACST1B	241214-14-WG	Water		12/14/24 2:28	12/14/24 7:10
AC00383-05	ACST1B	241214-14-101	Water		12/14/24 12:00	12/14/24 7:10
AC00383-06	ACST1B	241214-14-001	Water		12/14/24 12:00	12/14/24 7:10

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No duplication of this report is allowed, except in its entirety

Report Date: 12/19/2024 11:52

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	241214-03-WG
Date/Time Collected:	12/14/2024 01:48		
Lab Number:	AC00383-01	Sample Collector:	S.T
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B244544	648.8	MPN/100 mL	1.0	1.0	IDEXX - Colilert	12/14/24 08:22	12/15/24 8:30	ASE	
Wet Chemistry										
Chlorine Screen	B244543	Absent	mg/L			SM 4500-CL G-2000 mod	12/14/24	12/14/24 7:18	MCB	

* The reported adjusted "MDL" is sample-specific. The analysis MDL as defined by 40 CFR pt 136 App.B. was corrected for dilution, dry weight, or method-defined ML.

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Report Date: 12/19/2024 11:52

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	241214-11-WG
Date/Time Collected:	12/14/2024 02:16		
Lab Number:	AC00383-02	Sample Collector:	S.T
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B244544	920.8	MPN/100 mL	1.0	1.0	IDEXX - Colilert	12/14/24 08:22	12/15/24 8:30	ASE	
Wet Chemistry										
Chlorine Screen	B244543	Absent	mg/L			SM 4500-CL G-2000 mod	12/14/24	12/14/24 7:18	MCB	

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Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	241214-12-WG
Date/Time Collected:	12/14/2024 02:05		
Lab Number:	AC00383-03	Sample Collector:	K.C
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B244544	261.3	MPN/100 mL	1.0	1.0	IDEXX - Colilert	12/14/24 08:22	12/15/24 8:30	ASE	
Wet Chemistry										
Chlorine Screen	B244543	Absent	mg/L			SM 4500-CL G-2000 mod	12/14/24	12/14/24 7:18	MCB	

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Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	241214-14-WG
Date/Time Collected:	12/14/2024 02:28		
Lab Number:	AC00383-04	Sample Collector:	K.C
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B244544	517.2	MPN/100 mL	1.0	1.0	IDEXX - Colilert	12/14/24 08:22	12/15/24 8:30	ASE	
Wet Chemistry										
Chlorine Screen	B244543	Absent	mg/L			SM 4500-CL G-2000 mod	12/14/24	12/14/24 7:18	MCB	

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Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	241214-14-101
Date/Time Collected:	12/14/2024 12:00		
Lab Number:	AC00383-05	Sample Collector:	K.C
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B244544	727.0	MPN/100 mL	1.0	1.0	IDEXX - Colilert	12/14/24 08:22	12/15/24 8:30	ASE	
Wet Chemistry										
Chlorine Screen	B244543	Absent	mg/L			SM 4500-CL G-2000 mod	12/14/24	12/14/24 7:18	MCB	

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Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	241214-14-001
Date/Time Collected:	12/14/2024 12:00		
Lab Number:	AC00383-06	Sample Collector:	K.C
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B244544	<1.0	MPN/100 mL	1.0	1.0	IDEXX - Colilert	12/14/24 08:22	12/15/24 8:30	ASE	U
Wet Chemistry										
Chlorine Screen	B244543	Absent	mg/L			SM 4500-CL G-2000 mod	12/14/24	12/14/24 7:18	MCB	

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Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Quality Control Report

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Microbiology									
Batch: B244544									
Blank (B244544-BLK1)									
E. Coli	Absent						12/15/2024	ASE	
LCS (B244544-BS1)									
E. Coli				Present			12/15/2024	ASE	
Duplicate (B244544-DUP1)	Source ID: AC00383-01								
E. Coli					Pass	128	12/15/2024	ASE	

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Report Date: 12/19/2024 11:52

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Notes and Definitions

Item	Definition
U	Analyte included in the analysis, but not detected
NR	No result for this parameter.

Method Reference Acronyms

Colilert	Colilert, IDEXX Laboratories, Inc.
EPA	Manual of Methods for Chemical Analysis of Water and Wastes, USEPA
GS	USGS Techniques of Water-Resources Investigations
HH	Hach Spectrophotometer Procedures Manual
SM	Standard Methods for the Examination of Water and Wastewater
SW	Test methods for Evaluating Solid Waste, SW-846

Stephen Quintero or Azubike Emenari
QA/QC Coordinator

Kate Harris
Interim Water Quality Laboratory Manager

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Ada County Highway District

ACHD

Attn: Steven Turner
3775 Adams Street
Garden City, Idaho 83714-6418
Tel. (208) 407-4284

Purchase Order: 63069586

Project: Stormwater PI

Sampler(s): Kristen Chisholm
Steven Turner

Analysis Methods

Lab#	Begin Date	End Date	Begin Time	End Time	Sample Identification	Sampler Initials	Matrix: Water	Type: Grab	Type: Composite	BOD_5 - SM 5210 B	COD - Hach 8000	TSS - SM 2540 D	TDS - SM 2540 C	TKN - EPA 351.2	TP - EPA 200.7	Orthophosphate - EPA 365.1	Total As, Cd, Pb - EPA 200.8	Diss. Cd Cu, Pb, Zn - EPA 200.8	Total Hg - EPA 245.1	E. Coli - IDEXX Colilert	Turbidity - EPA 180.1	Hardness - SM 2340 B-2011	NO3+NO2 - EPA 353.2	Timberline Ammonia-001	Chloride - EPA 300.0	Total Containers
AC00383-01	12/14/24		0148 ~~0214~~		241214-03-WG	ST	X	X												X						1
AC00383-02			0216		241214-11-WG	ST	X	X												X						1
AC00383-03			0205		241214-12-WG	KC	X	X												X						1
AC00383-04			0228		241214-14-WG	KC	X	X												X						1
AC00383-05			1200		241214-14-101	KC	X	X												X						1
AC00383-06			1200		241214-14-001	KC	X	X												X						1

Relinquished by (sign)	Date &Time Transferred	Received by (sign)	Comments/ Special Instructions
Steven Turner	12/14 04:00	[signature]	12 14 24 0710

241010 ST

COC_WQL-PI

AC00383

Report Date: 12/20/2024 11:24

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Samples in this Report

Lab ID	Sample	Sample Description	Matrix	Qualifiers	Sampled	Received
AC00382-01	ACST1B	241214-206-WG	Water		12/14/24 2:59	12/14/24 7:10

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Report Date: 12/20/2024 11:24

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	241214-206-WG
Date/Time Collected:	12/14/2024 02:59		
Lab Number:	AC00382-01	Sample Collector:	S.T
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B244544	1299.7	MPN/100 mL	1.0	1.0	IDEXX - Colilert	12/14/24 08:22	12/15/24 8:30	ASE	
Wet Chemistry										
Chlorine Screen	B244543	Absent	mg/L			SM 4500-CL G-2000 mod	12/14/24	12/14/24 7:18	MCB	

* The reported adjusted "MDL" is sample-specific. The analysis MDL as defined by 40 CFR pt 136 App.B. was corrected for dilution, dry weight, or method-defined ML.

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Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Report Date: 12/20/2024 11:24

Quality Control Report

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Microbiology									
Batch: B244544									
Blank (B244544-BLK1)									
E. Coli	Absent						12/15/2024	ASE	
LCS (B244544-BS1)									
E. Coli				Present			12/15/2024	ASE	
Duplicate (B244544-DUP1)	Source ID: AC00383-01								
E. Coli					Pass	128	12/15/2024	ASE	

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Report Date: 12/20/2024 11:24

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Notes and Definitions

Item	Definition
NR	No result for this parameter.

Method Reference Acronyms

Colilert	Colilert, IDEXX Laboratories, Inc.
EPA	Manual of Methods for Chemical Analysis of Water and Wastes, USEPA
GS	USGS Techniques of Water-Resources Investigations
HH	Hach Spectrophotometer Procedures Manual
SM	Standard Methods for the Examination of Water and Wastewater
SW	Test methods for Evaluating Solid Waste, SW-846

Stephen Quintero or Azubike Emenari
QA/QC Coordinator

Kate Harris
Interim Water Quality Laboratory Manager

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Ada County Highway District

ACHD

Attn: Steven Turner
3775 Adams Street
Garden City, Idaho 83714–6418
Tel. (208) 407–4284

Purchase Order: 63069586

Project: Stormwater PI

Sampler(s): Kristen Chisholm
Steven Turner

Analysis Methods

Lab#	Begin Date	End Date	Begin Time	End Time	Sample Identification	Sampler Initials	Matrix: Water	Type: Grab	Type: Composite	BOD_5 - SM 5210 B	COD - Hach 8000	TSS - SM 2540 D	TDS - SM 2540 C	TKN - EPA 351.2	TP - EPA 200.7	Orthophosphate - EPA 365.1	Total As, Cd, Pb - EPA 200.8	Diss. Cd Cu, Pb, Zn - EPA 200.8	Total Hg - EPA 245.1	E. Coli - IDEXX Colilert	Turbidity - EPA 180.1	Hardness - SM 2340 B-2011	NO3+NO2 - EPA 353.2	Timberline Ammonia-001	Chloride - EPA 300.0	Total Containers
AC00352-01 ~~AC00383-07~~	12/14/24		0259		241214-206-WG	ST	X	X												X						1

Relinquished by (sign)	Date &Time Transferred	Received by (sign)	Comments/ Special Instructions
Steven Turner	12/14 04:00	[signature]	12-14-24 0710

241010 ST

COC_WQL-PI

AC00302

Report Date: 01/10/2025 12:54

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Samples in this Report

Lab ID	Sample	Sample Description	Matrix	Qualifiers	Sampled	Received
AC00386-01	ACST1C	241214-11-WC	Water		12/14/24 10:10	12/14/24 13:00
AC00386-02	ACST1C	241214-12-WC	Water		12/14/24 8:51	12/14/24 13:00
AC00386-03	ACST1C	241214-14-WC	Water		12/14/24 10:18	12/14/24 13:00

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Report Date: 01/10/2025 12:54

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1C	Location Description:	241214-11-WC
Date/Time Collected:	12/14/2024 01:54 - 12/14/2024 10:10		
Lab Number:	AC00386-01	Sample Collector:	Kristen Chisholm
Sample Type:	Composite	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
Ammonia, as N	B250007	0.222	mg/L	0.0450	0.0450	Timberline Ammonia-001	01/02/25	1/2/25 16:54	MEC	
BOD5	B244553	21.6	mg/L	2.00	2.00	SM 5210 B-2016	12/15/24	12/20/24 9:18	ALM	
Chloride	B244584	100	mg/L	0.0600	0.0300	EPA 300.0, Rev. 2.1 (1993)	12/19/24	12/19/24 8:01	ALN	D
COD	B244551	94.0	mg/L	7.00	7.00	HH 8000, Standard Method 5220 D	12/15/24	12/15/24 9:26	ASE	
Nitrate-Nitrite, as N	B244579	0.445	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	12/17/24	12/17/24 12:09	RKG	
TKN	B250022	1.36	mg/L	0.100	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	01/03/25	1/3/25 15:04	RKG	
Total Dissolved Solids	B244559	271	mg/L	25.0	25.0	SM 2540 C-2015	12/16/24	12/17/24 14:32	ASE	
Total Suspended Solids	B244561	32.2	mg/L	0.900	0.900	SM 2540 D-2015	12/16/24	12/16/24 13:02	RHC	
Turbidity	B244557	23.5	NTU	0.3	0.3	EPA 180.1, Rev. 2.0 (1993)	12/16/24	12/16/24 6:54	ALN	
Dissolved Wet Chemistry										
Orthophosphate, as P	B244554	0.358	mg/L	3.00E-3	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	12/15/24	12/15/24 9:42	BAK	
Total Metals										
Mercury	B244572	<0.0100	ug/L	0.0100	0.0100	EPA 245.1	12/17/24	12/17/24 12:17	SAS	U
Arsenic	B244638	2.2	ug/L	0.050	0.050	EPA 200.8	12/22/24	12/27/24 15:58	DMW	
Cadmium	B244638	0.045	ug/L	0.020	0.020	EPA 200.8	12/22/24	12/27/24 15:58	DMW	
Calcium	B244563	22.3	mg/L	0.0400	0.0400	EPA 200.7	12/16/24	12/19/24 10:01	SMC	
Lead	B244638	2.6	ug/L	0.010	0.010	EPA 200.8	12/22/24	12/27/24 15:58	DMW	
Magnesium	B244563	4670	ug/L	80.0	80.0	EPA 200.7	12/16/24	12/19/24 10:01	SMC	
Phosphorus as P	B244563	0.535	mg/L	0.0120	0.0120	EPA 200.7	12/16/24	12/19/24 10:01	SMC	
Hardness	B244563	74.9	mg/L	0.100	0.100	SM 2340 B-2011	12/16/24	12/19/24 10:01	SMC	
Dissolved Metals										
Cadmium	B244637	<0.0100	ug/L	0.010	0.010	EPA 200.8	12/21/24	12/21/24 17:16	DMW	U
Copper	B244637	2.4	ug/L	0.14	0.14	EPA 200.8	12/21/24	12/21/24 17:16	DMW	
Lead	B244637	0.22	ug/L	0.010	0.010	EPA 200.8	12/21/24	12/21/24 17:16	DMW	
Zinc	B244637	17.3	ug/L	0.50	0.50	EPA 200.8	12/21/24	12/21/24 17:16	DMW	

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Report Date: 01/10/2025 12:54

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1C	Location Description:	241214-12-WC
Date/Time Collected:	12/14/2024 01:39 - 12/14/2024 08:51		
Lab Number:	AC00386-02	Sample Collector:	Kristen Chisholm
Sample Type:	Composite	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
Ammonia, as N	B250007	0.615	mg/L	0.0450	0.0450	Timberline Ammonia-001	01/02/25	1/2/25 16:50	MEC	
BOD5	B244553	9.48	mg/L	2.00	2.00	SM 5210 B-2016	12/15/24	12/20/24 9:12	ALM	
Chloride	B244584	50.5	mg/L	0.0300	0.0300	EPA 300.0, Rev. 2.1 (1993)	12/18/24	12/18/24 17:37	ALN	
COD	B244551	66.0	mg/L	7.00	7.00	HH 8000, Standard Method 5220 D	12/15/24	12/15/24 9:26	ASE	
Nitrate-Nitrite, as N	B244579	0.247	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	12/17/24	12/17/24 12:11	RKG	
TKN	B250022	1.31	mg/L	0.100	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	01/03/25	1/3/25 15:06	RKG	
Total Dissolved Solids	B244559	124	mg/L	25.0	25.0	SM 2540 C-2015	12/16/24	12/17/24 14:34	ASE	
Total Suspended Solids	B244561	30.5	mg/L	0.900	0.900	SM 2540 D-2015	12/16/24	12/16/24 9:12	RHC	
Turbidity	B244557	28.3	NTU	0.3	0.3	EPA 180.1, Rev. 2.0 (1993)	12/16/24	12/16/24 6:37	ALN	
Dissolved Wet Chemistry										
Orthophosphate, as P	B244554	0.0859	mg/L	3.00E-3	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	12/15/24	12/15/24 9:43	BAK	
Total Metals										
Mercury	B244572	<0.0100	ug/L	0.0100	0.0100	EPA 245.1	12/17/24	12/17/24 12:46	SAS	U
Arsenic	B244638	0.90	ug/L	0.050	0.050	EPA 200.8	12/22/24	12/27/24 16:01	DMW	
Cadmium	B244638	0.058	ug/L	0.020	0.020	EPA 200.8	12/22/24	12/27/24 16:01	DMW	
Calcium	B244563	7.19	mg/L	0.0400	0.0400	EPA 200.7	12/16/24	12/19/24 10:05	SMC	
Lead	B244638	3.3	ug/L	0.010	0.010	EPA 200.8	12/22/24	12/27/24 16:01	DMW	
Magnesium	B244563	1860	ug/L	80.0	80.0	EPA 200.7	12/16/24	12/19/24 10:05	SMC	
Phosphorus as P	B244563	0.155	mg/L	0.0120	0.0120	EPA 200.7	12/16/24	12/19/24 10:05	SMC	
Hardness	B244563	25.6	mg/L	0.100	0.100	SM 2340 B-2011	12/16/24	12/19/24 10:05	SMC	
Dissolved Metals										
Cadmium	B244637	0.018	ug/L	0.010	0.010	EPA 200.8	12/21/24	12/21/24 17:18	DMW	
Copper	B244637	3.5	ug/L	0.14	0.14	EPA 200.8	12/21/24	12/21/24 17:18	DMW	
Lead	B244637	0.14	ug/L	0.010	0.010	EPA 200.8	12/21/24	12/21/24 17:18	DMW	
Zinc	B244637	31.0	ug/L	0.50	0.50	EPA 200.8	12/21/24	12/21/24 17:18	DMW	

* The reported adjusted "MDL" is sample-specific. The analysis MDL as defined by 40 CFR pt 136 App.B. was corrected for dilution, dry weight, or method-defined ML.

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Report Date: 01/10/2025 12:54

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
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Analysis Report

Location: ACST1C
Location Description: 241214-14-WC
Date/Time Collected: 12/14/2024 01:20 - 12/14/2024 10:18
Lab Number: AC00386-03
Sample Collector: Kristen Chisholm
Sample Type: Composite
Sample Matrix: Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
Ammonia, as N	B250007	0.251	mg/L	0.0450	0.0450	Timberline Ammonia-001	01/02/25	1/2/25 16:47	MEC	
BOD5	B244553	14.8	mg/L	2.00	2.00	SM 5210 B-2016	12/15/24	12/20/24 9:07	ALM	
Chloride	B244584	150	mg/L	0.0600	0.0300	EPA 300.0, Rev. 2.1 (1993)	12/19/24	12/19/24 8:27	ALN	D
COD	B244551	75.0	mg/L	7.00	7.00	HH 8000, Standard Method 5220 D	12/15/24	12/15/24 9:26	ASE	
Nitrate-Nitrite, as N	B244579	0.778	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	12/17/24	12/17/24 12:12	RKG	
TKN	B250022	1.17	mg/L	0.100	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	01/03/25	1/3/25 15:07	RKG	
Total Dissolved Solids	B244559	360	mg/L	25.0	25.0	SM 2540 C-2015	12/16/24	12/17/24 14:35	ASE	
Total Suspended Solids	B244561	42.3	mg/L	0.900	0.900	SM 2540 D-2015	12/16/24	12/16/24 10:50	RHC	
Turbidity	B244557	31.8	NTU	0.3	0.3	EPA 180.1, Rev. 2.0 (1993)	12/16/24	12/16/24 7:08	ALN	
Dissolved Wet Chemistry										
Orthophosphate, as P	B244554	0.212	mg/L	3.00E-3	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	12/15/24	12/15/24 9:45	BAK	
Total Metals										
Mercury	B244572	0.0119	ug/L	0.0100	0.0100	EPA 245.1	12/17/24	12/17/24 12:49	SAS	
Arsenic	B244638	3.4	ug/L	0.050	0.050	EPA 200.8	12/22/24	12/27/24 16:03	DMW	
Cadmium	B244638	0.091	ug/L	0.020	0.020	EPA 200.8	12/22/24	12/27/24 16:03	DMW	
Calcium	B244563	32.3	mg/L	0.0400	0.0400	EPA 200.7	12/16/24	12/19/24 10:08	SMC	
Lead	B244638	3.8	ug/L	0.010	0.010	EPA 200.8	12/22/24	12/27/24 16:03	DMW	
Magnesium	B244563	6410	ug/L	80.0	80.0	EPA 200.7	12/16/24	12/19/24 10:08	SMC	
Phosphorus as P	B244563	0.347	mg/L	0.0120	0.0120	EPA 200.7	12/16/24	12/19/24 10:08	SMC	
Hardness	B244563	107	mg/L	0.100	0.100	SM 2340 B-2011	12/16/24	12/19/24 10:08	SMC	
Dissolved Metals										
Cadmium	B244637	0.034	ug/L	0.010	0.010	EPA 200.8	12/21/24	12/21/24 17:01	DMW	
Copper	B244637	3.2	ug/L	0.14	0.14	EPA 200.8	12/21/24	12/21/24 17:01	DMW	
Lead	B244637	0.15	ug/L	0.010	0.010	EPA 200.8	12/21/24	12/21/24 17:01	DMW	
Zinc	B244637	24.3	ug/L	0.50	0.50	EPA 200.8	12/21/24	12/21/24 17:01	DMW	

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Report Date: 01/10/2025 12:54

Quality Control Report

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry									
Batch: B244551									
Blank (B244551-BLK1)									
COD	<7	mg/L					12/15/2024	ASE	U
LCS (B244551-BS1)									
COD			98.7	90-110			12/15/2024	ASE	
Duplicate (B244551-DUP1)	Source ID: AC00385-01								
COD					1.77	10	12/15/2024	ASE	
Batch: B244553									
Blank (B244553-BLK1)									
BOD5	<2	mg/L					12/20/2024	ALM	U
LCS (B244553-BS1)									
BOD5			99.3	84.6-115.4			12/20/2024	ALM	
LCS (B244553-BS2)									
BOD5			108	84.6-115.4			12/20/2024	ALM	
Duplicate (B244553-DUP1)	Source ID: BB04382-01								
BOD5					12.4	30	12/20/2024	ALM	D
Batch: B244557									
Blank (B244557-BLK1)									
Turbidity	<0.3	NTU					12/16/2024	ALN	U
LCS (B244557-BS1)									
Turbidity			99.6	90-110			12/16/2024	ALN	
Duplicate (B244557-DUP1)	Source ID: AC00386-02								
Turbidity					6.82	25	12/16/2024	ALN	
Batch: B244559									
Blank (B244559-BLK1)									
Total Dissolved Solids	<25	mg/L					12/17/2024	ASE	U
LCS (B244559-BS1)									
Total Dissolved Solids			90.7	90-110			12/17/2024	ASE	
Duplicate (B244559-DUP1)	Source ID: BB04383-04								
Total Dissolved Solids					1.46	10	12/17/2024	ASE	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B244561									
Blank (B244561-BLK1)									
Total Suspended Solids	<0.9	mg/L					12/16/2024	RHC	U
LCS (B244561-BS1)									
Total Suspended Solids			98.5	90-110			12/16/2024	RHC	
Duplicate (B244561-DUP1) Source ID: LS02191-02									
Total Suspended Solids					3.45	20	12/16/2024	RHC	
Duplicate (B244561-DUP2) Source ID: EP00416-01									
Total Suspended Solids					2.82	20	12/16/2024	RHC	
Batch: B244579									
Blank (B244579-BLK1)									
Nitrate-Nitrite, as N	<0.025	mg/L					12/17/2024	RKG	U
LCS (B244579-BS1)									
Nitrate-Nitrite, as N			96.9	90-110			12/17/2024	RKG	
LCS (B244579-BS2)									
Nitrate-Nitrite, as N			97.3	90-110			12/17/2024	RKG	
Duplicate (B244579-DUP1) Source ID: BB04373-01									
Nitrate-Nitrite, as N					0.0167	10	12/17/2024	RKG	D
Duplicate (B244579-DUP2) Source ID: BB04384-01									
Nitrate-Nitrite, as N					0.701	10	12/17/2024	RKG	
Matrix Spike (B244579-MS1) Source ID: BB04373-01									
Nitrate-Nitrite, as N			96.1	90-110			12/17/2024	RKG	D
Matrix Spike (B244579-MS2) Source ID: BB04384-01									
Nitrate-Nitrite, as N			94.6	90-110			12/17/2024	RKG	
Matrix Spike Dup (B244579-MSD1) Source ID: BB04373-01									
Nitrate-Nitrite, as N			98.7	90-110	1.24	10	12/17/2024	RKG	D
Matrix Spike Dup (B244579-MSD2) Source ID: BB04384-01									
Nitrate-Nitrite, as N			95.1	90-110	0.161	10	12/17/2024	RKG	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B244584									
Blank (B244584-BLK1)									
Chloride	<0.03	mg/L					12/18/2024	ALN	U
Blank (B244584-BLK2)									
Chloride	<0.03	mg/L					12/18/2024	ALN	U
Blank (B244584-BLK3)									
Chloride	<0.03	mg/L					12/19/2024	ALN	U
LCS (B244584-BS1)									
Chloride			98.5	90-110			12/18/2024	ALN	
Duplicate (B244584-DUP1) Source ID: AC00384-01									
Chloride					0.109	10	12/18/2024	ALN	
Duplicate (B244584-DUP2) Source ID: EP00409-01									
Chloride					0.0846	10	12/18/2024	ALN	D
Matrix Spike (B244584-MS1) Source ID: AC00384-01									
Chloride			96.8	90-110			12/18/2024	ALN	
Matrix Spike (B244584-MS2) Source ID: EP00409-01									
Chloride			95.8	90-110			12/18/2024	ALN	D
Matrix Spike Dup (B244584-MSD1) Source ID: AC00384-01									
Chloride			96.1	90-110	0.255	10	12/18/2024	ALN	
Matrix Spike Dup (B244584-MSD2) Source ID: EP00409-01									
Chloride			98.2	90-110	1.42	10	12/18/2024	ALN	D
Batch: B250007									
Blank (B250007-BLK1)									
Ammonia, as N	<0.045	mg/L					01/02/2025	MEC	U
Blank (B250007-BLK2)									
Ammonia, as N	<0.045	mg/L					01/02/2025	MEC	U
LCS (B250007-BS1)									
Ammonia, as N			99.1	90-110			01/02/2025	MEC	
LCS (B250007-BS2)									
Ammonia, as N			98.1	90-110			01/02/2025	MEC	
Duplicate (B250007-DUP1) Source ID: AC00384-01									
Ammonia, as N					1.82	20	01/02/2025	MEC	
Duplicate (B250007-DUP2) Source ID: BB04384-03									
Ammonia, as N					4.19	20	01/02/2025	MEC	D
Matrix Spike (B250007-MS1) Source ID: AC00384-01									
Ammonia, as N			105	84-115			01/02/2025	MEC	
Matrix Spike (B250007-MS2) Source ID: BB04384-03									
Ammonia, as N			99.0	84-115			01/02/2025	MEC	D
Matrix Spike (B250007-MS3) Source ID: EP00416-01									
Ammonia, as N			104	84-115			01/02/2025	MEC	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B250007 (Continued)									
Matrix Spike (B250007-MS4) Source ID: EP00417-01									
Ammonia, as N			100	84-115			01/02/2025	MEC	
Matrix Spike Dup (B250007-MSD1) Source ID: AC00384-01									
Ammonia, as N			104	84-115	1.01	20	01/02/2025	MEC	
Matrix Spike Dup (B250007-MSD2) Source ID: BB04384-03									
Ammonia, as N			99.1	84-115	0.0772	20	01/02/2025	MEC	D
Batch: B250022									
Blank (B250022-BLK1)									
TKN	<0.1	mg/L					01/03/2025	RKG	U
Blank (B250022-BLK2)									
TKN	<0.1	mg/L					01/03/2025	RKG	U
LCS (B250022-BS1)									
TKN			96.4	80-120			01/03/2025	RKG	
LCS (B250022-BS2)									
TKN			91.8	80-120			01/03/2025	RKG	
Duplicate (B250022-DUP1) Source ID: BB04383-03									
TKN					0.409	20	01/03/2025	RKG	D
Duplicate (B250022-DUP2) Source ID: BB04385-02									
TKN					2.25	20	01/03/2025	RKG	D
Duplicate (B250022-DUP3) Source ID: WB03511-06									
TKN					0.918	20	01/03/2025	RKG	D
Matrix Spike (B250022-MS1) Source ID: BB04383-03									
TKN			98.2	80-120			01/03/2025	RKG	D
Matrix Spike (B250022-MS2) Source ID: BB04385-02									
TKN			100	80-120			01/03/2025	RKG	D
Matrix Spike (B250022-MS3) Source ID: WB03511-06									
TKN			97.6	80-120			01/03/2025	RKG	D
Matrix Spike (B250022-MS4) Source ID: EP00416-01									
TKN			95.4	80-120			01/03/2025	RKG	D
Matrix Spike (B250022-MS5) Source ID: EP00417-01									
TKN			95.2	80-120			01/03/2025	RKG	D
Matrix Spike Dup (B250022-MSD1) Source ID: BB04383-03									
TKN			97.3	80-120	0.331	20	01/03/2025	RKG	D
Matrix Spike Dup (B250022-MSD2) Source ID: BB04385-02									
TKN			88.1	80-120	3.95	20	01/03/2025	RKG	D
Matrix Spike Dup (B250022-MSD3) Source ID: WB03511-06									
TKN			92.0	80-120	2.22	20	01/03/2025	RKG	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Dissolved Wet Chemistry									
Batch: B244554									
Blank (B244554-BLK1)									
Orthophosphate, as P	<0.003	mg/L					12/15/2024	BAK	U
LCS (B244554-BS1)									
Orthophosphate, as P			96.9	90-110			12/15/2024	BAK	
Duplicate (B244554-DUP1) Source ID: AC00384-01									
Orthophosphate, as P					0.0508	10	12/15/2024	BAK	
Matrix Spike (B244554-MS1) Source ID: AC00384-01									
Orthophosphate, as P			101	90-110			12/15/2024	BAK	
Matrix Spike Dup (B244554-MSD1) Source ID: AC00384-01									
Orthophosphate, as P			101	90-110	0.124	10	12/15/2024	BAK	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals									
Batch: B244563									
Blank (B244563-BLK1)									
Calcium	<40	ug/L					12/19/2024	SMC	U
Magnesium	<80	ug/L					12/19/2024	SMC	U
Phosphorus as P	<0.012	mg/L					12/19/2024	SMC	U
LCS (B244563-BS1)									
Calcium			99.7	85-115			12/19/2024	SMC	
Magnesium			99.4	85-115			12/19/2024	SMC	
Phosphorus as P			100	85-115			12/19/2024	SMC	
Duplicate (B244563-DUP1) Source ID: AC00385-01									
Calcium					1.49	20	12/19/2024	SMC	
Magnesium					1.58	20	12/19/2024	SMC	
Phosphorus as P					1.91	20	12/19/2024	SMC	
Matrix Spike (B244563-MS1) Source ID: AC00385-01									
Calcium			101	70-130			12/19/2024	SMC	
Magnesium			101	70-130			12/19/2024	SMC	
Phosphorus as P			95.5	70-130			12/19/2024	SMC	
Matrix Spike Dup (B244563-MSD1) Source ID: AC00385-01									
Calcium			100	70-130	0.430	20	12/19/2024	SMC	
Magnesium			101	70-130	0.270	20	12/19/2024	SMC	
Phosphorus as P			95.5	70-130	0.0187	20	12/19/2024	SMC	
Batch: B244572									
Blank (B244572-BLK1)									
Mercury	<0.01	ug/L					12/17/2024	SAS	U
LCS (B244572-BS1)									
Mercury			103	85-115			12/17/2024	SAS	
Duplicate (B244572-DUP1) Source ID: AC00386-01									
Mercury					NR	20	12/17/2024	SAS	U
Matrix Spike (B244572-MS1) Source ID: AC00386-01									
Mercury			111	70-130			12/17/2024	SAS	
Matrix Spike Dup (B244572-MSD1) Source ID: AC00386-01									
Mercury			110	70-130	0.145	20	12/17/2024	SAS	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals (Continued)									
Batch: B244638									
Blank (B244638-BLK1)									
Arsenic	<0.050	ug/L					12/27/2024	DMW	U
Cadmium	<0.020	ug/L					12/27/2024	DMW	U
Lead	<0.010	ug/L					12/27/2024	DMW	U
LCS (B244638-BS1)									
Arsenic			100	85-115			12/27/2024	DMW	
Cadmium			104	85-115			12/27/2024	DMW	
Lead			106	85-115			12/27/2024	DMW	
Duplicate (B244638-DUP1) Source ID: AC00386-03									
Arsenic					0.891	20	12/27/2024	DMW	
Cadmium					0.303	20	12/27/2024	DMW	
Lead					0.821	20	12/27/2024	DMW	
Matrix Spike (B244638-MS1) Source ID: AC00386-03									
Arsenic			98.9	70-130			12/27/2024	DMW	
Cadmium			101	70-130			12/27/2024	DMW	
Lead			98.0	70-130			12/27/2024	DMW	
Matrix Spike Dup (B244638-MSD1) Source ID: AC00386-03									
Arsenic			98.8	70-130	0.0531	20	12/27/2024	DMW	
Cadmium			99.0	70-130	2.21	20	12/27/2024	DMW	
Lead			97.8	70-130	0.152	20	12/27/2024	DMW	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Dissolved Metals									
Batch: B244637									
Blank (B244637-BLK1)									
Cadmium	<0.010	ug/L					12/21/2024	DMW	U
Copper	<0.14	ug/L					12/21/2024	DMW	U
Lead	<0.010	ug/L					12/21/2024	DMW	U
Zinc	<0.50	ug/L					12/21/2024	DMW	U
LCS (B244637-BS1)									
Cadmium			97.6	85-115			12/21/2024	DMW	
Copper			97.0	85-115			12/21/2024	DMW	
Lead			99.9	85-115			12/21/2024	DMW	
Zinc			96.1	85-115			12/21/2024	DMW	
Duplicate (B244637-DUP1) Source ID: AC00386-03									
Cadmium					42.8	10	12/21/2024	DMW	QC-02
Copper					0.309	10	12/21/2024	DMW	
Lead					7.86	10	12/21/2024	DMW	
Zinc					0.422	10	12/21/2024	DMW	
Matrix Spike (B244637-MS1) Source ID: AC00386-03									
Cadmium			96.0	70-130			12/21/2024	DMW	
Copper			91.6	70-130			12/21/2024	DMW	
Lead			94.7	70-130			12/21/2024	DMW	
Zinc			90.3	70-130			12/21/2024	DMW	
Matrix Spike Dup (B244637-MSD1) Source ID: AC00386-03									
Cadmium			93.6	70-130	2.57	10	12/21/2024	DMW	
Copper			88.5	70-130	2.56	10	12/21/2024	DMW	
Lead			91.1	70-130	3.83	10	12/21/2024	DMW	
Zinc			87.7	70-130	1.51	10	12/21/2024	DMW	

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Report Date: 01/10/2025 12:54

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Notes and Definitions

Item	Definition
D	Data reported from a dilution
QC-02	The RPD is greater than the method acceptance criteria. At least one of the values used to calculate the RPD, is less than or equal to the PQL.
U	Analyte included in the analysis, but not detected
NR	No result for this parameter.

Method Reference Acronyms

Colilert	Colilert, IDEXX Laboratories, Inc.
EPA	Manual of Methods for Chemical Analysis of Water and Wastes, USEPA
GS	USGS Techniques of Water-Resources Investigations
HH	Hach Spectrophotometer Procedures Manual
SM	Standard Methods for the Examination of Water and Wastewater
SW	Test methods for Evaluating Solid Waste, SW-846

Stephen Quintero or Azubike Emenari
QA/QC Coordinator

Leslea Basterrechea
Water Quality Laboratory Manager

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Ada County Highway District

ACHD

Attn: Steven Turner
3775 Adams Street
Garden City, Idaho 83714-6418
Tel. (208) 407-4284

Purchase Order: 63069586

Project: Stormwater PI

Sampler(s): Kristen Chisholm
Steven Turner

Lab#	Begin Date	End Date	Begin Time	End Time	Sample Identification	Sampler Initials	Matrix: Water	Type: Grab	Type: Composite	BOD_5 - SM 5210 B	COD - Hach 8000	TSS - SM 2540 D	TDS - SM 2540 C	TKN - EPA 351.2	TP - EPA 200.7	Orthophosphate - EPA 365.1	Total As, Cd, Pb - EPA 200.8	Diss. Cd Cu, Pb, Zn - EPA 200.8	Total Hg - EPA 245.1	E. Coli - IDEXX Colilert	Turbidity - EPA 180.1	Hardness - SM 2340 B-2011	NO3+NO2 - EPA 353.2	Timberline Ammonia-001	Chloride - EPA 300.0	Total Containers
AC00386-01	12/14/24	12/14/24	0154	1010	241214-11-WC	KC	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	2
AC00386-02	"	"	0139	0851	241214-12-WC	KC	"		"	"	"	"	"	"	"	"	"	"	"		"	"	"	"	"	1
AC00386-03	"	"	0120	1018	241214-14-WC	KC	↓		↓	"	"	"	"	"	"	"	"	"	"		"	"	"	"	"	2

Relinquished by (sign)	Date &Time Transferred	Received by (sign)	Comments/ Special Instructions
Kristen Chisholm	12/14/24 1246	12/14/24 3:00	

241010 ST

DC_WQL-PI

AC00386

Report Date: 01/10/2025 12:54

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11818 Joplin Road
Boise, Idaho 83714-1076
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Samples in this Report

Lab ID	Sample	Sample Description	Matrix	Qualifiers	Sampled	Received
AC00385-01	ACST1C	241214-206-WC	Water		12/14/24 10:33	12/14/24 13:00

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Analysis Report

Location: ACST1C
Location Description: 241214-206-WC
Date/Time Collected: 12/14/2024 02:08 - 12/14/2024 10:33
Lab Number: AC00385-01
Sample Collector: Kristen Chisholm
Sample Type: Composite
Sample Matrix: Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
Ammonia, as N	B250007	0.119	mg/L	0.0450	0.0450	Timberline Ammonia-001	01/02/25	1/2/25 16:57	MEC	
BOD5	B244553	34.9	mg/L	2.00	2.00	SM 5210 B-2016	12/15/24	12/20/24 9:23	ALM	
Chloride	B244584	94.0	mg/L	0.0300	0.0300	EPA 300.0, Rev. 2.1 (1993)	12/18/24	12/18/24 16:44	ALN	
COD	B244551	171	mg/L	7.00	7.00	HH 8000, Standard Method 5220 D	12/15/24	12/15/24 9:26	ASE	
Nitrate-Nitrite, as N	B244579	0.0960	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	12/17/24	12/17/24 12:08	RKG	
TKN	B250022	1.74	mg/L	0.100	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	01/03/25	1/3/25 15:03	RKG	
Total Dissolved Solids	B244559	267	mg/L	25.0	25.0	SM 2540 C-2015	12/16/24	12/17/24 14:31	ASE	
Total Suspended Solids	B244561	43.5	mg/L	0.900	0.900	SM 2540 D-2015	12/16/24	12/16/24 10:54	RHC	
Turbidity	B244557	49.4	NTU	0.6	0.3	EPA 180.1, Rev. 2.0 (1993)	12/16/24	12/16/24 7:20	ALN	D
Dissolved Wet Chemistry										
Orthophosphate, as P	B244554	0.668	mg/L	6.00E-3	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	12/15/24	12/15/24 9:46	BAK	D
Total Metals										
Mercury	B244572	<0.0100	ug/L	0.0100	0.0100	EPA 245.1	12/17/24	12/17/24 12:35	SAS	U
Arsenic	B244638	2.2	ug/L	0.050	0.050	EPA 200.8	12/22/24	12/27/24 15:56	DMW	
Cadmium	B244638	0.069	ug/L	0.020	0.020	EPA 200.8	12/22/24	12/27/24 15:56	DMW	
Calcium	B244563	9.22	mg/L	0.0400	0.0400	EPA 200.7	12/16/24	12/19/24 9:45	SMC	
Lead	B244638	4.5	ug/L	0.010	0.010	EPA 200.8	12/22/24	12/27/24 15:56	DMW	
Magnesium	B244563	2990	ug/L	80.0	80.0	EPA 200.7	12/16/24	12/19/24 9:45	SMC	
Phosphorus as P	B244563	0.934	mg/L	0.0120	0.0120	EPA 200.7	12/16/24	12/19/24 9:45	SMC	
Hardness	B244563	35.3	mg/L	0.100	0.100	SM 2340 B-2011	12/16/24	12/19/24 9:45	SMC	
Dissolved Metals										
Cadmium	B244637	0.019	ug/L	0.010	0.010	EPA 200.8	12/21/24	12/21/24 17:13	DMW	
Copper	B244637	4.7	ug/L	0.14	0.14	EPA 200.8	12/21/24	12/21/24 17:13	DMW	
Lead	B244637	0.59	ug/L	0.010	0.010	EPA 200.8	12/21/24	12/21/24 17:13	DMW	
Zinc	B244637	26.7	ug/L	0.50	0.50	EPA 200.8	12/21/24	12/21/24 17:13	DMW	

* The reported adjusted "MDL" is sample-specific. The analysis MDL as defined by 40 CFR pt 136 App.B. was corrected for dilution, dry weight, or method-defined ML.

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Quality Control Report

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry									
Batch: B244551									
Blank (B244551-BLK1)									
COD	<7	mg/L					12/15/2024	ASE	U
LCS (B244551-BS1)									
COD			98.7	90-110			12/15/2024	ASE	
Duplicate (B244551-DUP1)	Source ID: AC00385-01								
COD					1.77	10	12/15/2024	ASE	
Batch: B244553									
Blank (B244553-BLK1)									
BOD5	<2	mg/L					12/20/2024	ALM	U
LCS (B244553-BS1)									
BOD5			99.3	84.6-115.4			12/20/2024	ALM	
LCS (B244553-BS2)									
BOD5			108	84.6-115.4			12/20/2024	ALM	
Duplicate (B244553-DUP1)	Source ID: BB04382-01								
BOD5					12.4	30	12/20/2024	ALM	D
Batch: B244557									
Blank (B244557-BLK1)									
Turbidity	<0.3	NTU					12/16/2024	ALN	U
LCS (B244557-BS1)									
Turbidity			99.6	90-110			12/16/2024	ALN	
Duplicate (B244557-DUP1)	Source ID: AC00386-02								
Turbidity					6.82	25	12/16/2024	ALN	
Batch: B244559									
Blank (B244559-BLK1)									
Total Dissolved Solids	<25	mg/L					12/17/2024	ASE	U
LCS (B244559-BS1)									
Total Dissolved Solids			90.7	90-110			12/17/2024	ASE	
Duplicate (B244559-DUP1)	Source ID: BB04383-04								
Total Dissolved Solids					1.46	10	12/17/2024	ASE	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B244561									
Blank (B244561-BLK1)									
Total Suspended Solids	<0.9	mg/L					12/16/2024	RHC	U
LCS (B244561-BS1)									
Total Suspended Solids			98.5	90-110			12/16/2024	RHC	
Duplicate (B244561-DUP1) Source ID: LS02191-02									
Total Suspended Solids					3.45	20	12/16/2024	RHC	
Duplicate (B244561-DUP2) Source ID: EP00416-01									
Total Suspended Solids					2.82	20	12/16/2024	RHC	
Batch: B244579									
Blank (B244579-BLK1)									
Nitrate-Nitrite, as N	<0.025	mg/L					12/17/2024	RKG	U
LCS (B244579-BS1)									
Nitrate-Nitrite, as N			96.9	90-110			12/17/2024	RKG	
LCS (B244579-BS2)									
Nitrate-Nitrite, as N			97.3	90-110			12/17/2024	RKG	
Duplicate (B244579-DUP1) Source ID: BB04373-01									
Nitrate-Nitrite, as N					0.0167	10	12/17/2024	RKG	D
Duplicate (B244579-DUP2) Source ID: BB04384-01									
Nitrate-Nitrite, as N					0.701	10	12/17/2024	RKG	
Matrix Spike (B244579-MS1) Source ID: BB04373-01									
Nitrate-Nitrite, as N			96.1	90-110			12/17/2024	RKG	D
Matrix Spike (B244579-MS2) Source ID: BB04384-01									
Nitrate-Nitrite, as N			94.6	90-110			12/17/2024	RKG	
Matrix Spike Dup (B244579-MSD1) Source ID: BB04373-01									
Nitrate-Nitrite, as N			98.7	90-110	1.24	10	12/17/2024	RKG	D
Matrix Spike Dup (B244579-MSD2) Source ID: BB04384-01									
Nitrate-Nitrite, as N			95.1	90-110	0.161	10	12/17/2024	RKG	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B244584									
Blank (B244584-BLK1)									
Chloride	<0.03	mg/L					12/18/2024	ALN	U
Blank (B244584-BLK2)									
Chloride	<0.03	mg/L					12/18/2024	ALN	U
Blank (B244584-BLK3)									
Chloride	<0.03	mg/L					12/19/2024	ALN	U
LCS (B244584-BS1)									
Chloride			98.5	90-110			12/18/2024	ALN	
Duplicate (B244584-DUP1) Source ID: AC00384-01									
Chloride					0.109	10	12/18/2024	ALN	
Duplicate (B244584-DUP2) Source ID: EP00409-01									
Chloride					0.0846	10	12/18/2024	ALN	D
Matrix Spike (B244584-MS1) Source ID: AC00384-01									
Chloride			96.8	90-110			12/18/2024	ALN	
Matrix Spike (B244584-MS2) Source ID: EP00409-01									
Chloride			95.8	90-110			12/18/2024	ALN	D
Matrix Spike Dup (B244584-MSD1) Source ID: AC00384-01									
Chloride			96.1	90-110	0.255	10	12/18/2024	ALN	
Matrix Spike Dup (B244584-MSD2) Source ID: EP00409-01									
Chloride			98.2	90-110	1.42	10	12/18/2024	ALN	D
Batch: B250007									
Blank (B250007-BLK1)									
Ammonia, as N	<0.045	mg/L					01/02/2025	MEC	U
Blank (B250007-BLK2)									
Ammonia, as N	<0.045	mg/L					01/02/2025	MEC	U
LCS (B250007-BS1)									
Ammonia, as N			99.1	90-110			01/02/2025	MEC	
LCS (B250007-BS2)									
Ammonia, as N			98.1	90-110			01/02/2025	MEC	
Duplicate (B250007-DUP1) Source ID: AC00384-01									
Ammonia, as N					1.82	20	01/02/2025	MEC	
Duplicate (B250007-DUP2) Source ID: BB04384-03									
Ammonia, as N					4.19	20	01/02/2025	MEC	D
Matrix Spike (B250007-MS1) Source ID: AC00384-01									
Ammonia, as N			105	84-115			01/02/2025	MEC	
Matrix Spike (B250007-MS2) Source ID: BB04384-03									
Ammonia, as N			99.0	84-115			01/02/2025	MEC	D
Matrix Spike (B250007-MS3) Source ID: EP00416-01									
Ammonia, as N			104	84-115			01/02/2025	MEC	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B250007 (Continued)									
Matrix Spike (B250007-MS4) Source ID: EP00417-01									
Ammonia, as N			100	84-115			01/02/2025	MEC	
Matrix Spike Dup (B250007-MSD1) Source ID: AC00384-01									
Ammonia, as N			104	84-115	1.01	20	01/02/2025	MEC	
Matrix Spike Dup (B250007-MSD2) Source ID: BB04384-03									
Ammonia, as N			99.1	84-115	0.0772	20	01/02/2025	MEC	D
Batch: B250022									
Blank (B250022-BLK1)									
TKN	<0.1	mg/L					01/03/2025	RKG	U
Blank (B250022-BLK2)									
TKN	<0.1	mg/L					01/03/2025	RKG	U
LCS (B250022-BS1)									
TKN			96.4	80-120			01/03/2025	RKG	
LCS (B250022-BS2)									
TKN			91.8	80-120			01/03/2025	RKG	
Duplicate (B250022-DUP1) Source ID: BB04383-03									
TKN					0.409	20	01/03/2025	RKG	D
Duplicate (B250022-DUP2) Source ID: BB04385-02									
TKN					2.25	20	01/03/2025	RKG	D
Duplicate (B250022-DUP3) Source ID: WB03511-06									
TKN					0.918	20	01/03/2025	RKG	D
Matrix Spike (B250022-MS1) Source ID: BB04383-03									
TKN			98.2	80-120			01/03/2025	RKG	D
Matrix Spike (B250022-MS2) Source ID: BB04385-02									
TKN			100	80-120			01/03/2025	RKG	D
Matrix Spike (B250022-MS3) Source ID: WB03511-06									
TKN			97.6	80-120			01/03/2025	RKG	D
Matrix Spike (B250022-MS4) Source ID: EP00416-01									
TKN			95.4	80-120			01/03/2025	RKG	D
Matrix Spike (B250022-MS5) Source ID: EP00417-01									
TKN			95.2	80-120			01/03/2025	RKG	D
Matrix Spike Dup (B250022-MSD1) Source ID: BB04383-03									
TKN			97.3	80-120	0.331	20	01/03/2025	RKG	D
Matrix Spike Dup (B250022-MSD2) Source ID: BB04385-02									
TKN			88.1	80-120	3.95	20	01/03/2025	RKG	D
Matrix Spike Dup (B250022-MSD3) Source ID: WB03511-06									
TKN			92.0	80-120	2.22	20	01/03/2025	RKG	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Dissolved Wet Chemistry									
Batch: B244554									
Blank (B244554-BLK1)									
Orthophosphate, as P	<0.003	mg/L					12/15/2024	BAK	U
LCS (B244554-BS1)									
Orthophosphate, as P			96.9	90-110			12/15/2024	BAK	
Duplicate (B244554-DUP1) Source ID: AC00384-01									
Orthophosphate, as P					0.0508	10	12/15/2024	BAK	
Matrix Spike (B244554-MS1) Source ID: AC00384-01									
Orthophosphate, as P			101	90-110			12/15/2024	BAK	
Matrix Spike Dup (B244554-MSD1) Source ID: AC00384-01									
Orthophosphate, as P			101	90-110	0.124	10	12/15/2024	BAK	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals									
Batch: B244563									
Blank (B244563-BLK1)									
Calcium	<40	ug/L					12/19/2024	SMC	U
Magnesium	<80	ug/L					12/19/2024	SMC	U
Phosphorus as P	<0.012	mg/L					12/19/2024	SMC	U
LCS (B244563-BS1)									
Calcium			99.7	85-115			12/19/2024	SMC	
Magnesium			99.4	85-115			12/19/2024	SMC	
Phosphorus as P			100	85-115			12/19/2024	SMC	
Duplicate (B244563-DUP1) Source ID: AC00385-01									
Calcium					1.49	20	12/19/2024	SMC	
Magnesium					1.58	20	12/19/2024	SMC	
Phosphorus as P					1.91	20	12/19/2024	SMC	
Matrix Spike (B244563-MS1) Source ID: AC00385-01									
Calcium			101	70-130			12/19/2024	SMC	
Magnesium			101	70-130			12/19/2024	SMC	
Phosphorus as P			95.5	70-130			12/19/2024	SMC	
Matrix Spike Dup (B244563-MSD1) Source ID: AC00385-01									
Calcium			100	70-130	0.430	20	12/19/2024	SMC	
Magnesium			101	70-130	0.270	20	12/19/2024	SMC	
Phosphorus as P			95.5	70-130	0.0187	20	12/19/2024	SMC	
Batch: B244572									
Blank (B244572-BLK1)									
Mercury	<0.01	ug/L					12/17/2024	SAS	U
LCS (B244572-BS1)									
Mercury			103	85-115			12/17/2024	SAS	
Duplicate (B244572-DUP1) Source ID: AC00386-01									
Mercury					NR	20	12/17/2024	SAS	U
Matrix Spike (B244572-MS1) Source ID: AC00386-01									
Mercury			111	70-130			12/17/2024	SAS	
Matrix Spike Dup (B244572-MSD1) Source ID: AC00386-01									
Mercury			110	70-130	0.145	20	12/17/2024	SAS	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals (Continued)									
Batch: B244638									
Blank (B244638-BLK1)									
Arsenic	<0.050	ug/L					12/27/2024	DMW	U
Cadmium	<0.020	ug/L					12/27/2024	DMW	U
Lead	<0.010	ug/L					12/27/2024	DMW	U
LCS (B244638-BS1)									
Arsenic			100	85-115			12/27/2024	DMW	
Cadmium			104	85-115			12/27/2024	DMW	
Lead			106	85-115			12/27/2024	DMW	
Duplicate (B244638-DUP1) Source ID: AC00386-03									
Arsenic					0.891	20	12/27/2024	DMW	
Cadmium					0.303	20	12/27/2024	DMW	
Lead					0.821	20	12/27/2024	DMW	
Matrix Spike (B244638-MS1) Source ID: AC00386-03									
Arsenic			98.9	70-130			12/27/2024	DMW	
Cadmium			101	70-130			12/27/2024	DMW	
Lead			98.0	70-130			12/27/2024	DMW	
Matrix Spike Dup (B244638-MSD1) Source ID: AC00386-03									
Arsenic			98.8	70-130	0.0531	20	12/27/2024	DMW	
Cadmium			99.0	70-130	2.21	20	12/27/2024	DMW	
Lead			97.8	70-130	0.152	20	12/27/2024	DMW	

The contents of this report apply to the sample(s) analyzed in accordance with the Chain of Custody document.
No duplication of this report is allowed, except in its entirety

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Dissolved Metals									
Batch: B244637									
Blank (B244637-BLK1)									
Cadmium	<0.010	ug/L					12/21/2024	DMW	U
Copper	<0.14	ug/L					12/21/2024	DMW	U
Lead	<0.010	ug/L					12/21/2024	DMW	U
Zinc	<0.50	ug/L					12/21/2024	DMW	U
LCS (B244637-BS1)									
Cadmium			97.6	85-115			12/21/2024	DMW	
Copper			97.0	85-115			12/21/2024	DMW	
Lead			99.9	85-115			12/21/2024	DMW	
Zinc			96.1	85-115			12/21/2024	DMW	
Duplicate (B244637-DUP1) Source ID: AC00386-03									
Cadmium					42.8	10	12/21/2024	DMW	QC-02
Copper					0.309	10	12/21/2024	DMW	
Lead					7.86	10	12/21/2024	DMW	
Zinc					0.422	10	12/21/2024	DMW	
Matrix Spike (B244637-MS1) Source ID: AC00386-03									
Cadmium			96.0	70-130			12/21/2024	DMW	
Copper			91.6	70-130			12/21/2024	DMW	
Lead			94.7	70-130			12/21/2024	DMW	
Zinc			90.3	70-130			12/21/2024	DMW	
Matrix Spike Dup (B244637-MSD1) Source ID: AC00386-03									
Cadmium			93.6	70-130	2.57	10	12/21/2024	DMW	
Copper			88.5	70-130	2.56	10	12/21/2024	DMW	
Lead			91.1	70-130	3.83	10	12/21/2024	DMW	
Zinc			87.7	70-130	1.51	10	12/21/2024	DMW	

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Report Date: 01/10/2025 12:54

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Notes and Definitions

Item	Definition
D	Data reported from a dilution
QC-02	The RPD is greater than the method acceptance criteria. At least one of the values used to calculate the RPD, is less than or equal to the PQL.
U	Analyte included in the analysis, but not detected
NR	No result for this parameter.

Method Reference Acronyms

Colilert	Colilert, IDEXX Laboratories, Inc.
EPA	Manual of Methods for Chemical Analysis of Water and Wastes, USEPA
GS	USGS Techniques of Water-Resources Investigations
HH	Hach Spectrophotometer Procedures Manual
SM	Standard Methods for the Examination of Water and Wastewater
SW	Test methods for Evaluating Solid Waste, SW-846

Stephen Quintero or Azubike Emenari
QA/QC Coordinator

Leslea Basterrechea
Water Quality Laboratory Manager

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No duplication of this report is allowed, except in its entirety

ACHD

Attn: Steven Turner
3775 Adams Street
Garden City, Idaho 83714–6418
Tel. (208) 407–4284

Purchase Order: 63069586

Project: Stormwater PI

Sampler(s): Kristen Chisholm
Steven Turner

Lab#	Begin Date	End Date	Begin Time	End Time	Sample Identification	Sampler Initials	Matrix: Water	Type: Grab	Type: Composite	BOD_5 - SM 5210 B	COD - Hach 8000	TSS - SM 2540 D	TDS - SM 2540 C	TKN - EPA 351.2	TP - EPA 200.7	Orthophosphate - EPA 365.1	Total As, Cd, Pb - EPA 200.8	Diss. Cd Cu, Pb, Zn - EPA 200.8	Total Hg - EPA 245.1	E. Coli - IDEXX Colilert	Turbidity - EPA 180.1	Hardness - SM 2340 B-2011	NO3+NO2 - EPA 353.2	Timberline Ammonia-001	Chloride - EPA 300.0	Total Containers
AC00385-01	12/14/24	12/14/24	0208	1033	241214-206-WC	KC	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	2

Relinquished by (sign)	Date &Time Transferred	Received by (sign)	Comments/ Special Instructions
Kristen Chisholm	12/14/24 1246	12/14/24 1300	

AC00385

ACHD Sample Filtration, Splitting, and Compositing for Metals

Sample	Split/Filter Info	Filter Used	Bottle/Lid Lots	Bottles Split	Comments
Lims#: AC00386-03 Location: _____ Sample Date: 12-14-24 Sample ID: ACSTIC 1 ~~10~~ 14	Split Date: 12-14-24 Start Split: 1330 Start Filter: 1330 Comp Time: 1310 Analyst: DMW/SMC	Filter: ☒Voss ☒0.45µm ☐1.0µm ☒5.0µm ☐Other: 10um CC00018-74	Coll Jug: CC00059-01 CC00058-45 Comp Jug: CC00052-05 SS Tubing: CC00058-64 ~~SS Helper:~~ CC00018-74 Stir Bar: ~~CC00058-51~~ Connector: CC00051-AC 58-05	☒Teflon Total ☒TKN ☒Teflon Diss (F) ☒NH_3 ☒Hg CVAA ☒NO_x (F) ☒BOD ☒ortho-P (F) ☒TSS 1C ☒Turb ☒TDS ☐_____ ☒COD ☐_____	2 jugs 3 filters
Lims#: AC00384-01 Location: _____ Sample Date: 12-14-24 Sample ID: ACSTIC 2 - 19	Split Date: 12-14-24 Start Split: 1338 Start Filter: 1338 Comp Time: 1325 Analyst: DMW/SMC	Filter: ☒Voss ☒0.45µm ☐1.0µm ☒5.0µm ☒Other: 10um	Coll Jug: CC00059-01 Comp Jug: — SS Tubing: SSA1 ~~SS Helper:~~ CC00058-64 Stir Bar: ~~CC00058-51~~ 58-51 Connector: CC00054-32, 51	☒Teflon Total ☒TKN ☒Teflon Diss (F) ☒NH_3 ☒Hg CVAA ☒NO_x (F) ☒BOD ☒ortho-P (F) ☒TSS 1C ☒Turb ☒TDS ☐_____ ☒COD ☐_____	2 jugs 6 filters
Lims#: AC00386-01 Location: _____ Sample Date: 12-14-24 Sample ID: ACSTIC 3 - 11	Split Date: 12-14-24 Start Split: 1410 Start Filter: 1410 Comp Time: 1400 Analyst: MW/SMC	Filter: ☒Voss ☒0.45µm ☒1.0µm ☒5.0µm ☒Other: 10um	Coll Jug: CC00059-01 /— Comp Jug: _____ SS Tubing: CC00057-AF ~~SS Helper:~~ _____ Stir Bar: CC00058-51 11-45 Connector CC00051-27 (2)	☒Teflon Total ☒TKN ☒Teflon Diss (F) ☒NH_3 ☒Hg CVAA ☒NO_x (F) ☒BOD ☒ortho-P (F) ☒TSS 1C ☒Turb ☒TDS ☐_____ ☒COD ☐_____	4 filters 2 jugs connected to CC00054-B1+
Lims#: AC00385-01 Location: _____ Sample Date: 12-14-24 Sample ID: ACSTIC 4 206	Split Date: 12-14-24 Start Split: 1425 Start Filter: 1425 Comp Time: 1422 Analyst: DMW/SMC	Filter: ☒Voss ☒0.45µm ☐1.0µm ☒5.0µm ☒Other: 10um	Coll Jug: CC00048-45, 58-49 Comp Jug: CC00058-50 SS Tubing: CC00058-70 ~~SS Helper:~~ _____ Stir Bar: CC00059-41 Connector: CC00051-27, 54-32	☒Teflon Total ☒TKN ☒Teflon Diss (F) ☒NH_3 ☒Hg CVAA ☒NO_x (F) ☒BOD ☒ortho-P (F) ☒TSS 1C ☒Turb ☒TDS ☐_____ ☒COD ☐_____	3 jugs 3 filters
Lims#: AC00386-02 Location: _____ Sample Date: ACSTIC Sample ID: _____ 5 12	Split Date: 12-14-24 Start Split: 1439 Start Filter: 1439 Comp Time: — Analyst: DMW/SMC	Filter: ☒Voss ☒0.45µm ☐1.0µm ☒5.0µm ☒Other: 10um	Coll Jug: No TAG /— Comp Jug: — SS Tubing: CC00058-70 ~~SS Helper:~~ _____ Stir Bar: CC0058-51 Connector: CC00059-27 (2) 03	☒Teflon Total ☒TKN ☒Teflon Diss (F) ☒NH_3 ☒Hg CVAA ☒NO_x (F) ☒BOD ☒ortho-P (F) ☒TSS 1C ☒Turb ☒TDS ☐_____ ☒COD ☐_____	1 jug 3 filters

Technical Memorandum

1290 W. Myrtle St. Suite 340
Boise, ID 83702

Phone: 801.316.9859

Prepared for: Ada County Highway District

Project Title: NPDES Phase I Stormwater Support WY 2025

Project No.: 196784

Technical Memorandum

Subject: ACHD Phase I Storm Event Report for January 31, 2025

Date: March 20, 2025

To: Monica Lowe

Cc: Steven Turner

Kristen Jolliffe

From: Zuly Lapa, Project Engineer

Prepared by: Reghan Hodges, Project Engineer

Reviewed by: Zuly Lapa, EIT, Project Engineer

Nikki McDonald, PE, Project Manager

Limitations:

This document was prepared solely for ACHD in accordance with professional standards at the time the services were performed and in accordance with the contract between ACHD and Brown and Caldwell dated September 14, 2024. This document is governed by the specific scope of work authorized by ACHD; it is not intended to be relied upon by any other party except for regulatory authorities contemplated by the scope of work. We have relied on information or instructions provided by ACHD and other parties and, unless otherwise expressly indicated, have made no independent investigation as to the validity, completeness, or accuracy of such information.

Section 1: Introduction

The Environmental Protection Agency Region 10 reissued a Municipal Separate Storm Sewer System Phase I National Pollutant Discharge Elimination System Permit (NPDES Permit), effective October 1, 2021, to Ada County Highway District (ACHD), Boise City, Ada County Drainage District No. 3, Idaho Transportation Department District 3, Boise State University, and Garden City. Under the NPDES Permit, Permittees are required to continue to conduct wet weather stormwater outfall monitoring and subwatershed monitoring. Four outfall monitoring sites (Lucky, Whitewater, Main, and Americana) and one subwatershed monitoring site (AS_6) have been established. The AS_6 site represents a subwatershed located within the Americana watershed. At each site, a minimum of three composite and three grab samples will be collected during Water Year (WY) 2025 (October 1, 2024, through September 30, 2025). The following storm event report summarizes stormwater sampling results from the January 31, 2025, storm event.

Section 2: Project Status

Table 2-1 is a summary of the sample types collected to date for WY 2025 Phase I Stormwater Outfall Monitoring. When samples are qualified, additional samples will be attempted from subsequent storms to collect unqualified samples.

Table 2-1. WY 2025 Samples Collected

Date	Lucky	Whitewater	Main	Americana	AS_6
December 14, 2024	G, --[1]	G, C	G, C	G, C	G, C
January 31, 2025	--, C	--, C[2]	--, C	--, C[2]	--, C[3]
Unqualified Samples:	1G, 1C	1G, 1C	1G, 2C	1G, 1C	1G, 1C
Samples Remaining:	2G, 2C	2G, 2C	2G, 1C	2G, 2C	2G, 2C

Notes:

-- = no samples taken

C = composite sample

G = grab sample

[1] Equipment installation error resulted in negative flow and velocity; therefore, no composite subsamples were taken.

[2] Composite sample qualified due to lack of representativeness (50%–75%).

[3] Sample rejected due to lack of representativeness (<50%).

Section 3: Storm Event Summary

The January 31, 2025, storm event and the subsequent preparation and sampling efforts are detailed in the following sections.

3.1 Storm Detail

A summary of the forecast on which monitoring decisions were based is detailed below. The sampling event communication form that describes the forecast and summarizes the decision-making process from January 31, 2025, is included in Attachment A for reference.

Thursday, January 30, 2025 (Sampling Event Communication & Set Up)

- On the morning of January 30, the National Weather Service issued a forecast for widespread rain and snow in the Boise area, starting January 31 at 1300 and ending at 2200. The forecasted precipitation for this event was 0.13 inches of rain and 0.1-1.0 inches of snow. The chance of precipitation was 90%, with 76% probability of snow and rain amounts to be greater than 0.1 inches over a 12-hour period.
- Setup for Lucky, Whitewater, Americana and AS_6 was accomplished on the afternoon of January 30. An expected precipitation depth of 0.11 inches was used to set trigger volumes at monitoring stations. A runoff calculations worksheet showing how the trigger volumes were calculated is included in Attachment A.

Friday, January 31, 2025 (Set Up & Storm Event)

- Setup for Main was accomplished the morning of January 31. An expected precipitation depth of 0.11 inches was used to set the trigger volume (Attachment A).
- The runoff started on January 31 at approximately 1717 and ended on January 31 at 2359.
- Precipitation totals ranged between 0.18 and 0.23 inches at local rain gauges.
- After setting up the stations, an updated forecast resulted in low confidence of overnight rain. The sampling team decided to not collect grab samples and leave composite sampling bottles overnight.

Flow measurements and precipitation data are listed in Table 1 along with a sampling summary. Hydrographs for the Lucky, Whitewater, Main, Americana and AS_6 sites showing flow, rain, and sample collection data are included in Attachment B.

3.2 Sampling Summary

Lucky, Whitewater, Americana and AS_6 monitoring stations were set up on January 30, 2025, and Main monitoring station was set up on January 31, 2025, to collect flow-proportional composite samples during the storm. Sampler enable conditions were programmed into the Lucky, Whitewater, Main, Americana and AS_6 flowmeters. Setup and sampling information are included in Table 1. The field forms completed during setup/shutdown and sampling are included in Attachment C.

Composite Samples

Composite samples were collected at the Lucky, Whitewater, Main, Americana and AS_6 monitoring stations and submitted to the Boise City Public Works Water Quality Laboratory at 1135 on February 1. Analytical results are shown in Table 2 and pollutant loading estimates for the event are detailed in Table 3. Laboratory analytical reports are included in Attachment D.

Section 4: Quality Assurance/Quality Control

No quality control samples were collected during the January 31, 20235, storm event.

Data quality objectives for this storm were evaluated and tracked using the data validation review checklist included in Attachment A. An acceptable composite sample represents at least 75 percent of the total discharge or at least 6 hours of the storm duration. The composite samples collected at Whitewater and Americana were qualified due to a lack of representativeness (50 – 75 percent) and lasted less than 6

hours. The composite sample collected at AS_6 was rejected because it represented 47 percent of the storm runoff and lasted approximately 1 hour.

Section 5: Notes and Recommendations

No notes or recommendations from the January 31, 2025, storm event.

Data Tables

Table 1. Sampling and Flow Summary					
	Lucky	Whitewater	Main	Americana	AS_6
Grab samples collected and submitted?	NO	NO	NO	NO	NO
Composite samples collected and submitted?	YES	YES	YES	YES	YES
Trigger volume (ft^3)	2,895 gal	801 cf	456 cf	2,960 cf	1,646 gal
Velocity cutoff (fps)	--	--	--	--	--
Sampler enable condition (in) or Velocity cutoff (fps)	Level > 2.61"	Level > 3.15"	Level > 2.4"	Level > 5.09"	Level > 1.5"
Deadband/ Hysteresis (in)	1.0"	1.0"	1.0"	1.0"	1.0"
Runoff start time	1732	1934	1717	1745	1923
Grab sample collection time	--	--	--	--	--
Composite sample stop time	2238	2112	2346	2128	2045
Runoff stop time	2344	2359	2359	2321	2333
Volume of discharge sampled (ft^3)	9,304	18,294	6,396	68,384	6,129
Total runoff volume (ft^3)	9,981	33,142	6,603	88,850	13,037
Percent of storm flow sampled (%)	93%	54%	98%	74%	47%
Composite sample duration (hrs)	4	1.5	6	3.5	1
Storm Precipitation (in)	0.20	0.18	0.21	0.21/0.23	0.21/0.23
Referenced Rain Gauge	Cynthia Mann	Whitewater	Front	Front/East	Front/East
Sampler messages (counts): Success	23	24	15	24	24
Number of composite bottles filled	1	1	1	1	1
Composite sample volume (Approx.; ml)	12,500 mL	13,250 mL	8,750 mL	14,750 mL	14,750 mL

Notes:

-- No data.

Table 2. Field and Analytical Data Summary

Monitoring Station	Sample Date	Sample ID Grab	Field Parameters				Analytical Parameters																				
			Dissolved Oxygen	pH	Conductivity	Temperature	E. coli	Sample ID Composite	BOD_5	COD	Chloride	Hardness as $CaCO_3$	Turbidity	TSS	TDS	Total Phosphorus	Orthophosphate as P	Ammonia as N	Nitrate + Nitrite as N	TKN	Arsenic, total	Cadmium, dissolved	Cadmium, total	Copper, dissolved	Lead, dissolved	Lead, total	Mercury, total	Zinc, dissolved
			mg/L	S.U.	uS/cm	C	mpn/100 mL		mg/L	mg/L	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Lucky	1/31/2025	--	--	--	--	--	--	250131-03-WC	14.5	89.0	6.07	17.4	36.4	49.2	46.3	0.271	0.117	0.649	0.242	1.77	1.4	<0.0100	0.055	2.3	0.083	1.5	0.0111	28.1
Whitewater	1/31/2025	--	--	--	--	--	--	250131-11-WC	20.1[UJ]	140[UJ]	83.2[UJ]	95.2[UJ]	113[UJ]	116[UJ]	230[UJ]	0.418[UJ]	0.182[UJ]	0.925[UJ]	0.842[UJ]	2.46[UJ]	4.0[UJ]	0.012[UJ]	0.12[UJ]	3.5[UJ]	0.083[UJ]	7.7[UJ]	0.0115[UJ]	22.0[UJ]
Main	1/31/2025	--	--	--	--	--	--	250131-12-WC	15.8	134	59.4	34.6	86.5	89.0	140	0.215	0.0795	1.08	0.285	2.17	2.0	0.019	0.12	4.7	0.063	7.2	0.0138	40.8
Americana	1/31/2025	--	--	--	--	--	--	250131-14-WC	22.6[UJ]	153[UJ]	176[UJ]	98.5[UJ]	97.7[UJ]	118[UJ]	378[UJ]	0.365[UJ]	0.157[UJ]	0.851[UJ]	0.734[UJ]	2.31[UJ]	3.7[UJ]	0.024[UJ]	0.14[UJ]	3.8[UJ]	0.091[UJ]	7.0[UJ]	0.0144[UJ]	35.0[UJ]
AS_6	1/31/2025	--	--	--	--	--	--	250131-206-WC	38.8[R]	250[R]	37.6[R]	33.5[R]	144[R]	230[R]	126[R]	0.740[R]	0.384[R]	0.941[R]	0.267[R]	4.33[R]	2.8[R]	0.015[R]	0.15[R]	4.6[R]	0.27[R]	10.6[R]	0.0145[R]	27.9[R]

Notes:

-- = No data.

[UJ] Composite sample qualified due to lack of representativeness (50%-75%).

[R] Sample rejected due to lack of representativeness (<50%).

Table 3. Event Pollutant Loading Estimates in Pounds						
Monitoring Station	Event Date	TSS	Total Phosphorus	Ammonia as N	Nitrate + Nitrite as N	TKN
Lucky	1/31/2024	30.6	0.169	0.404	0.151	1.10
Whitewater	1/31/2024	240[1J]	0.865[1J]	1.91[1J]	1.74[1J]	5.09[1J]
Main	1/31/2024	36.7	0.0886	0.445	0.117	0.894
Americana	1/31/2024	654[1J]	2.02[1J]	4.72[1J]	4.07[1J]	12.8[1J]
AS_6	1/31/2024	187[1R]	0.602[1R]	0.766[1R]	0.217[1R]	3.52[1R]

Notes:

[1J] Composite sample qualified due to lack of representativeness (50%-75%).

[1R] Sample rejected due to lack of representativeness (<50%).

Attachment A: Supplemental Documents

Sampling Event Communication Form

Data Validation Checklist

Runoff Calculation Worksheet

SAMPLING EVENT COMMUNICATION FORM

Date: 1/30/2025	Time: 10:30 AM	Initials: ST
Is there a targeted sampling event during the next 36 hours? (Or, if it is Friday, is a targeted event expected before 5:00 PM Monday?)		Yes

Past 72 hr Precip	
Date and time of expected event	1/31 @ 10:00 am
Expected amount of precipitation	0.13" of rain, 0.1"-1.0" of snow.
Percent chance of precipitation	90%
Percent chance of >0.10" over 12 hours	76%

NWS Update

Talked to Steven at NWS. He said the system will start out on Friday around 10:00 am as snow and turn into rain from 1:00 pm – 10:00 pm. He predicted 0.1" – 1.0" of snow from that time and 0.13" of rain. There is a high chance there will be a break after 10:00 pm on Friday evening with a chance of showers between 10:00 pm and 5:00 am Saturday. With the snow and rain, Steven predicted a 76% chance for <0.1" of liquid in a 12 hour period.

Targeted Station & Samples

Lucky	Whitewater	Main	Americana	AS_6	State (Phase II)
☒ Grab	☒ Grab	☒ Grab	☒ Grab	☒ Grab	☐ Grab
☒ Composite	☒ Composite	☒ Composite	☒ Composite	☒ Composite	☒ Composite

Type of Forecasted Precipitation

☐ Light Rain	☒ Rain	☒ Rain on Snow
☐ Scattered Showers	☐ Thunder Showers	☒ Snowmelt
☐ Other:		

Reasons for Not Targeting a Forecasted Storm and/or Stations

☐ Holiday
☐ Waiting on Antecedent Dry Period – Expires:
☐ Equipment Concerns:
☐ Other:

Text Forecast

NWS Forecast for: 2 Miles NNW Garden City ID
Issued by: National Weather Service Boise, ID
Last Update: 3:42 am MST Jan 30, 2025

Today: Sunny, with a high near 44. Light south southeast wind.
Tonight: Increasing clouds, with a low around 27. East southeast wind around 6 mph becoming northeast after midnight.
Friday: Snow before 2pm, then rain. High near 43. South southeast wind 6 to 11 mph. Chance of precipitation is 90%. Little or no snow accumulation expected.
Friday Night: Rain, mainly before 11pm. Low around 36. Southeast wind 6 to 10 mph. Chance of precipitation is 80%. New precipitation amounts between a tenth and quarter of an inch possible.
Saturday: Rain likely, mainly before 5pm. Mostly cloudy, with a high near 47. Southeast wind around 7 mph becoming west in the afternoon. Chance of precipitation is 70%. New precipitation amounts between a tenth and quarter of an inch possible.

Saturday Night: A chance of rain before 8pm, then snow likely. Mostly cloudy, with a low around 31. Chance of precipitation is 70%. New snow accumulation of less than a half inch possible.
Sunday: Snow likely before 2pm, then rain likely. Mostly cloudy, with a high near 43. Chance of precipitation is 60%. New snow accumulation of less than a half inch possible.
Sunday Night: Rain likely before 8pm, then rain and snow likely. Mostly cloudy, with a low around 32. Chance of precipitation is 60%.
Monday: A chance of rain and snow before 11am, then a chance of rain. Mostly cloudy, with a high near 45. Chance of precipitation is 50%.
Monday Night: Rain likely. Cloudy, with a low around 33. Chance of precipitation is 70%.
Tuesday: Rain and snow likely. Mostly cloudy, with a high near 46. Chance of precipitation is 60%.
Tuesday Night: Rain and snow likely. Mostly cloudy, with a low around 26. Chance of precipitation is 60%.
Wednesday: A 40 percent chance of snow. Partly sunny, with a high near 41.

Forecast Discussion

Area Forecast Discussion
National Weather Service Boise ID
942 AM MST Thu Jan 30 2025

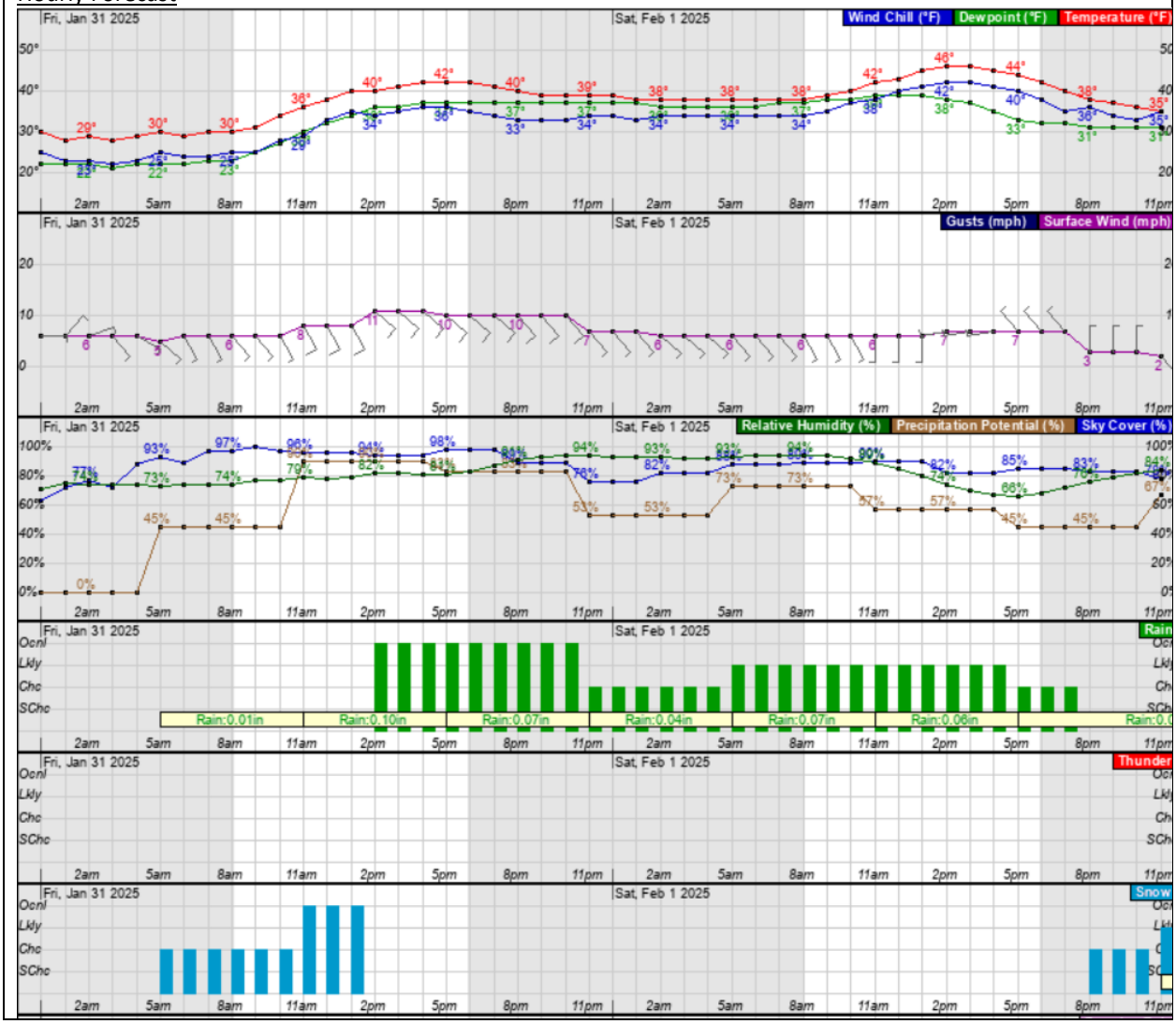
.DISCUSSION...Clear skies this morning with some high clouds later in the day as the upper ridge begins to give way to an incoming storm system. Forecast for today is on track. Afternoon package will see an update to current WWA products with accumulating snow possible down to valley floors.

.SHORT TERM...Today through Saturday night...The upper ridge supporting our dry and stable conditions over the late several days will end on Friday due to the onset of a moist Pacific flow. Clouds increase tonight followed by precipitation moving in from west to east on Friday. **Temperatures will be cold enough for snow all the way down to valley floors through early or mid-afternoon before changing to rain in the lower valleys late in the afternoon and evening.** The air mass will start off very dry which will combine with drying from downslope winds in the Upper Treasure Valley, reducing any chance for appreciable snowfall. The latest guidance suggests just a light dusting of snow on Friday. However, the Lower Treasure Valley near Ontario could see accumulations of up to an inch. **Widespread valley rain/snow and mountain snow continues through Saturday,** especially in the higher elevations of central Idaho where a Winter Storm Watch is in effect through Saturday night. Snow levels range from near valley floors in the north to around 5000 feet near the Nevada border. Gusty winds develop on Friday that continue into Saturday, mainly in the higher elevations where gusts of 30 to 40 mph are expected.

.LONG TERM...Sunday through Thursday...There is some agreement among the ensemble members in showing the moist Pacific plume shifting further south than previous runs early next week, although confidence remains low due to the narrowness of the plume since it could end up further north - similar to the ECMWF. The offshore trough eventually weakens as it moves inland later in the week. Our area remains within a moist west-southwest flow for additional rounds of valley rain/snow and mountain snow. Snowfall in the higher elevations may be significant, but pinpointing amounts with any confidence is low. Winds will be gusty at times. Temperatures near to slightly

above normal trend to near normal later in the week.

Hourly Forecast



Storm Event QA/QC Checklist – Phase I

STORM DATE 1/31/2025

A. Event and Data Completeness	Yes	No	N/A	Notes
1. Field data sheets filled out completely and clearly	X			
2. Field parameters reviewed, and any problems/issues addressed	X			
3. All samples collected as specified	X			
4. All samples delivered to lab promptly (review chain of custody rpts)	X			
5. Inconsistencies/clarifications discussed with sampling team member			X	
6. All analytical reports from lab received	X			

B. Validation and Verification Methods	Yes	No	N/A	Notes
1. Outliers and unexpected values discussed with lab			X	
2. Appropriate analytical methods used	X			
3. All lab QA samples were within method acceptance criteria	X			
4. All samples reviewed and data qualifiers assigned if needed	X			
5. Data quality objective achieved	X			

C. Specific Storm and Sample QA/QC Criteria	Lucky	Whitewater	Main	Americana	AS_6	Program Criteria	Met	Qualify	Reject
1. Antecedent dry period (inches in previous 72-hours)	0.01"	0.01"	0.00"	0.00"/0.01"	0.00"/0.01"	< 0.11" in 72 hrs	X		
2. Precipitation (inches)	0.20"	0.18"	0.21"	0.21"/0.23"	0.21"/0.23"	> 0.10"	X		
3. Sampled amount (% of total run-off)	93%	54%	98%	74%	47%	>= 75% or >= 6 hrs: no qualifier >= 50% and <75%: qualify < 50%: reject	X Lucky, Main	X WW, Americana	X AS_6
4. Composite sample duration (hours)	4	1.5	6	3.5	1				
4. Ecoli sample holding time (hours)	—	—	—	—	—	<=8 hrs: no qualifier >8 and <=16 hrs.: qualify >16 hrs.: reject			
5. Filtering of samples for dissolved parameter analysis (hours)	14	16	13	16	15.5	<= 24 hrs: no qualifier > 24 hrs.: reject	X		

D. Notes

- No grab samples targeted for this storm.
- Whitewater and Americana composite samples qualified due to lack of representativeness (50-75%)
- AS_6 rejected due to lack of representativeness (<50%)
- Due to forecast changes following station setup (low confidence in overnight rain) decision was made not to mobilize sampling team.

Reviewed by Steven Turner **Date** 2/26/25 **Approved by** Monica Lowe **Date** 2/26/25

Updated 220718 TL

Storm Runoff Estimates and Trigger Volumes

Step 1. Enter runoff coefficients in yellow cells.
Step 2. Enter expected precipitation depth (in) in blue cell.
Step 3. Read trigger volumes (**bold**) in green cells.

Expected Precipitation Depth = 0.11
Aliquots per Sample = 17

Site	Area (ac)	Using RC calculated from flow data		
		RC	Expected Vol (ft^3)	Trigger Vol (ft^3)
Lucky	105	0.157	6582.5	**387**
Whitewater	498	0.069	13621.3	**801**
Main	79	0.246	7760.0	**456**
Main Alt	60	0.200	4791.6	**282**
Americana	875	0.144	50311.8	**2960**
Americana Alt	869	0.144	49966.8	**2939**
AS_6	204	0.046	3747.0	**220**
State	34	0.127	1724.2	**101**

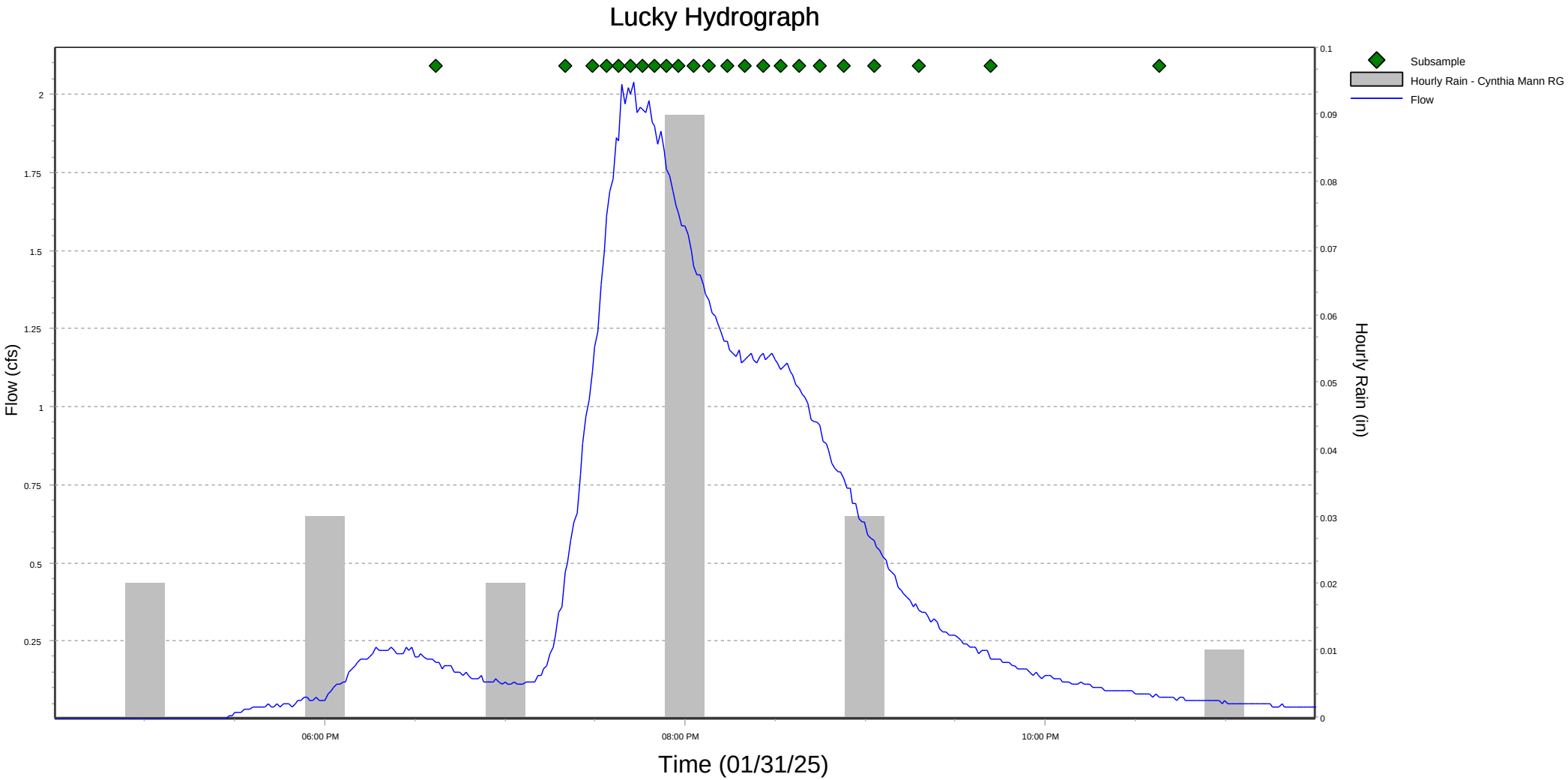
Notes:

Calculated RC = runoff volume (ft^3) / [precip (ft) x area (ft^2)]

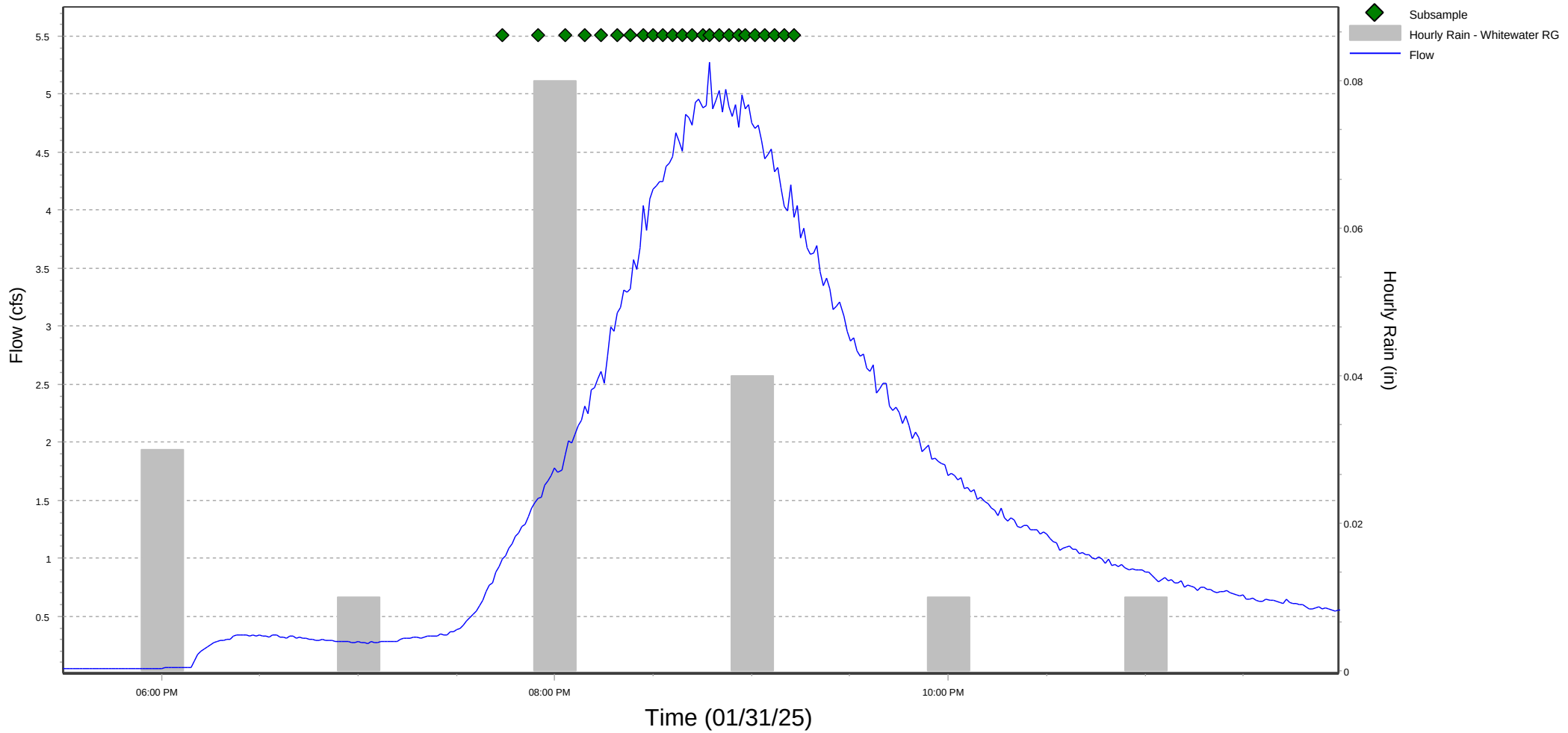
Where precip (ft) is the measured amount from local rain guage, and volume (ft^3) is the measured discharge, and area (ft^2) is the watershed area

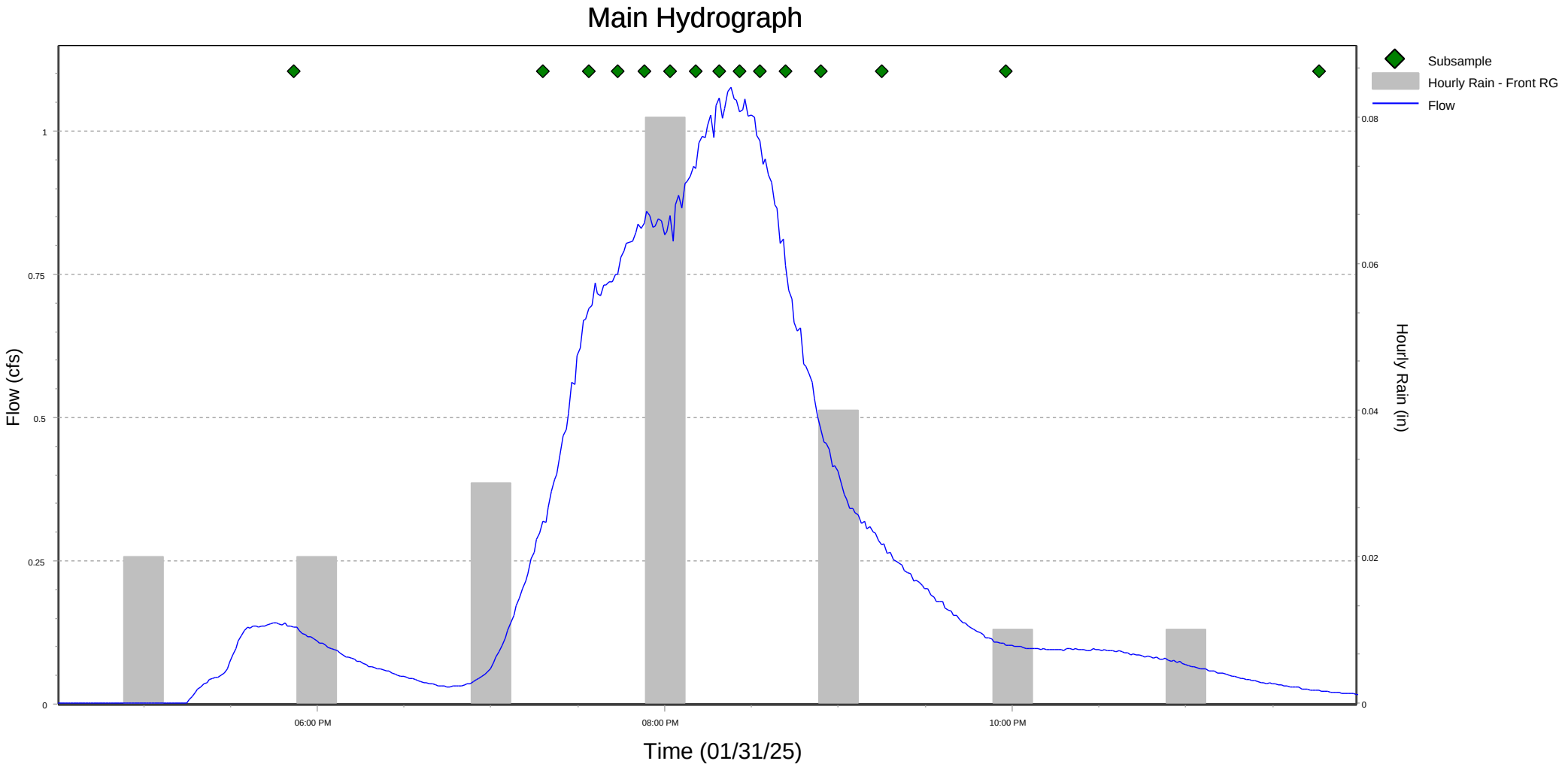
Expected volume (ft^3) = RC x expected precip (ft) x area (ft^2)

Attachment B: Storm Event Hydrographs

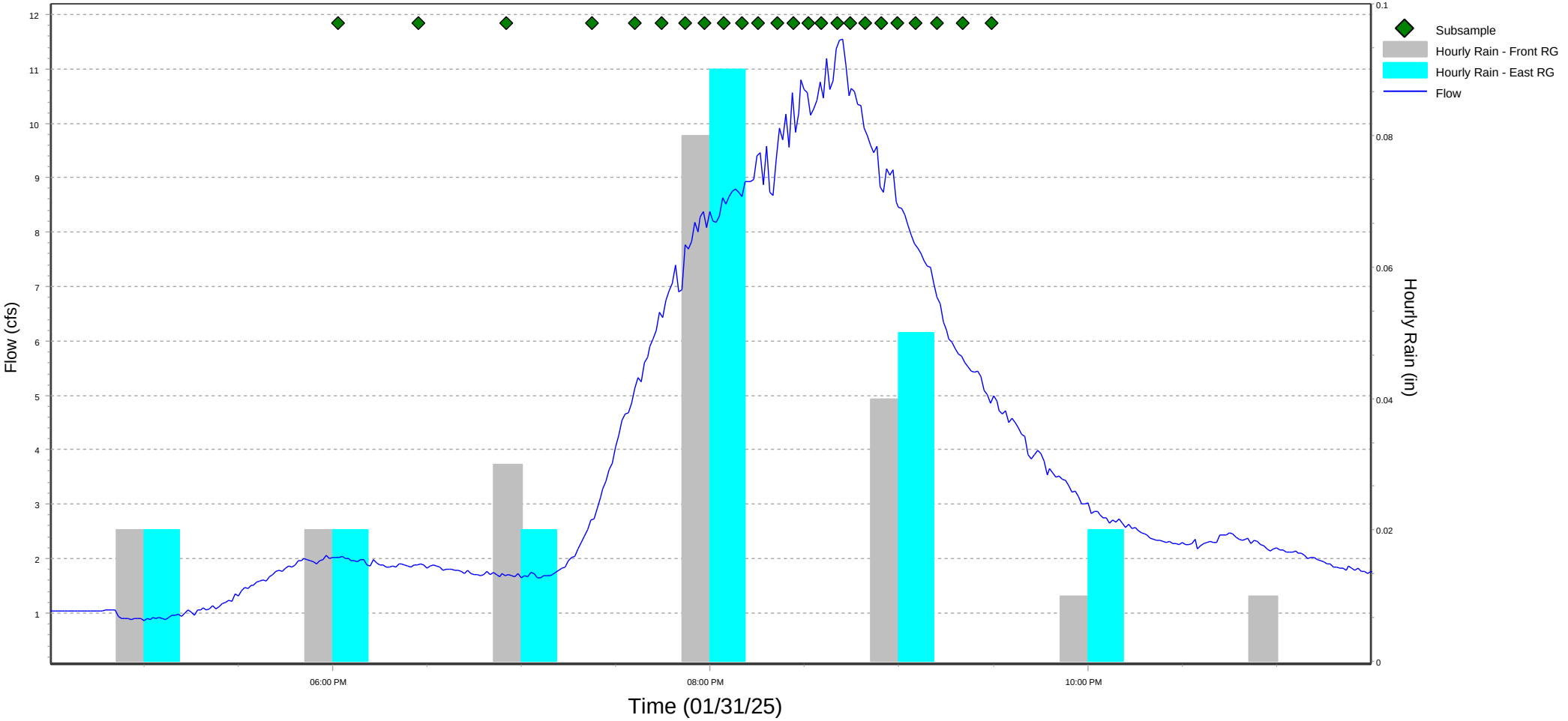

Lucky Hydrograph
Subsample
Hourly Rain - Cynthia Mann RG
Flow
Flow (cfs)
Hourly Rain (in)
Time (01/31/25)
06:00 PM
08:00 PM
10:00 PM
2
1.75
1.5
1.25
1
0.75
0.5
0.25
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0

Whitewater Hydrograph

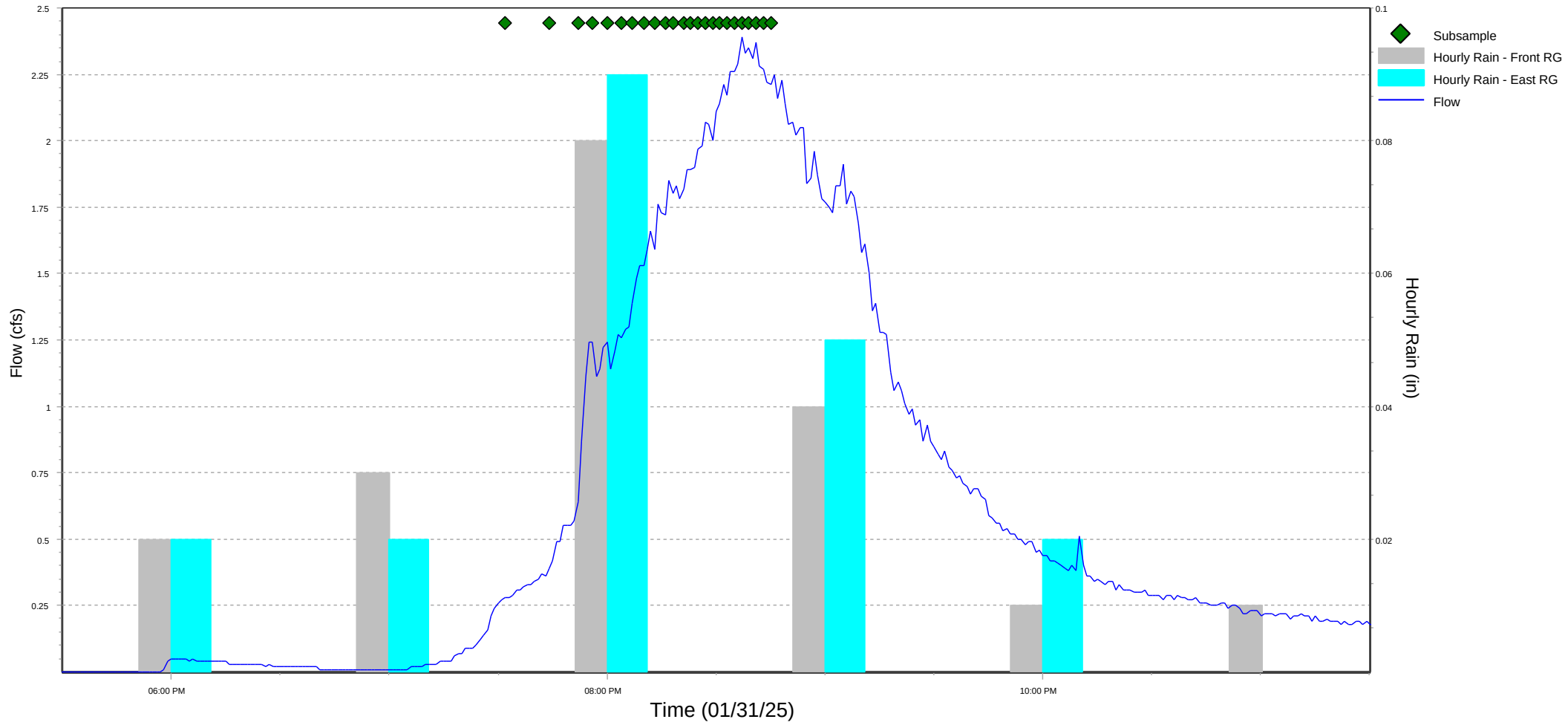



Main Hydrograph
Subsample
Hourly Rain - Front RG
Flow
Flow (cfs)
Hourly Rain (in)
1
0.75
0.5
0.25
0
0.08
0.06
0.04
0.02
0
06:00 PM
08:00 PM
10:00 PM
Time (01/31/25)

Americana Hydrograph



AS_6 Hydrograph



Attachment C: Field Forms

Set Up/ Shut Down Form – HACH (Lucky, [redacted], AS_6)

STATION: Lucky

SET UP

Personnel: ~~KC~~ KS, ST

Date/Time On-Site: 1/30/25 1309

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
13:13	1.61	0.00	0.00	13.2

Enable Condition or Velocity Cutoff:	2.61
Deadband:	1
Trigger Volume:	2895 gal

- [x] Install batteries on flowmeter and sampler
- [x] Perform decon. cycle
- [x] Install 15L sample bottle, with ice
- [x] Leave bottle lid at site, in a clean re-sealable plastic bag
- [x] Verify all cable and tubing connections
- [x] Check date and time on flowmeter and sampler
- [x] Set flowmeter program and sampler program parameters
- [x] Set logging interval to 1 minute
- [x] Start flowmeter program and sampler program
- [x] Verify running

Comments:
Replaced sampler desiccant.

off-site: 1332

SHUT DOWN

Personnel: ST

Date/Time On-Site: 2/3/25 1410

Time	Level (in)	Flow ~~(cfs)~~ GPM	Velocity (fps)	Total (cf)	Battery (V)
14:12	6.00	352.93	1.13	–	12.3
Downloaded to:		Stevens USB			

If flow monitoring is complete:	If continuing to monitor flow:
☒ Halt program on flowmeter	☐ Replace flowmeter battery
☒ Download flowmeter data	☐ Reset logging interval to 15 minutes
☒ Remove flowmeter battery	☐ Change velocity cutoff to 0.02 fps
	☐ Start program
	☐ Verify running

Comments: No grab taken. Composite bottle was left running overnight.

off site: 14:20

Composite Sample Collection

STATION: Lucky
Personnel: ST. KS

Bottle 1 **of** 1
Date/Time On-Site: 2/1 9:31

☐ Halt sampler program	
☐ Put lid on sample bottle; label sample bottle	
Sample ID:	250131-03 -WC
Approx Sample Volume (mL):	12,500 mL
Clarity (ex. Clear, Cloudy, Silty):	Cloudy
Color (ex. Clear, Gray, Tan, Brown, Black):	Grey
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	1/31 1837	Success	13	1/31 2014	Success
2	1920		14	2020	
3	1929		15	2026	
4	1934		16	2032	
5	1938		17	2038	
6	1942		18	2045	
7	1946		19	2053	
8	1950		20	2103	
9	1954		21	2118	
10	1958		22	2142	
11	2003		23	2238	
12	2008		24		

Comments:

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☒ Power off sampler, if separate from flowmeter	☐ Keep flowmeter running
☒ Keep flowmeter running	☐ Install new 15L bottle, add ice
☒ Add ice to sample transport cooler	☐ Restart program from beginning
	Date/Time Restarted: _____
	☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Set Up/ Shut Down Form – ISCO (Whitewater, Americana, State, Main)

TATION: Whitewater

SET UP

Personnel: KJ, ST

Date/Time On-Site: 1/30/25 1434

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
1434	1.97	0.05	0.22	—

Enable Condition:	3.15
Hysteresis:	1.0
Flow Pulse Interval:	801 cf

On-Site
- [x] Replace flowmeter battery, install sampler battery
- [x] Perform decon. cycle
- [x] Install 15L sample bottle, with ice
- [x] Leave bottle lid at site, in a clean re-sealable plastic bag
- [x] Set sampler program parameters
- [x] Check date/time on sampler
- [x] Verify all cable and tubing connections
- [x] Verify sampler program is running

Flowlink (Refer to PG 411 or PG 412, if needed)
- [x] Direct or Remote; Date/time 1/30/25 1439
- [x] Retrieve data and review recent flow history
- [x] Change Wireless Power Control to Storm Event
- [x] Change Data Storage Rates to 1 minute for Level, Velocity, Total Flow, and Flow Rate
- [x] Enable Sampler: On Trigger, and set Sampler Enable equation
- [x] Set Sampler Pacing to Flow Paced, and set trigger volume

Comments:

Date/Time Off-Site: 1/30/25 1500

SHUT DOWN

Personnel: ST

Date/Time On-Site: 2/3/25 10:44

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
10:44	3.90	0.65	1.03	-
	Downloaded to:	Stevens laptop		

On-Site
- [x] Replace flowmeter battery
- [x] Remove battery from sampler

Flowlink (Refer to Flowlink Instructions, if needed)
- [x] Direct or Remote; Date/time 2/3 10:44
- [x] Retrieve data
- [x] Change Wireless Power Control to Dry Weather
- [x] Change Data Storage Rates to 15 minutes for Level, Velocity, Total Flow, and Flow Rate
- [x] Enable Sampler: Never

Comments: No grab taken. Composite bottle left running overnight.

Date/Time Off-Site: 2/3/25 10:50

Revised 240123 KC

Composite Sample Collection

STATION: Whitewater **Bottle** 1 **of** 1

Personnel: ST, KJ **Date/Time On-Site:** 2/1 9:54

☐ Halt sampler program		
☐ Put lid on sample bottle; label sample bottle		
Sample ID:	250131-11	-WC
Approx Sample Volume (mL):	13,250 mL	
Clarity (ex. Clear, Cloudy, Silty):	Cloudy	
Color (ex. Clear, Gray, Tan, Brown, Black):	Brown	
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	1/31 1942	Success	13	1/31 2041	Success
2	1953		14	2043	
3	2001		15	2046	
4	2007		16	2049	
5	2013		17	2051	
6	2018		18	2054	
7	2022		19	2057	
8	2025		20	2100	
9	2029		21	2103	
10	2032		22	2106	
11	2035		23	2109	
12	2038		24	2112	

Comments: Composite bottle left overnight. Sampling team went home because of low confidence in the rain. Only 1 bottle at this site.

Date/Time Off-Site: 2/1 10:16

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☒ Power off sampler, if separate from flowmeter	☐ Keep flowmeter running
☒ Keep flowmeter running	☐ Install new 15L bottle; add ice
☒ Add ice to sample transport cooler	☐ Restart program from beginning
	Date/Time Restarted: _____
	☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Set Up/ Shut Down Form – ISCO (Whitewater, Americana, State) and Main)

TATION: Main

SET UP

Personnel: ST, KJ

Date/Time On-Site: 1/31/25 11:20

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
11:25	1.448	0.00	0.04	11.7
Enable Condition:		2.4		
Hysteresis:		1		
Flow Pulse Interval:		456 cf		

On-Site
- ☒ Replace flowmeter battery, install sampler battery
- ☒ Perform decon. cycle
- ☒ Install 15L sample bottle, with ice
- ☒ Leave bottle lid at site, in a clean re-sealable plastic bag
- ☒ Set sampler program parameters
- ☒ Check date/time on sampler
- ☒ Verify all cable and tubing connections
- ☒ Verify sampler program is running

Flowlink (Refer to PG 411 or PG 412, if needed)
- ☒ Direct or Remote; Date/time 1/31 11:25
- ☐ Retrieve data and review recent flow history
- ☐ Change Wireless Power Control to Storm Event
- ☒ Change Data Storage Rates to 1 minute for Level, Velocity, Total Flow, and Flow Rate
- ☒ Enable Sampler: On Trigger, and set Sampler Enable equation
- ☒ Set Sampler Pacing to Flow Paced, and set trigger volume

Comments:

Date/Time Off-Site: 1/31/25 ~~11~~ ST 11:31

SHUT DOWN

Personnel: ST

Date/Time On-Site: 2/3/25 ~~11:12~~ 15:01 ST

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
15:17	~~7.~~ 3.526	~	0.66a	11.63
~~11:16~~	~~9.51~~	3.92	2.826	11.53v ST
Downloaded to:		Stevens ~~laptop~~ ST USB		

On-Site
- ☐ Replace flowmeter battery
- ☐ Remove battery from sampler

Flowlink (Refer to Flowlink Instructions, if needed) 15:15
- ☒ Direct or Remote; Date/time 2/3/25 ~~11:17~~
- ☒ Retrieve data
- ☐ Change Wireless Power Control to Dry Weather
- ☐ Change Data Storage Rates to 15 minutes for Level, Velocity, Total Flow, and Flow Rate
- ☐ Enable Sampler: Never

Comments: No grab taken. Composite bottle left running overnight.

Date/Time Off-Site: 2/3/25 15:22

Composite Sample Collection

STATION: Main **Bottle** 1 **of** 1

Personnel: LS, ST **Date/Time On-Site:** 2/1/25 1103

☒ Halt sampler program			
☒ Put lid on sample bottle; label sample bottle			
Sample ID:	250131-12	-WC	
Approx Sample Volume (mL):	8750 mL		
Clarity (ex. Clear, Cloudy, Silty):	Cloudy		
Color (ex. Clear, Gray, Tan, Brown, Black):	Brown		
QA/QC Sample ID:		-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	1/31/25 1751	Success	13	1/31/25 2115	Success
2	1918	↓	14	2158	↓
3	1933		15	2346	
4	1944		16		
5	1953		17		
6	2002		18		
7	2010		19		
8	2018		20		
9	2025		21		
10	2033		22		
11	2042		23		
12	↓ 2054	↓	24		

Comments:

Date/Time Off-Site: 2/1/25 1110

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☒ Power off sampler, if separate from flowmeter	☐ Keep flowmeter running
☒ Keep flowmeter running	☐ Install new 15L bottle; add ice
☒ Add ice to sample transport cooler	☐ Restart program from beginning
	Date/Time Restarted: _____
	☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Set Up/ Shut Down Form – ISCO (Whitewater, Americana, State), Main)

TATION: Americana

SET UP

Personnel: KJ, ST

Date/Time On-Site: 1/30/25 1623

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
1623	4.00	0.85	1.694	11.78
Enable Condition:	5.09"			
Hysteresis:	1.0"			
Flow Pulse Interval:	2960 cf			

On-Site

- [x] Replace flowmeter battery, install sampler battery
- [x] Perform decon. cycle
- [x] Install 15L sample bottle, with ice
- [x] Leave bottle lid at site, in a clean re-sealable plastic bag
- [x] Set sampler program parameters
- [x] Check date/time on sampler
- [x] Verify all cable and tubing connections
- [x] Verify sampler program is running

Flowlink (Refer to PG 411 or PG 412, if needed)

- [x] Direct or Remote; Date/time 1/30/25 1630
- [x] Retrieve data and review recent flow history
- [x] Change Wireless Power Control to Storm Event
- [x] Change Data Storage Rates to 1 minute for Level, Velocity, Total Flow, and Flow Rate
- [x] Enable Sampler: On Trigger, and set Sampler Enable equation
- [x] Set Sampler Pacing to Flow Paced, and set trigger volume

Comments:

Date/Time Off-Site: 1/30 1640

SHUT DOWN

Personnel: ST

Date/Time On-Site: 2/3/25 11:12

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
11:16	7.81	3.92	2.826	11.53
Downloaded to:	Stevens laptop.			

On-Site

- [x] Replace flowmeter battery
- [x] Remove battery from sampler

Flowlink (Refer to Flowlink Instructions, if needed)

- [x] Direct or Remote; Date/time 2/3 11:17
- [x] Retrieve data
- [x] Change Wireless Power Control to Dry Weather
- [x] Change Data Storage Rates to 15 minutes for Level, Velocity, Total Flow, and Flow Rate
- [x] Enable Sampler: Never

Comments:

No grab taken. Composite bottle was left running overnight.

Date/Time Off-Site: 2/3/25 15:05

Composite Sample Collection

STATION: Americana **Bottle** 1 **of** 1

Personnel: K.J., ST **Date/Time On-Site:** 2/1/25 1045

☑ Halt sampler program	
☑ Put lid on sample bottle; label sample bottle	
Sample ID:	~~B~~ KS 250131-14 -WC
Approx Sample Volume (mL):	14750 mL
Clarity (ex. Clear, Cloudy, Silty):	Cloudy
Color (ex. Clear, Gray, Tan, Brown, Black):	Black
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	1/31/25 1800	Success	13	1/31/25 2025	Success
2	1826		14	2030	
3	1854		15	2034	
4	1921		16	2039	
5	1935		17	2043	
6	1943		18	2048	
7	1951		19	2053	
8	1957		20	2058	
9	2003		21	2104	
10	2009		22	2111	
11	2014		23	2119	
12	2020		24	2128	

Comments: Only 1 bottle at this site. Sampling team went home because of low confidence in the rain.

Date/Time Off-Site: _____

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☑ Power off sampler, if separate from flowmeter	☐ Keep flowmeter running
☑ Keep flowmeter running	☐ Install new 15L bottle; add ice
☑ Add ice to sample transport cooler	☐ Restart program from beginning
	Date/Time Restarted: _____
	☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Set Up/ Shut Down Form – HACH (Lucky, [redacted] AS_6)

STATION: AS-6

SET UP

Personnel: KJ, ST

Date/Time On-Site: 1/30/25 1704

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
1704	0.51	0.00	0.00	13.2

Enable Condition or Velocity Cutoff:	1.5"
Deadband:	1"
Trigger Volume:	1646 gal

- [x] Install batteries on flowmeter and sampler
- [ ] Perform decon. cycle
- [ ] Install 15L sample bottle, with ice
- [ ] Leave bottle lid at site, in a clean re-sealable plastic bag
- [ ] Verify all cable and tubing connections
- [x] Check date and time on flowmeter and sampler
- [x] Set flowmeter program and sampler program parameters
- [x] Set logging interval to 1 minute
- [x] Start flowmeter program and sampler program
- [x] Verify running

Comments:

Date/Time Off-Site: 1/30/25 17:13

SHUT DOWN

Personnel: ST

Date/Time On-Site: 2/3/25 1436

Time	Level (in)	Flow (cfs)	Velocity (fps)	Total (cf)	Battery (V)
1437	4.44	316.13	1.56	~.	12.4
Downloaded to:		Stevens USD			

If flow monitoring is complete:	**If continuing to monitor flow:**
[x] Halt program on flowmeter	[ ] Replace flowmeter battery
[x] Download flowmeter data	[ ] Reset logging interval to 15 minutes
[x] Remove flowmeter battery	[ ] Change velocity cutoff to 0.02 fps
	[ ] Start program
	[ ] Verify running

Comments: No grab taken. Composite bottle was left running overnight.

Date/Time Off-Site: 2/3/25 14:50

Composite Sample Collection

STATION: AS_6 **Bottle** 1 **of** 1

Personnel: KJ, ST **Date/Time On-Site:** 2/1/25 ~~1045~~ 1035

☒ Halt sampler program	
☒ Put lid on sample bottle; label sample bottle	
Sample ID:	250131-206 -WC
Approx Sample Volume (mL):	14750 mL
Clarity (ex. Clear, Cloudy, Silty):	Cloudy
Color (ex. Clear, Gray, Tan, Brown, Black):	Black
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	1/31/25 1932	Success	13	1/31/25 2023	Success
2	1944	"	14	2025	
3	1952		15	2027	
4	1956		16	2029	
5	2000		17	2031	
6	2004		18	2033	
7	2007		19	2035	
8	2010		20	2037	
9	2013		21	2039	
10	2016		22	2041	
11	2018		23	2043	
12	2021		24	2045	

Comments: Only 1 bottle at this site. Sampling team went home because of low confidence in the rain.

Date/Time Off-Site: 2/1/25 1039

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☐ Keep flowmeter running
☒ Keep flowmeter running	☐ Install new 15L bottle, add ice
☒ Add ice to sample transport cooler	☐ Restart program from beginning
	Date/Time Restarted: _____
	☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	3.0"	3500 mL	5.5"	7250 mL	8.0"	11000 mL	10.5"	14750 mL
1.0"	800 mL	3.5"	4250 mL	6.0"	8000 mL	8.5"	11750 mL	11.0"	15500 mL
1.5"	1400 mL	4.0"	5000 mL	6.5"	8750 mL	9.0"	12500 mL	11.5"	16250 mL
2.0"	2000 mL	4.5"	5750 mL	7.0"	9500 mL	9.5"	13250 mL	After 12"	1" = 1500 mL
2.5"	2750 mL	5.0"	6500 mL	7.5"	10250 mL	10.0"	14000 mL	Lab min	8,000 mL

Attachment D: Storm Event Analytical Reports

Report Date: 02/24/2025 11:22

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Samples in this Report

Lab ID	Sample	Sample Description	Matrix	Qualifiers	Sampled	Received
AC00389-01	ACST1C	250131-03-WC	Water		1/31/25 22:38	2/1/25 11:36
AC00389-02	ACST1C	250131-11-WC	Water		1/31/25 21:12	2/1/25 11:36
AC00389-03	ACST1C	250131-12-WC	Water		1/31/25 23:46	2/1/25 11:36
AC00389-04	ACST1C	250131-14-WC	Water		1/31/25 21:28	2/1/25 11:36

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Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1C	Location Description:	250131-03-WC
Date/Time Collected:	01/31/2025 18:37 - 01/31/2025 22:38		
Lab Number:	AC00389-01	Sample Collector:	K.J
Sample Type:	Composite	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
mmonia, as N	B250369	0.649	mg/L	0.0450	0.0450	Timberline Ammonia-001	02/03/25	2/3/25 11:25	RHC	
OD5	B250360	14.5	mg/L	2.00	2.00	SM 5210 B-2016	02/01/25	2/6/25 10:30	LRF	
hloride	B250467	6.07	mg/L	0.0200	0.0200	EPA 300.0, Rev. 2.1 (1993)	02/13/25	2/13/25 12:13	RHC	
OD	B250361	89.0	mg/L	7.00	7.00	HH 8000, Standard Method 5220 D	02/01/25	2/1/25 15:01	MCB	
itrate-Nitrite, as N	B250387	0.242	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	02/04/25	2/4/25 12:28	JAL	
KN	B250406	1.77	mg/L	0.100	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	02/06/25	2/6/25 15:24	RKG	
otal Dissolved Solids	B250396	46.3	mg/L	25.0	25.0	SM 2540 C-2015	02/07/25	2/8/25 13:02	RKG	
otal Suspended Solids	B250364	49.2	mg/L	0.900	0.900	SM 2540 D-2015	02/02/25	2/2/25 12:57	ASE	
urbidity	B250362	36.4	NTU	0.3	0.3	EPA 180.1, Rev. 2.0 (1993)	02/02/25	2/2/25 9:06	ASE	
Dissolved Wet Chemistry										
rthophosphate, as P	B250363	0.117	mg/L	3.00E-3	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	02/02/25	2/2/25 11:30	BAK	
Total Metals										
lercury	B250494	0.0111	ug/L	0.0100	0.0100	EPA 245.1	02/13/25	2/13/25 12:54	SAS	
rsenic	B250508	1.4	ug/L	0.050	0.050	EPA 200.8	02/16/25	2/17/25 15:38	DMW	
admium	B250508	0.055	ug/L	0.020	0.020	EPA 200.8	02/16/25	2/17/25 15:38	DMW	
alcium	B250335	5.77	mg/L	0.0400	0.0400	EPA 200.7	02/03/25	2/10/25 11:02	SMC	
ead	B250508	1.5	ug/L	0.010	0.010	EPA 200.8	02/16/25	2/17/25 15:38	DMW	
lagnesium	B250335	726	ug/L	80.0	80.0	EPA 200.7	02/03/25	2/10/25 11:02	SMC	
hosphorus as P	B250335	0.271	mg/L	0.0120	0.0120	EPA 200.7	02/03/25	2/10/25 11:02	SMC	
lardness	B250335	17.4	mg/L	0.100	0.100	SM 2340 B-2011	02/03/25	2/10/25 11:02	SMC	
Dissolved Metals										
admium	B250403	<0.0100	ug/L	0.010	0.010	EPA 200.8	02/15/25	2/15/25 14:32	DMW	U
opper	B250403	2.3	ug/L	0.14	0.14	EPA 200.8	02/15/25	2/15/25 14:32	DMW	
ead	B250403	0.083	ug/L	0.010	0.010	EPA 200.8	02/15/25	2/15/25 14:32	DMW	
inc	B250403	28.1	ug/L	0.50	0.50	EPA 200.8	02/15/25	2/15/25 14:32	DMW	

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Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1C	Location Description:	250131-11-WC
Date/Time Collected:	01/31/2025 19:42 - 01/31/2025 21:12		
Lab Number:	AC00389-02	Sample Collector:	K.J
Sample Type:	Composite	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
Ammonia, as N	B250369	0.925	mg/L	0.0450	0.0450	Timberline Ammonia-001	02/03/25	2/3/25 11:11	RHC	
BOD5	B250360	20.1	mg/L	2.00	2.00	SM 5210 B-2016	02/01/25	2/6/25 10:25	LRF	
Chloride	B250467	83.2	mg/L	0.0200	0.0200	EPA 300.0, Rev. 2.1 (1993)	02/13/25	2/13/25 12:39	RHC	
COD	B250361	140	mg/L	7.00	7.00	HH 8000, Standard Method 5220 D	02/01/25	2/1/25 15:33	MCB	
Nitrate-Nitrite, as N	B250387	0.842	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	02/04/25	2/4/25 12:33	JAL	
TKN	B250406	2.46	mg/L	0.100	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	02/06/25	2/6/25 15:26	RKG	
Total Dissolved Solids	B250396	230	mg/L	25.0	25.0	SM 2540 C-2015	02/07/25	2/8/25 13:03	RKG	
Total Suspended Solids	B250364	116	mg/L	0.900	0.900	SM 2540 D-2015	02/02/25	2/2/25 12:58	ASE	
Turbidity	B250362	113	NTU	1.2	0.3	EPA 180.1, Rev. 2.0 (1993)	02/02/25	2/2/25 8:47	ASE	D
Dissolved Wet Chemistry										
Orthophosphate, as P	B250363	0.182	mg/L	3.00E-3	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	02/02/25	2/2/25 11:35	BAK	
Total Metals										
Mercury	B250494	0.0115	ug/L	0.0100	0.0100	EPA 245.1	02/13/25	2/13/25 13:08	SAS	
Arsenic	B250508	4.0	ug/L	0.050	0.050	EPA 200.8	02/16/25	2/17/25 15:48	DMW	
Cadmium	B250508	0.12	ug/L	0.020	0.020	EPA 200.8	02/16/25	2/17/25 15:48	DMW	
Calcium	B250335	27.6	mg/L	0.0400	0.0400	EPA 200.7	02/03/25	2/10/25 11:05	SMC	
Lead	B250508	7.7	ug/L	0.010	0.010	EPA 200.8	02/16/25	2/17/25 15:48	DMW	
Magnesium	B250335	6380	ug/L	80.0	80.0	EPA 200.7	02/03/25	2/10/25 11:05	SMC	
Phosphorus as P	B250335	0.418	mg/L	0.0120	0.0120	EPA 200.7	02/03/25	2/10/25 11:05	SMC	
Hardness	B250335	95.2	mg/L	0.100	0.100	SM 2340 B-2011	02/03/25	2/10/25 11:05	SMC	
Dissolved Metals										
Cadmium	B250403	0.012	ug/L	0.010	0.010	EPA 200.8	02/15/25	2/15/25 14:41	DMW	
Copper	B250403	3.5	ug/L	0.14	0.14	EPA 200.8	02/15/25	2/15/25 14:41	DMW	
Lead	B250403	0.083	ug/L	0.010	0.010	EPA 200.8	02/15/25	2/15/25 14:41	DMW	
Zinc	B250403	22.0	ug/L	0.50	0.50	EPA 200.8	02/15/25	2/15/25 14:41	DMW	

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Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1C	Location Description:	250131-12-WC
Date/Time Collected:	01/31/2025 17:51 - 01/31/2025 23:46		
Lab Number:	AC00389-03	Sample Collector:	K.J
Sample Type:	Composite	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
mmonia, as N	B250369	1.08	mg/L	0.0450	0.0450	Timberline Ammonia-001	02/03/25	2/3/25 11:08	RHC	
OD5	B250360	15.8	mg/L	2.00	2.00	SM 5210 B-2016	02/01/25	2/6/25 10:16	LRF	
hloride	B250467	59.4	mg/L	0.0200	0.0200	EPA 300.0, Rev. 2.1 (1993)	02/13/25	2/13/25 13:06	RHC	
OD	B250361	134	mg/L	7.00	7.00	HH 8000, Standard Method 5220 D	02/01/25	2/1/25 15:20	MCB	
itrate-Nitrite, as N	B250387	0.285	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	02/04/25	2/4/25 12:34	JAL	
KN	B250406	2.17	mg/L	0.100	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	02/06/25	2/6/25 15:27	RKG	
otal Dissolved Solids	B250396	140	mg/L	25.0	25.0	SM 2540 C-2015	02/07/25	2/8/25 13:04	RKG	
otal Suspended Solids	B250364	89.0	mg/L	0.900	0.900	SM 2540 D-2015	02/02/25	2/2/25 12:22	ASE	
urbidity	B250362	86.5	NTU	1.2	0.3	EPA 180.1, Rev. 2.0 (1993)	02/02/25	2/2/25 9:23	ASE	D
Dissolved Wet Chemistry										
rthophosphate, as P	B250363	0.0795	mg/L	3.00E-3	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	02/02/25	2/2/25 11:36	BAK	
Total Metals										
lercury	B250465	0.0138	ug/L	0.0100	0.0100	EPA 245.1	02/11/25	2/11/25 14:18	SAS	
rsenic	B250508	2.0	ug/L	0.050	0.050	EPA 200.8	02/16/25	2/17/25 15:50	DMW	
admium	B250508	0.12	ug/L	0.020	0.020	EPA 200.8	02/16/25	2/17/25 15:50	DMW	
alcium	B250335	9.72	mg/L	0.0400	0.0400	EPA 200.7	02/03/25	2/10/25 11:21	SMC	
ead	B250508	7.2	ug/L	0.010	0.010	EPA 200.8	02/16/25	2/17/25 15:50	DMW	
lagnesium	B250335	2510	ug/L	80.0	80.0	EPA 200.7	02/03/25	2/10/25 11:21	SMC	
hosphorus as P	B250335	0.215	mg/L	0.0120	0.0120	EPA 200.7	02/03/25	2/10/25 11:21	SMC	
lardness	B250335	34.6	mg/L	0.100	0.100	SM 2340 B-2011	02/03/25	2/10/25 11:21	SMC	
Dissolved Metals										
admium	B250403	0.019	ug/L	0.010	0.010	EPA 200.8	02/15/25	2/15/25 14:44	DMW	
opper	B250403	4.7	ug/L	0.14	0.14	EPA 200.8	02/15/25	2/15/25 14:44	DMW	
ead	B250403	0.063	ug/L	0.010	0.010	EPA 200.8	02/15/25	2/15/25 14:44	DMW	
inc	B250403	40.8	ug/L	0.50	0.50	EPA 200.8	02/15/25	2/15/25 14:44	DMW	

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Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1C	Location Description:	250131-14-WC
Date/Time Collected:	01/31/2025 18:00 - 01/31/2025 21:28		
Lab Number:	AC00389-04	Sample Collector:	K.J
Sample Type:	Composite	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
Ammonia, as N	B250369	0.851	mg/L	0.0450	0.0450	Timberline Ammonia-001	02/03/25	2/3/25 11:04	RHC	
BOD5	B250360	22.6	mg/L	2.00	2.00	SM 5210 B-2016	02/01/25	2/6/25 10:07	LRF	
Chloride	B250467	176	mg/L	0.0400	0.0200	EPA 300.0, Rev. 2.1 (1993)	02/13/25	2/13/25 19:44	RHC	D
COD	B250361	153	mg/L	7.00	7.00	HH 8000, Standard Method 5220 D	02/01/25	2/1/25 15:48	MCB	
Nitrate-Nitrite, as N	B250387	0.734	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	02/04/25	2/4/25 12:36	JAL	
TKN	B250406	2.31	mg/L	0.100	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	02/06/25	2/6/25 15:28	RKG	
Total Dissolved Solids	B250396	378	mg/L	25.0	25.0	SM 2540 C-2015	02/07/25	2/8/25 13:05	RKG	
Total Suspended Solids	B250364	118	mg/L	0.900	0.900	SM 2540 D-2015	02/02/25	2/2/25 13:13	ASE	
Turbidity	B250362	97.7	NTU	1.2	0.3	EPA 180.1, Rev. 2.0 (1993)	02/02/25	2/2/25 9:01	ASE	D
Dissolved Wet Chemistry										
Orthophosphate, as P	B250363	0.157	mg/L	3.00E-3	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	02/02/25	2/2/25 11:37	BAK	
Total Metals										
Mercury	B250465	0.0144	ug/L	0.0100	0.0100	EPA 245.1	02/11/25	2/11/25 14:22	SAS	
Arsenic	B250508	3.7	ug/L	0.050	0.050	EPA 200.8	02/16/25	2/17/25 15:52	DMW	
Cadmium	B250508	0.14	ug/L	0.020	0.020	EPA 200.8	02/16/25	2/17/25 15:52	DMW	
Calcium	B250335	29.9	mg/L	0.0400	0.0400	EPA 200.7	02/03/25	2/10/25 11:25	SMC	
Lead	B250508	7.0	ug/L	0.010	0.010	EPA 200.8	02/16/25	2/17/25 15:52	DMW	
Magnesium	B250335	5820	ug/L	80.0	80.0	EPA 200.7	02/03/25	2/10/25 11:25	SMC	
Phosphorus as P	B250335	0.365	mg/L	0.0120	0.0120	EPA 200.7	02/03/25	2/10/25 11:25	SMC	
Hardness	B250335	98.5	mg/L	0.100	0.100	SM 2340 B-2011	02/03/25	2/10/25 11:25	SMC	
Dissolved Metals										
Cadmium	B250403	0.024	ug/L	0.010	0.010	EPA 200.8	02/15/25	2/15/25 14:46	DMW	
Copper	B250403	3.8	ug/L	0.14	0.14	EPA 200.8	02/15/25	2/15/25 14:46	DMW	
Lead	B250403	0.091	ug/L	0.010	0.010	EPA 200.8	02/15/25	2/15/25 14:46	DMW	
Zinc	B250403	35.0	ug/L	0.50	0.50	EPA 200.8	02/15/25	2/15/25 14:46	DMW	

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Quality Control Report

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry									
Batch: B250360									
Blank (B250360-BLK1)									
BOD5	<2	mg/L					02/06/2025	LRF	U
LCS (B250360-BS1)									
BOD5			87.0	84.6-115.4			02/06/2025	LRF	
LCS (B250360-BS2)									
BOD5			90.2	84.6-115.4			02/06/2025	LRF	
Duplicate (B250360-DUP1)	Source ID: AC00390-01								
BOD5					5.93	30	02/06/2025	LRF	
Batch: B250361									
Blank (B250361-BLK1)									
COD	<7	mg/L					02/01/2025	MCB	U
LCS (B250361-BS1)									
COD			98.7	90-110			02/01/2025	MCB	
Duplicate (B250361-DUP1)	Source ID: AC00391-01								
COD					1.34	10	02/01/2025	MCB	
Batch: B250362									
Blank (B250362-BLK1)									
Turbidity	<0.3	NTU					02/02/2025	ASE	U
LCS (B250362-BS1)									
Turbidity			100	90-110			02/02/2025	ASE	
Duplicate (B250362-DUP1)	Source ID: AC00389-01								
Turbidity					0.547	25	02/02/2025	ASE	
Batch: B250364									
Blank (B250364-BLK1)									
Total Suspended Solids	<0.9	mg/L					02/02/2025	ASE	U
LCS (B250364-BS1)									
Total Suspended Solids			102	90-110			02/02/2025	ASE	
Duplicate (B250364-DUP1)	Source ID: AC00389-02								
Total Suspended Solids					0.802	20	02/02/2025	ASE	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B250369									
Blank (B250369-BLK1)									
Ammonia, as N	<0.045	mg/L					02/03/2025	RHC	U
Blank (B250369-BLK2)									
Ammonia, as N	<0.045	mg/L					02/03/2025	RHC	U
LCS (B250369-BS1)									
Ammonia, as N			98.7	90-110			02/03/2025	RHC	
Duplicate (B250369-DUP1) Source ID: LS02247-02									
Ammonia, as N					0.0858	20	02/03/2025	RHC	D
Matrix Spike (B250369-MS1) Source ID: LS02247-02									
Ammonia, as N			101	84-115			02/03/2025	RHC	D
Matrix Spike Dup (B250369-MSD1) Source ID: LS02247-02									
Ammonia, as N			95.5	84-115	4.28	20	02/03/2025	RHC	D
Batch: B250387									
Blank (B250387-BLK1)									
Nitrate-Nitrite, as N	<0.025	mg/L					02/04/2025	JAL	U
Blank (B250387-BLK2)									
Nitrate-Nitrite, as N	<0.025	mg/L					02/04/2025	JAL	U
LCS (B250387-BS1)									
Nitrate-Nitrite, as N			96.6	90-110			02/04/2025	JAL	
LCS (B250387-BS2)									
Nitrate-Nitrite, as N			99.6	90-110			02/04/2025	JAL	
Duplicate (B250387-DUP1) Source ID: AC00389-01									
Nitrate-Nitrite, as N					0.159	10	02/04/2025	JAL	
Duplicate (B250387-DUP2) Source ID: BB04482-01									
Nitrate-Nitrite, as N					1.34	10	02/04/2025	JAL	
Duplicate (B250387-DUP3) Source ID: BB04484-06									
Nitrate-Nitrite, as N					0.158	10	02/04/2025	JAL	
Duplicate (B250387-DUP4) Source ID: LS02235-02									
Nitrate-Nitrite, as N					2.49	10	02/04/2025	JAL	
Matrix Spike (B250387-MS1) Source ID: AC00389-01									
Nitrate-Nitrite, as N			93.1	90-110			02/04/2025	JAL	
Matrix Spike (B250387-MS2) Source ID: BB04482-01									
Nitrate-Nitrite, as N			95.9	90-110			02/04/2025	JAL	
Matrix Spike (B250387-MS3) Source ID: BB04484-06									
Nitrate-Nitrite, as N			94.9	90-110			02/04/2025	JAL	
Matrix Spike (B250387-MS4) Source ID: LS02235-02									
Nitrate-Nitrite, as N			94.7	90-110			02/04/2025	JAL	
Matrix Spike Dup (B250387-MSD1) Source ID: AC00389-01									
Nitrate-Nitrite, as N			93.9	90-110	0.699	10	02/04/2025	JAL	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B250387 (Continued)									
Matrix Spike Dup (B250387-MSD2) Source ID: BB04482-01									
Nitrate-Nitrite, as N			96.1	90-110	0.148	10	02/04/2025	JAL	
Matrix Spike Dup (B250387-MSD3) Source ID: BB04484-06									
Nitrate-Nitrite, as N			94.2	90-110	0.538	10	02/04/2025	JAL	
Matrix Spike Dup (B250387-MSD4) Source ID: LS02235-02									
Nitrate-Nitrite, as N			94.5	90-110	0.134	10	02/04/2025	JAL	
Batch: B250396									
Blank (B250396-BLK1)									
Total Dissolved Solids	<25	mg/L					02/08/2025	RKG	U
LCS (B250396-BS1)									
Total Dissolved Solids			91.7	90-110			02/08/2025	RKG	
Duplicate (B250396-DUP1) Source ID: WB03605-06									
Total Dissolved Solids					0.596	10	02/07/2025	RKG	
Batch: B250406									
Blank (B250406-BLK1)									
TKN	<0.1	mg/L					02/06/2025	RKG	U
Blank (B250406-BLK2)									
TKN	<0.1	mg/L					02/06/2025	RKG	U
LCS (B250406-BS1)									
TKN			100	80-120			02/06/2025	RKG	
LCS (B250406-BS2)									
TKN			101	80-120			02/06/2025	RKG	
Duplicate (B250406-DUP1) Source ID: BB04433-01									
TKN					0.264	20	02/06/2025	RKG	D
Duplicate (B250406-DUP2) Source ID: BB04469-02									
TKN					0.654	20	02/06/2025	RKG	D
Duplicate (B250406-DUP3) Source ID: WB03581-05									
TKN					0.355	20	02/06/2025	RKG	D
Matrix Spike (B250406-MS1) Source ID: BB04433-01									
TKN			103	80-120			02/06/2025	RKG	D
Matrix Spike (B250406-MS2) Source ID: BB04469-02									
TKN			102	80-120			02/06/2025	RKG	D
Matrix Spike (B250406-MS3) Source ID: WB03581-05									
TKN			97.9	80-120			02/06/2025	RKG	D
Matrix Spike Dup (B250406-MSD1) Source ID: BB04433-01									
TKN			105	80-120	1.14	20	02/06/2025	RKG	D
Matrix Spike Dup (B250406-MSD2) Source ID: BB04469-02									
TKN			103	80-120	0.412	20	02/06/2025	RKG	D
Matrix Spike Dup (B250406-MSD3) Source ID: WB03581-05									
TKN			108	80-120	3.38	20	02/06/2025	RKG	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B250467									
Blank (B250467-BLK1)									
Chloride	<0.02	mg/L					02/12/2025	RHC	U
LCS (B250467-BS1)									
Chloride			102	90-110			02/12/2025	RHC	
Duplicate (B250467-DUP1) Source ID: WB03605-06									
Chloride					0.148	10	02/13/2025	RHC	D
Duplicate (B250467-DUP2) Source ID: LS02250-02									
Chloride					0.176	10	02/13/2025	RHC	D
Matrix Spike (B250467-MS1) Source ID: WB03605-06									
Chloride			97.7	90-110			02/13/2025	RHC	D
Matrix Spike (B250467-MS2) Source ID: LS02250-02									
Chloride			97.6	90-110			02/13/2025	RHC	D
Matrix Spike Dup (B250467-MSD1) Source ID: WB03605-06									
Chloride			97.6	90-110	0.0393	10	02/13/2025	RHC	D
Matrix Spike Dup (B250467-MSD2) Source ID: LS02250-02									
Chloride			97.0	90-110	0.261	10	02/13/2025	RHC	D
Dissolved Wet Chemistry									
Batch: B250363									
Blank (B250363-BLK1)									
Orthophosphate, as P	<0.003	mg/L					02/02/2025	BAK	U
LCS (B250363-BS1)									
Orthophosphate, as P			95.4	90-110			02/02/2025	BAK	
Duplicate (B250363-DUP1) Source ID: AC00389-01									
Orthophosphate, as P					0.119	10	02/02/2025	BAK	
Matrix Spike (B250363-MS1) Source ID: AC00389-01									
Orthophosphate, as P			98.4	90-110			02/02/2025	BAK	
Matrix Spike Dup (B250363-MSD1) Source ID: AC00389-01									
Orthophosphate, as P			101	90-110	1.03	10	02/02/2025	BAK	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals									
Batch: B250335									
Blank (B250335-BLK1)									
Calcium	<0.04	mg/L					02/10/2025	SMC	U
Magnesium	<80	ug/L					02/10/2025	SMC	U
Phosphorus as P	<0.012	mg/L					02/10/2025	SMC	U
LCS (B250335-BS1)									
Calcium			100	85-115			02/10/2025	SMC	
Magnesium			101	85-115			02/10/2025	SMC	
Phosphorus as P			102	85-115			02/10/2025	SMC	
Duplicate (B250335-DUP1) Source ID: AC00389-02									
Calcium					1.09	20	02/10/2025	SMC	
Magnesium					0.404	20	02/10/2025	SMC	
Phosphorus as P					1.39	20	02/10/2025	SMC	
Duplicate (B250335-DUP2) Source ID: ES00370-06									
Calcium					0.482	20	02/10/2025	SMC	
Magnesium					0.318	20	02/10/2025	SMC	
Phosphorus as P					3.41	20	02/10/2025	SMC	
Matrix Spike (B250335-MS1) Source ID: AC00389-02									
Calcium			103	70-130			02/10/2025	SMC	
Magnesium			99.9	70-130			02/10/2025	SMC	
Phosphorus as P			101	70-130			02/10/2025	SMC	
Matrix Spike (B250335-MS2) Source ID: ES00370-06									
Calcium			101	70-130			02/10/2025	SMC	
Magnesium			99.4	70-130			02/10/2025	SMC	
Phosphorus as P			103	70-130			02/10/2025	SMC	
Matrix Spike Dup (B250335-MSD1) Source ID: AC00389-02									
Calcium			103	70-130	0.231	20	02/10/2025	SMC	
Magnesium			101	70-130	0.603	20	02/10/2025	SMC	
Phosphorus as P			103	70-130	1.78	20	02/10/2025	SMC	
Matrix Spike Dup (B250335-MSD2) Source ID: ES00370-06									
Calcium			101	70-130	0.228	20	02/10/2025	SMC	
Magnesium			99.4	70-130	0.0390	20	02/10/2025	SMC	
Phosphorus as P			103	70-130	0.374	20	02/10/2025	SMC	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals (Continued)									
Batch: B250465									
Blank (B250465-BLK1)									
Mercury	<0.01	ug/L					02/11/2025	SAS	U
LCS (B250465-BS1)									
Mercury			105	85-115			02/11/2025	SAS	
Duplicate (B250465-DUP1) Source ID: EP00426-02									
Mercury					NR	20	02/11/2025	SAS	U
Duplicate (B250465-DUP2) Source ID: AC00391-01									
Mercury					NR	20	02/11/2025	SAS	U
Matrix Spike (B250465-MS1) Source ID: EP00426-02									
Mercury			102	70-130			02/11/2025	SAS	
Matrix Spike (B250465-MS2) Source ID: AC00391-01									
Mercury			99.6	70-130			02/11/2025	SAS	
Matrix Spike Dup (B250465-MSD1) Source ID: EP00426-02									
Mercury			105	70-130	2.90	20	02/11/2025	SAS	
Matrix Spike Dup (B250465-MSD2) Source ID: AC00391-01									
Mercury			102	70-130	2.83	20	02/11/2025	SAS	
Batch: B250494									
Blank (B250494-BLK1)									
Mercury	<0.01	ug/L					02/13/2025	SAS	U
LCS (B250494-BS1)									
Mercury			100	85-115			02/13/2025	SAS	
Duplicate (B250494-DUP1) Source ID: AC00389-01									
Mercury					NR	20	02/13/2025	SAS	U
Matrix Spike (B250494-MS1) Source ID: AC00389-01									
Mercury			96.6	70-130			02/13/2025	SAS	
Matrix Spike Dup (B250494-MSD1) Source ID: AC00389-01									
Mercury			87.7	70-130	8.69	20	02/13/2025	SAS	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals (Continued)									
Batch: B250508									
Blank (B250508-BLK1)									
Arsenic	<0.050	ug/L					02/17/2025	DMW	U
Cadmium	<0.020	ug/L					02/17/2025	DMW	U
Lead	<0.010	ug/L					02/17/2025	DMW	U
LCS (B250508-BS1)									
Arsenic			103	85-115			02/17/2025	DMW	
Cadmium			104	85-115			02/17/2025	DMW	
Lead			106	85-115			02/17/2025	DMW	
Duplicate (B250508-DUP1) Source ID: AC00389-01									
Arsenic					0.676	20	02/17/2025	DMW	
Cadmium					5.69	20	02/17/2025	DMW	
Lead					2.44	20	02/17/2025	DMW	
Matrix Spike (B250508-MS1) Source ID: AC00389-01									
Arsenic			103	70-130			02/17/2025	DMW	
Cadmium			105	70-130			02/17/2025	DMW	
Lead			106	70-130			02/17/2025	DMW	
Matrix Spike Dup (B250508-MSD1) Source ID: AC00389-01									
Arsenic			102	70-130	0.698	20	02/17/2025	DMW	
Cadmium			105	70-130	0.433	20	02/17/2025	DMW	
Lead			105	70-130	0.541	20	02/17/2025	DMW	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Dissolved Metals									
Batch: B250403									
Blank (B250403-BLK1)									
Cadmium	<0.010	ug/L					02/15/2025	DMW	U
Copper	<0.14	ug/L					02/15/2025	DMW	U
Lead	<0.010	ug/L					02/15/2025	DMW	U
Zinc	<0.50	ug/L					02/15/2025	DMW	U
LCS (B250403-BS1)									
Cadmium			103	85-115			02/15/2025	DMW	
Copper			101	85-115			02/15/2025	DMW	
Lead			103	85-115			02/15/2025	DMW	
Zinc			99.1	85-115			02/15/2025	DMW	
Duplicate (B250403-DUP1) Source ID: AC00389-01									
Cadmium					NR	10	02/15/2025	DMW	
Copper					1.68	10	02/15/2025	DMW	
Lead					0.859	10	02/15/2025	DMW	
Zinc					0.383	10	02/15/2025	DMW	
Matrix Spike (B250403-MS1) Source ID: AC00389-01									
Cadmium			102	70-130			02/15/2025	DMW	
Copper			101	70-130			02/15/2025	DMW	
Lead			103	70-130			02/15/2025	DMW	
Zinc			98.3	70-130			02/15/2025	DMW	
Matrix Spike Dup (B250403-MSD1) Source ID: AC00389-01									
Cadmium			101	70-130	0.741	10	02/15/2025	DMW	
Copper			99.7	70-130	1.18	10	02/15/2025	DMW	
Lead			100	70-130	2.90	10	02/15/2025	DMW	
Zinc			98.8	70-130	0.233	10	02/15/2025	DMW	

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Notes and Definitions

tem	Definition
)	Data reported from a dilution
I	Analyte included in the analysis, but not detected
IR	No result for this parameter.

lethod Reference Acronyms

Colilert	Colilert, IDEXX Laboratories, Inc.
EPA	Manual of Methods for Chemical Analysis of Water and Wastes, USEPA
GS	USGS Techniques of Water-Resources Investigations
HH	Hach Spectrophotometer Procedures Manual
SM	Standard Methods for the Examination of Water and Wastewater
SW	Test methods for Evaluating Solid Waste, SW-846

Stephen Quintero or Azubike Emenari
QA/QC Coordinator

Leslea Basterrechea
Water Quality Laboratory Manager

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Ada County Highway District

ACHD

Attn: Steven Turner
3775 Adams Street
Garden City, Idaho 83714-6418
Tel. (208) 407-4284

Purchase Order: 63069586

Project: Stormwater PI

Sampler(s): Steven Turner
Kristen Jolliffe

Lab#	Begin Date	End Date	Begin Time	End Time	Sample Identification	Sampler Initials	Matrix: Water	Type: Grab	Type: Composite	BOD5 - SM 5210 B	COD - Hach 8000	TSS - SM 2540 D	TDS - SM 2540 C	TKN - EPA 351.2	TP - EPA 200.7	Orthophosphate - EPA 365.1	Total As, Cd, Pb - EPA 200.8	Diss. Cd Cu, Pb, Zn - EPA 200.8	Total Hg - EPA 245.1	E. Coli - IDEXX Colilert	Turbidity - EPA 180.1	Hardness - SM 2340 B-2011	NO3+NO2 - EPA 353.2	Timberline Ammonia-001	Chloride - EPA 300.0	Total Containers
AC00385-01	1/31/25	1/31/25	1837	2238	250131-03-WC	KJ	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	1
-02	↓	↓	1942	2112 2346	250131-11-WC	KJ	X		X																	1
-03			1751	~~2342~~	250131-12-WC	KJ	X		X																	1
-04			1800	2128	250131-14-WC	KJ	X		X																	1

Relinquished by (sign)	Date &Time Transferred	Received by (sign)	Comments/ Special Instructions
Kristen Jolliffe	2/1/25 1135	April L Stoffel 2/1/25 1136	

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Samples in this Report

Lab ID	Sample	Sample Description	Matrix	Qualifiers	Sampled	Received
AC00390-01	ACST1C	250131-206-WC	Water		1/31/25 20:45	2/1/25 11:36

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Analysis Report

Location:	ACST1C	Location Description:	250131-206-WC
Date/Time Collected:	01/31/2025 19:32 - 01/31/2025 20:45		
Lab Number:	AC00390-01	Sample Collector:	K.J
Sample Type:	Composite	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
mmonia, as N	B250369	0.941	mg/L	0.0450	0.0450	Timberline Ammonia-001	02/03/25	2/3/25 11:01	RHC	
BOD5	B250360	38.8	mg/L	2.00	2.00	SM 5210 B-2016	02/01/25	2/6/25 9:50	LRF	
Chloride	B250467	37.6	mg/L	0.0200	0.0200	EPA 300.0, Rev. 2.1 (1993)	02/13/25	2/13/25 13:59	RHC	
COD	B250361	250	mg/L	7.00	7.00	HH 8000, Standard Method 5220 D	02/01/25	2/1/25 14:43	MCB	
Nitrate-Nitrite, as N	B250387	0.267	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	02/04/25	2/4/25 12:37	JAL	
TKN	B250406	4.33	mg/L	0.100	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	02/06/25	2/6/25 15:29	RKG	
Total Dissolved Solids	B250396	126	mg/L	25.0	25.0	SM 2540 C-2015	02/07/25	2/8/25 13:06	RKG	
Total Suspended Solids	B250364	230	mg/L	0.900	0.900	SM 2540 D-2015	02/02/25	2/2/25 12:35	ASE	
Turbidity	B250362	144	NTU	1.2	0.3	EPA 180.1, Rev. 2.0 (1993)	02/02/25	2/2/25 8:40	ASE	D
Dissolved Wet Chemistry										
Orthophosphate, as P	B250363	0.384	mg/L	3.00E-3	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	02/02/25	2/2/25 11:39	BAK	
Total Metals										
Mercury	B250465	0.0145	ug/L	0.0100	0.0100	EPA 245.1	02/11/25	2/11/25 14:25	SAS	
Arsenic	B250508	2.8	ug/L	0.050	0.050	EPA 200.8	02/16/25	2/17/25 15:55	DMW	
Cadmium	B250508	0.15	ug/L	0.020	0.020	EPA 200.8	02/16/25	2/17/25 15:55	DMW	
Calcium	B250335	9.54	mg/L	0.0400	0.0400	EPA 200.7	02/03/25	2/10/25 11:28	SMC	
Lead	B250508	10.6	ug/L	0.010	0.010	EPA 200.8	02/16/25	2/17/25 15:55	DMW	
Magnesium	B250335	2350	ug/L	80.0	80.0	EPA 200.7	02/03/25	2/10/25 11:28	SMC	
Phosphorus as P	B250335	0.740	mg/L	0.0120	0.0120	EPA 200.7	02/03/25	2/10/25 11:28	SMC	
Hardness	B250335	33.5	mg/L	0.100	0.100	SM 2340 B-2011	02/03/25	2/10/25 11:28	SMC	
Dissolved Metals										
Cadmium	B250403	0.015	ug/L	0.010	0.010	EPA 200.8	02/15/25	2/15/25 14:49	DMW	
Copper	B250403	4.6	ug/L	0.14	0.14	EPA 200.8	02/15/25	2/15/25 14:49	DMW	
Lead	B250403	0.27	ug/L	0.010	0.010	EPA 200.8	02/15/25	2/15/25 14:49	DMW	
Zinc	B250403	27.9	ug/L	0.50	0.50	EPA 200.8	02/15/25	2/15/25 14:49	DMW	

* The reported adjusted "MDL" is sample-specific. The analysis MDL as defined by 40 CFR pt 136 App.B, was corrected for dilution, dry weight, or method-defined ML.

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Quality Control Report

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry									
Batch: B250360									
Blank (B250360-BLK1)									
BOD5	<2	mg/L					02/06/2025	LRF	U
LCS (B250360-BS1)									
BOD5			87.0	84.6-115.4			02/06/2025	LRF	
LCS (B250360-BS2)									
BOD5			90.2	84.6-115.4			02/06/2025	LRF	
Duplicate (B250360-DUP1)	Source ID: AC00390-01								
BOD5					5.93	30	02/06/2025	LRF	
Batch: B250361									
Blank (B250361-BLK1)									
COD	<7	mg/L					02/01/2025	MCB	U
LCS (B250361-BS1)									
COD			98.7	90-110			02/01/2025	MCB	
Duplicate (B250361-DUP1)	Source ID: AC00391-01								
COD					1.34	10	02/01/2025	MCB	
Batch: B250362									
Blank (B250362-BLK1)									
Turbidity	<0.3	NTU					02/02/2025	ASE	U
LCS (B250362-BS1)									
Turbidity			100	90-110			02/02/2025	ASE	
Duplicate (B250362-DUP1)	Source ID: AC00389-01								
Turbidity					0.547	25	02/02/2025	ASE	
Batch: B250364									
Blank (B250364-BLK1)									
Total Suspended Solids	<0.9	mg/L					02/02/2025	ASE	U
LCS (B250364-BS1)									
Total Suspended Solids			102	90-110			02/02/2025	ASE	
Duplicate (B250364-DUP1)	Source ID: AC00389-02								
Total Suspended Solids					0.802	20	02/02/2025	ASE	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B250369									
Blank (B250369-BLK1)									
Ammonia, as N	<0.045	mg/L					02/03/2025	RHC	U
Blank (B250369-BLK2)									
Ammonia, as N	<0.045	mg/L					02/03/2025	RHC	U
LCS (B250369-BS1)									
Ammonia, as N			98.7	90-110			02/03/2025	RHC	
Duplicate (B250369-DUP1) Source ID: LS02247-02									
Ammonia, as N					0.0858	20	02/03/2025	RHC	D
Matrix Spike (B250369-MS1) Source ID: LS02247-02									
Ammonia, as N			101	84-115			02/03/2025	RHC	D
Matrix Spike Dup (B250369-MSD1) Source ID: LS02247-02									
Ammonia, as N			95.5	84-115	4.28	20	02/03/2025	RHC	D
Batch: B250387									
Blank (B250387-BLK1)									
Nitrate-Nitrite, as N	<0.025	mg/L					02/04/2025	JAL	U
Blank (B250387-BLK2)									
Nitrate-Nitrite, as N	<0.025	mg/L					02/04/2025	JAL	U
LCS (B250387-BS1)									
Nitrate-Nitrite, as N			96.6	90-110			02/04/2025	JAL	
LCS (B250387-BS2)									
Nitrate-Nitrite, as N			99.6	90-110			02/04/2025	JAL	
Duplicate (B250387-DUP1) Source ID: AC00389-01									
Nitrate-Nitrite, as N					0.159	10	02/04/2025	JAL	
Duplicate (B250387-DUP2) Source ID: BB04482-01									
Nitrate-Nitrite, as N					1.34	10	02/04/2025	JAL	
Duplicate (B250387-DUP3) Source ID: BB04484-06									
Nitrate-Nitrite, as N					0.158	10	02/04/2025	JAL	
Duplicate (B250387-DUP4) Source ID: LS02235-02									
Nitrate-Nitrite, as N					2.49	10	02/04/2025	JAL	
Matrix Spike (B250387-MS1) Source ID: AC00389-01									
Nitrate-Nitrite, as N			93.1	90-110			02/04/2025	JAL	
Matrix Spike (B250387-MS2) Source ID: BB04482-01									
Nitrate-Nitrite, as N			95.9	90-110			02/04/2025	JAL	
Matrix Spike (B250387-MS3) Source ID: BB04484-06									
Nitrate-Nitrite, as N			94.9	90-110			02/04/2025	JAL	
Matrix Spike (B250387-MS4) Source ID: LS02235-02									
Nitrate-Nitrite, as N			94.7	90-110			02/04/2025	JAL	
Matrix Spike Dup (B250387-MSD1) Source ID: AC00389-01									
Nitrate-Nitrite, as N			93.9	90-110	0.699	10	02/04/2025	JAL	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B250387 (Continued)									
Matrix Spike Dup (B250387-MSD2) Source ID: BB04482-01									
Nitrate-Nitrite, as N			96.1	90-110	0.148	10	02/04/2025	JAL	
Matrix Spike Dup (B250387-MSD3) Source ID: BB04484-06									
Nitrate-Nitrite, as N			94.2	90-110	0.538	10	02/04/2025	JAL	
Matrix Spike Dup (B250387-MSD4) Source ID: LS02235-02									
Nitrate-Nitrite, as N			94.5	90-110	0.134	10	02/04/2025	JAL	
Batch: B250396									
Blank (B250396-BLK1)									
Total Dissolved Solids	<25	mg/L					02/08/2025	RKG	U
LCS (B250396-BS1)									
Total Dissolved Solids			91.7	90-110			02/08/2025	RKG	
Duplicate (B250396-DUP1) Source ID: WB03605-06									
Total Dissolved Solids					0.596	10	02/07/2025	RKG	
Batch: B250406									
Blank (B250406-BLK1)									
TKN	<0.1	mg/L					02/06/2025	RKG	U
Blank (B250406-BLK2)									
TKN	<0.1	mg/L					02/06/2025	RKG	U
LCS (B250406-BS1)									
TKN			100	80-120			02/06/2025	RKG	
LCS (B250406-BS2)									
TKN			101	80-120			02/06/2025	RKG	
Duplicate (B250406-DUP1) Source ID: BB04433-01									
TKN					0.264	20	02/06/2025	RKG	D
Duplicate (B250406-DUP2) Source ID: BB04469-02									
TKN					0.654	20	02/06/2025	RKG	D
Duplicate (B250406-DUP3) Source ID: WB03581-05									
TKN					0.355	20	02/06/2025	RKG	D
Matrix Spike (B250406-MS1) Source ID: BB04433-01									
TKN			103	80-120			02/06/2025	RKG	D
Matrix Spike (B250406-MS2) Source ID: BB04469-02									
TKN			102	80-120			02/06/2025	RKG	D
Matrix Spike (B250406-MS3) Source ID: WB03581-05									
TKN			97.9	80-120			02/06/2025	RKG	D
Matrix Spike Dup (B250406-MSD1) Source ID: BB04433-01									
TKN			105	80-120	1.14	20	02/06/2025	RKG	D
Matrix Spike Dup (B250406-MSD2) Source ID: BB04469-02									
TKN			103	80-120	0.412	20	02/06/2025	RKG	D
Matrix Spike Dup (B250406-MSD3) Source ID: WB03581-05									
TKN			108	80-120	3.38	20	02/06/2025	RKG	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B250467									
Blank (B250467-BLK1)									
Chloride	<0.02	mg/L					02/12/2025	RHC	U
LCS (B250467-BS1)									
Chloride			102	90-110			02/12/2025	RHC	
Duplicate (B250467-DUP1) Source ID: WB03605-06									
Chloride					0.148	10	02/13/2025	RHC	D
Duplicate (B250467-DUP2) Source ID: LS02250-02									
Chloride					0.176	10	02/13/2025	RHC	D
Matrix Spike (B250467-MS1) Source ID: WB03605-06									
Chloride			97.7	90-110			02/13/2025	RHC	D
Matrix Spike (B250467-MS2) Source ID: LS02250-02									
Chloride			97.6	90-110			02/13/2025	RHC	D
Matrix Spike Dup (B250467-MSD1) Source ID: WB03605-06									
Chloride			97.6	90-110	0.0393	10	02/13/2025	RHC	D
Matrix Spike Dup (B250467-MSD2) Source ID: LS02250-02									
Chloride			97.0	90-110	0.261	10	02/13/2025	RHC	D
Dissolved Wet Chemistry									
Batch: B250363									
Blank (B250363-BLK1)									
Orthophosphate, as P	<0.003	mg/L					02/02/2025	BAK	U
LCS (B250363-BS1)									
Orthophosphate, as P			95.4	90-110			02/02/2025	BAK	
Duplicate (B250363-DUP1) Source ID: AC00389-01									
Orthophosphate, as P					0.119	10	02/02/2025	BAK	
Matrix Spike (B250363-MS1) Source ID: AC00389-01									
Orthophosphate, as P			98.4	90-110			02/02/2025	BAK	
Matrix Spike Dup (B250363-MSD1) Source ID: AC00389-01									
Orthophosphate, as P			101	90-110	1.03	10	02/02/2025	BAK	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals									
Batch: B250335									
Blank (B250335-BLK1)									
Calcium	<0.04	mg/L					02/10/2025	SMC	U
Magnesium	<80	ug/L					02/10/2025	SMC	U
Phosphorus as P	<0.012	mg/L					02/10/2025	SMC	U
LCS (B250335-BS1)									
Calcium			100	85-115			02/10/2025	SMC	
Magnesium			101	85-115			02/10/2025	SMC	
Phosphorus as P			102	85-115			02/10/2025	SMC	
Duplicate (B250335-DUP1) Source ID: AC00389-02									
Calcium					1.09	20	02/10/2025	SMC	
Magnesium					0.404	20	02/10/2025	SMC	
Phosphorus as P					1.39	20	02/10/2025	SMC	
Duplicate (B250335-DUP2) Source ID: ES00370-06									
Calcium					0.482	20	02/10/2025	SMC	
Magnesium					0.318	20	02/10/2025	SMC	
Phosphorus as P					3.41	20	02/10/2025	SMC	
Matrix Spike (B250335-MS1) Source ID: AC00389-02									
Calcium			103	70-130			02/10/2025	SMC	
Magnesium			99.9	70-130			02/10/2025	SMC	
Phosphorus as P			101	70-130			02/10/2025	SMC	
Matrix Spike (B250335-MS2) Source ID: ES00370-06									
Calcium			101	70-130			02/10/2025	SMC	
Magnesium			99.4	70-130			02/10/2025	SMC	
Phosphorus as P			103	70-130			02/10/2025	SMC	
Matrix Spike Dup (B250335-MSD1) Source ID: AC00389-02									
Calcium			103	70-130	0.231	20	02/10/2025	SMC	
Magnesium			101	70-130	0.603	20	02/10/2025	SMC	
Phosphorus as P			103	70-130	1.78	20	02/10/2025	SMC	
Matrix Spike Dup (B250335-MSD2) Source ID: ES00370-06									
Calcium			101	70-130	0.228	20	02/10/2025	SMC	
Magnesium			99.4	70-130	0.0390	20	02/10/2025	SMC	
Phosphorus as P			103	70-130	0.374	20	02/10/2025	SMC	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals (Continued)									
Batch: B250465									
Blank (B250465-BLK1)									
Mercury	<0.01	ug/L					02/11/2025	SAS	U
LCS (B250465-BS1)									
Mercury			105	85-115			02/11/2025	SAS	
Duplicate (B250465-DUP1) Source ID: EP00426-02									
Mercury					NR	20	02/11/2025	SAS	U
Duplicate (B250465-DUP2) Source ID: AC00391-01									
Mercury					NR	20	02/11/2025	SAS	U
Matrix Spike (B250465-MS1) Source ID: EP00426-02									
Mercury			102	70-130			02/11/2025	SAS	
Matrix Spike (B250465-MS2) Source ID: AC00391-01									
Mercury			99.6	70-130			02/11/2025	SAS	
Matrix Spike Dup (B250465-MSD1) Source ID: EP00426-02									
Mercury			105	70-130	2.90	20	02/11/2025	SAS	
Matrix Spike Dup (B250465-MSD2) Source ID: AC00391-01									
Mercury			102	70-130	2.83	20	02/11/2025	SAS	
Batch: B250508									
Blank (B250508-BLK1)									
Arsenic	<0.050	ug/L					02/17/2025	DMW	U
Cadmium	<0.020	ug/L					02/17/2025	DMW	U
Lead	<0.010	ug/L					02/17/2025	DMW	U
LCS (B250508-BS1)									
Arsenic			103	85-115			02/17/2025	DMW	
Cadmium			104	85-115			02/17/2025	DMW	
Lead			106	85-115			02/17/2025	DMW	
Duplicate (B250508-DUP1) Source ID: AC00389-01									
Arsenic					0.676	20	02/17/2025	DMW	
Cadmium					5.69	20	02/17/2025	DMW	
Lead					2.44	20	02/17/2025	DMW	
Matrix Spike (B250508-MS1) Source ID: AC00389-01									
Arsenic			103	70-130			02/17/2025	DMW	
Cadmium			105	70-130			02/17/2025	DMW	
Lead			106	70-130			02/17/2025	DMW	
Matrix Spike Dup (B250508-MSD1) Source ID: AC00389-01									
Arsenic			102	70-130	0.698	20	02/17/2025	DMW	
Cadmium			105	70-130	0.433	20	02/17/2025	DMW	
Lead			105	70-130	0.541	20	02/17/2025	DMW	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Dissolved Metals									
Batch: B250403									
Blank (B250403-BLK1)									
Cadmium	<0.010	ug/L					02/15/2025	DMW	U
Copper	<0.14	ug/L					02/15/2025	DMW	U
Lead	<0.010	ug/L					02/15/2025	DMW	U
Zinc	<0.50	ug/L					02/15/2025	DMW	U
LCS (B250403-BS1)									
Cadmium			103	85-115			02/15/2025	DMW	
Copper			101	85-115			02/15/2025	DMW	
Lead			103	85-115			02/15/2025	DMW	
Zinc			99.1	85-115			02/15/2025	DMW	
Duplicate (B250403-DUP1) Source ID: AC00389-01									
Cadmium					NR	10	02/15/2025	DMW	
Copper					1.68	10	02/15/2025	DMW	
Lead					0.859	10	02/15/2025	DMW	
Zinc					0.383	10	02/15/2025	DMW	
Matrix Spike (B250403-MS1) Source ID: AC00389-01									
Cadmium			102	70-130			02/15/2025	DMW	
Copper			101	70-130			02/15/2025	DMW	
Lead			103	70-130			02/15/2025	DMW	
Zinc			98.3	70-130			02/15/2025	DMW	
Matrix Spike Dup (B250403-MSD1) Source ID: AC00389-01									
Cadmium			101	70-130	0.741	10	02/15/2025	DMW	
Copper			99.7	70-130	1.18	10	02/15/2025	DMW	
Lead			100	70-130	2.90	10	02/15/2025	DMW	
Zinc			98.8	70-130	0.233	10	02/15/2025	DMW	

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Notes and Definitions

Item	Definition
	Data reported from a dilution
	Analyte included in the analysis, but not detected
R	No result for this parameter.

Method Reference Acronyms

Colilert	Colilert, IDEXX Laboratories, Inc.
EPA	Manual of Methods for Chemical Analysis of Water and Wastes, USEPA
GS	USGS Techniques of Water-Resources Investigations
HH	Hach Spectrophotometer Procedures Manual
SM	Standard Methods for the Examination of Water and Wastewater
SW	Test methods for Evaluating Solid Waste, SW-846

Stephen Quintero or Azubike Emenari
QA/QC Coordinator

Leslea Basterrechea
Water Quality Laboratory Manager

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Ada County Highway District

Attn: Steven Turner
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Purchase Order: 63069586
Project: Stormwater PI
Sampler(s): Steven Turner
Kristen Jolliffe

Lab#	Begin Date	End Date	Begin Time	End Time	Sample Identification	Sampler Initials	Matrix: Water	Type: Grab	Type: Composite	BOD_5 - SM 5210 B	COD - Hach 8000	TSS - SM 2540 D	TDS - SM 2540 C	TKN - EPA 351.2	TP - EPA 200.7	Orthophosphate - EPA 365.1	Total As, Cd, Pb - EPA 200.8	Diss. Cd Cu, Pb, Zn - EPA 200.8	Total Hg - EPA 245.1	E. Coli - IDEXX Colilert	Turbidity - EPA 180.1	Hardness - SM 2340 B-2011	NO3+NO2 - EPA 353.2	Timberline Ammonia-001	Chloride - EPA 300.0	Total Containers
AC003590-01	1/31/25	1/31/25	1932	2045	250131-206-WC	KJ	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	1

Relinquished by (sign)	Date &Time Transferred	Received by (sign)	Comments/ Special Instructions
Kristen Jolliffe	3/11/25 1135	3/11-25 1130	

Technical Memorandum

1290 W. Myrtle St. Suite 340
Boise, ID 83702

Phone: 801.316.9859

Prepared for: Ada County Highway District

Project Title: NPDES Phase I Stormwater Support WY 2025

Project No.: 196784

Technical Memorandum

Subject: ACHD Phase I Storm Event Report for February 23, 2025

Date: May 5, 2025

To: Monica Lowe

Cc: Steven Turner
Kristen Jolliffe

From: Zuly Lapa, Project Engineer

Prepared by: Reghan Hodges, Project Engineer

Reviewed by: Zuly Lapa, EIT, Project Engineer
Nikki McDonald, PE, Project Manager

Limitations:

This document was prepared solely for ACHD in accordance with professional standards at the time the services were performed and in accordance with the contract between ACHD and Brown and Caldwell dated September 14, 2024. This document is governed by the specific scope of work authorized by ACHD; it is not intended to be relied upon by any other party except for regulatory authorities contemplated by the scope of work. We have relied on information or instructions provided by ACHD and other parties and, unless otherwise expressly indicated, have made no independent investigation as to the validity, completeness, or accuracy of such information.

Section 1: Introduction

The Environmental Protection Agency Region 10 reissued a Municipal Separate Storm Sewer System Phase I National Pollutant Discharge Elimination System Permit (NPDES Permit), effective October 1, 2021, to Ada County Highway District (ACHD), Boise City, Ada County Drainage District No. 3, Idaho Transportation Department District 3, Boise State University, and Garden City. Under the NPDES Permit, Permittees are required to continue to conduct wet weather stormwater outfall monitoring and subwatershed monitoring. Four outfall monitoring sites (Lucky, Whitewater, Main, and Americana) and one subwatershed monitoring site (AS_6) have been established. The AS_6 site represents a subwatershed located within the Americana watershed. At each site, a minimum of three composite and three grab samples will be collected during Water Year (WY) 2025 (October 1, 2024, through September 30, 2025). The following storm event report summarizes stormwater sampling results from the February 23, 2025, storm event.

Section 2: Project Status

Table 2-1 is a summary of the sample types collected to date for WY 2025 Phase I Stormwater Outfall Monitoring. When samples are qualified, additional samples will be attempted from subsequent storms to collect unqualified samples.

Table 2-1. WY 2025 Samples Collected

Date	Lucky	Whitewater	Main	Americana	AS_6
December 14, 2024	G, C[1]	G, C	G, C	G, C	G, C
January 31, 2025	--, C	--, C[2]	--. C	--, C[2]	--, C[3]
February 23, 2025	G, C[4]	G, --	G, C	G, C[2]	G, C
Unqualified Samples:	2G, 1C	2G, 1C	2G, 3C	2G, 1C	2G, 2C
Samples Remaining:	1G, 2C	1G, 2C	1G, 0C	1G, 2C	1G, 1C

Notes:

– = no samples taken.

C = composite sample.

G = grab sample.

[1] *Equipment installation error resulted in negative flow and velocity; therefore, no composite subsamples were taken.*

[2] *Composite sample qualified due to lack of representativeness (50%–75%).*

[3] *Sample rejected due to lack of representativeness (<50%).*

[4] *Composite sample qualified due to exceedance of 6.0 °C.*

Section 3: Storm Event Summary

The February 23, 2025, storm event and the subsequent preparation and sampling efforts are detailed in the following sections.

3.1 Storm Detail

A summary of the forecast on which monitoring decisions were based is detailed below. The sampling event communication form that describes the forecast and summarizes the decision-making process from February 23, 2025, is included in Attachment A for reference.

Friday, February 21, 2025 (Sampling Event Communication)

- On the afternoon of February 21, the National Weather Service issued a forecast for a stratiform (consistent) system starting February 23 at 0500 until 1700. The chance of precipitation was 90%, with a 70%-80% probability of rain amounts to be greater than 0.1 inches over a 12-hour period. The forecasted precipitation for this event was 0.3 inches.

Saturday, February 22, 2025 (Set up)

- Setup was accomplished on the morning of February 22. An expected precipitation depth of 0.15 inches was used to set trigger volumes at monitoring stations. A runoff calculations worksheet showing how the trigger volumes were calculated is included in Attachment A.

Sunday, February 23, 2025 (Storm Event)

- The runoff started on February 23 at approximately 0516 and ended at 2359.
- Precipitation totals ranged between 0.27 and 0.38 inches at local rain gauges.

Flow measurements and precipitation data are listed in Table 1 along with a sampling summary. Hydrographs for the Lucky, Whitewater, Main, Americana and AS_6 sites showing flow, rain, and sample collection data are included in Attachment B. The Americana hydrograph depicts subsamples collected after the first composite sample was discarded, described below in Section 5.

3.2 Sampling Summary

Lucky, Whitewater, Main, Americana and AS_6 monitoring stations were set up on February 22, 2025, to collect flow-proportional composite samples during the storm. Sampler enable conditions were programmed into the Lucky, Whitewater, Main, Americana and AS_6 flowmeters. Setup and sampling information are included in Table 1. The field forms completed during setup/shutdown and sampling are included in Attachment C.

Grab Samples

Two, two-member teams mobilized to collect stormwater runoff grab samples and verify operation of the automatic sampling equipment on February 23 around 0545. Grab samples for Lucky, Whitewater, Main, Americana, and AS_6 were submitted to the Boise City Public Works Water Quality Laboratory (WQL) at 0856 on February 23. Results for grab samples, including field parameter and analytical data, are included in Table 2. Laboratory analytical reports are included in Attachment D.

Composite Samples

Composite samples were collected at the Lucky, Main, Americana and AS_6 monitoring stations and submitted to the WQL at 2044 on February 23. Analytical results are shown in Table 2 and pollutant loading estimates for the event are detailed in Table 3. Laboratory analytical reports are included in Attachment D.

Section 4: Quality Assurance/Quality Control

A summary of quality control samples collected during the February 23, 2025, storm event is presented below in Table 4-1. A field blank and a field duplicate were collected from the Whitewater monitoring station and a lab duplicate/composite split was collected from the AS_6 monitoring station. The analytical results for these samples are included in Table 4-1.

Table 4-1. Quality Control Samples			
Sample ID	Sample Type	Parent Sample	Conclusions
250223-11-001	Field blank	Whitewater grab	No *E. coli* detected in the field blank.
250223-11-101	Field duplicate	Whitewater grab	Relative percent difference was within the acceptable range.
250223-206-103	Lab duplicate/composite split	AS_6 composite	Relative percent difference was not within the acceptable range for dissolved lead and dissolved copper. Analytical values for dissolved lead and dissolved copper are considered estimates.

Data quality objectives for this storm were evaluated and tracked using the data validation review checklist included in Attachment A.

An acceptable composite sample represents at least 75 percent of the total discharge or at least 6 hours of the storm duration. The composite sample collected at Americana was qualified due to lack of representativeness (50 – 75 percent). See Section 5 for more information.

The AS_6 lab duplicate/composite split sample resulted in relative percent differences within the acceptable range for all results, with the exception of dissolved lead and dissolved copper. The dissolved lead and dissolved copper results are therefore considered estimates. Additionally, the composite sample collected at Lucky exceeded the preservation temperature maximum. Therefore, all constituents analyzed are considered estimates with the exception of total metals, hardness, and chloride, in accordance with 40CFR136. Acceptance and performance criteria for analytical and non-analytical data were met for the Main composite sample.

All grab samples collected met acceptance criteria.

Section 5: Notes and Recommendations

Whitewater

Composite sample bottles for Whitewater were not submitted to the WQL due to lack of sample representativeness. The duration of various sampler messages (those include “Power Failed”, “Sample Skipped”, “No More Liquid”, and “No Liquid Detected”) accounted for more than 50 percent of the total composite duration time. The sampling team replaced the battery on February 23, 2025, at 0925 and then later purged the line in attempt to clear the strainer. After further investigation, ACHD determined that the sampler tubing came loose from its mounting points in the pipe, which also caused the strainer to be disconnected from the tubing. The connections between the sampling tubing, strainer, and mounting points in the pipe were reinforced during spring maintenance. Longer amp hour batteries will be used at this monitoring station in the future.

Americana

The sampling team discovered the first composite sample bottle was primarily pre-storm dry weather samples. The sample bottle was discarded and not submitted to the WQL. Sampling of pre-storm flows likely resulted from modifying setup protocols due to recent rainfall.

Data Tables

Table 1. Sampling and Flow Summary					
	Lucky	Whitewater	Main	Americana	AS_6
Grab samples collected and submitted?	YES	YES	YES	YES	YES
Composite samples collected and submitted?	YES	NO	YES	YES	YES
Trigger volume (ft^3)	3,950 gal	1,093 cf	622 cf	4,036 cf	2,252 gal
Sampler enable condition (in) or Velocity cutoff (fps)	Level > 2.69	Level > 2.57	Level > 2.2	Level > 6.0	Level > 1.05
Deadband/ Hysteresis (in)	1.0"	1.0"	1.0"	1.0"	1.0"
Runoff start time	0540	0632	0516	0516	0600
Grab sample collection time	0714	0800	0814	0553	0744
Composite sample stop time	1849	--	1728	1927	1852
Runoff stop time	2031	2359	2025	2359	2049
Volume of discharge sampled (ft^3)	19,541	--	9,968	218,869	20,092
Total runoff volume (ft^3)	21,139	72,014	11,116	309,927	22,442
Percent of storm flow sampled (%)	92%	--	90%	71%	90%
Composite sample duration (hrs)	11.5	--	10	11.5	11
Storm Precipitation (in)	0.37	0.31	0.27	0.27/0.38	0.27/0.38
Referenced Rain Gauge	Cynthia Mann	Whitewater	Front	Front/East	Front/East
Sampler messages (counts): Success	38	--	17	57	66
Number of composite bottles filled	2	--	1	3	3
Composite sample volume (Approx.; ml)	21,250 mL	--	9,500 mL	33,750 mL	40,500 mL

Notes:

-- = No data

Table 2. Field and Analytical Data Summary

Monitoring Station	Sample Date	Sample ID Grab	Field Parameters				Analytical Parameters																				
			Dissolved Oxygen	pH	Conductivity	Temperature	E. coli	Sample ID Composite	BOD_5	COD	Chloride	Hardness as $CaCO_3$	Turbidity	TSS	TDS	Total Phosphorus	Orthophosphate as P	Ammonia as N	Nitrate + Nitrite as N	TKN	Arsenic, total	Cadmium, dissolved	Cadmium, total	Copper, dissolved	Lead, dissolved	Lead, total	Mercury, total	Zinc, dissolved
			mg/L	S.U.	uS/cm	C	mpn/100 mL		mg/L	mg/L	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Lucky	2/23/2025	250223-03-WG	10.03	7.99	114.81	8.01	35.0	250223-03-WC	2.77[2J]	22.0[2J]	3.93	16.2	25.8[2J]	12.6[2J]	39.0[2J]	0.103[2J]	0.0512[2J]	0.127[2J]	0.193[2J]	0.546[2J]	0.89	<0.0100[2J]	<0.0200	1.9[2J]	0.026[2J]	0.61	<0.0100	10.2[2J]
Whitewater	2/23/2025	250223-11-WG	10.22	7.64	180.45	6.34	127.4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Main	2/23/2025	250223-12-WG	10.87	7.98	203.06	7.74	18.9	250223-12-WC	4.66	51.0	28.0	20.8	32.9	29.1	75.3	0.100	0.0395	0.302	0.133	0.783	0.90	0.016	0.047	2.9	0.044	2.3	<0.0100	24.0
Americana	2/23/2025	250223-14-WG	5.59	8.04	714.07	12.19	17.3	250223-14-WC	3.56[1J]	31[1J]	72.4[1J]	87.8[1J]	13.9[1J]	21.3[1J]	214[1J]	0.123[1J]	0.0604[1J]	0.0779[1J]	0.687[1J]	0.583[1J]	3.4[1J]	0.012[1J]	0.032[1J]	2.0[1J]	0.036[1J]	1.9[1J]	<0.0100[1J]	15.4[1J]
AS_6	2/23/2025	250223-206-WG	10.85	8.23	320.50	6.25	161.6	250223-206-WC	6.17	56.0	17.8	14.4	45.2	37.6	76.5	0.224	0.104	0.0719	0.0847	0.905	2.1	<0.0100	0.044	3.7[1]	0.21[1]	4.2	<0.0100	10.1

Notes:

-- = No data.

[1] Relative percent difference was greater than 20% and both parent and QC sample were greater than five times the method detection limit. Values are considered estimates.

[1J] Composite sample qualified due to lack of representativeness (50% - 75%).

[2J] Composite sample qualified due to exceedance of 6.0° C.

Table 3. Event Pollutant Loading Estimates in Pounds						
Monitoring Station	Event Date	TSS	Total Phosphorus	Ammonia as N	Nitrate + Nitrite as N	TKN
Lucky	2/23/2025	16.6[2J]	0.136[2J]	0.168[2J]	0.255[2J]	0.720[2J]
Whitewater	2/23/2025	--	--	--	--	--
Main	2/23/2025	20.2	0.0694	0.210	0.0923	0.543
Americana	2/23/2025	412[1J]	2.38[1J]	1.51[1J]	13.3[1J]	11.3[1J]
AS_6	2/23/2025	52.7	0.314	0.101	0.119	1.27

Notes:

-- = No data

[1J] Composite sample qualified due to lack of representativeness (50% - 75%).

[2J] Composite sample qualified due to exceedance of 6.0° C.

Table 4. QC Sample Summary

Date	Parent Sample	Sample ID	Type	E. coli	BOD_5	COD	Chloride	Hardness as CaCO3	Turbidity	TSS	TDS	Total Phosphorus	Dissolved Orthophosphate	Ammonia	Nitrate + Nitrite (N)	TKN	Arsenic, total	Cadmium, dissolved	Cadmium, total	Copper, dissolved	Lead, dissolved	Lead, total	Mercury, total	Zinc, dissolved
				mpn/100 mL	mg/L	mg/L	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
2/23/2025	250223-11-WG	250223-11-001	Field Blank	<1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2/23/2025	250223-11-WG	250223-11-101	Field Duplicate	98.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Calculated parent/duplicate RPD				5%	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Allowable RPD				40%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
2/23/2025	250223-206-WC	250223-206-103	Lab Duplicate/Composite Split	--	6.18	61.0	18.3	14.4	46.3	36.8	75.0	0.222	0.103	0.0784	0.0970	0.941	2.0	<0.0100	0.038	4.9[1]	0.16[1]	4.0	<0.0100	9.6
Calculated parent/duplicate RPD				--	0%	9%	3%	0%	2%	2%	2%	1%	1%	9%	14%	4%	5%	0%	15%	28%	27%	5%	0%	5%
Allowable RPD				40%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%

Notes:

-- = No data

[1]Relative percent difference was greater than 20% and both parent and QC sample were greater than five times the method detection limit. Values are considered estimates.

Attachment A: Supplemental Documents

Sampling Event Communication Form

Data Validation Checklist

Runoff Calculation Worksheet

SAMPLING EVENT COMMUNICATION FORM

Date: 2/21/2025	Time: 3:58 PM	Initials: ST
Is there a targeted sampling event during the next 36 hours? (Or, if it is Friday, is a targeted event expected before 5:00 PM Monday?)		Yes

Past 72 hr Precip	0.30" at Airport
Date and time of expected event	2/23/25 5:00 am – 8:00 pm
Expected amount of precipitation	0.30"
Percent chance of precipitation	90%
Percent chance of >0.10" over 12 hours	70-80%

NWS Update

Spoke with Steven from NWS. This will be a stratiform (consistent) system starting early on Sunday morning around 5:00 am with a chance of light rain before. We will see consistent precip until 5:00 pm on Sunday. From 5:00 pm – 8:00 pm the system will turn showery and from 8:00 – 11:00 pm it will be sprinkles. There is still some uncertainty about the overall timing of this storm because of how far out we are.

Targeted Station & Samples

Lucky	Whitewater	Main	Americana	AS_6	State (Phase II)
☒ Grab	☒ Grab	☒ Grab	☒ Grab	☒ Grab	☒ Grab
☒ Composite	☒ Composite	☒ Composite	☒ Composite	☒ Composite	☒ Composite

Type of Forecasted Precipitation

☐ Light Rain	☒ Rain	☐ Rain on Snow
☐ Scattered Showers	☐ Thunder Showers	☐ Snowmelt
☐ Other: Snow		

Reasons for Not Targeting a Forecasted Storm and/or Stations

☐ Holiday
☒ Waiting on Antecedent Dry Period – Expires: 2/22/2025 9:53 PM
☐ Equipment Concerns:
☐ Other:

Text Forecast

NWS Forecast for: Boise ID
Issued by: National Weather Service Boise, ID
Last Update: 10:22 am MST Feb 21, 2025

Tonight: Increasing clouds, with a low around 28. Calm wind.
Saturday: Cloudy, then gradually becoming mostly sunny, with a high near 48. Light south southeast wind.
Saturday Night: Rain likely after 11pm. Mostly cloudy, with a low around 36. East southeast wind around 6 mph. Chance of precipitation is 60%.
Sunday: Rain. High near 53. Southeast wind around 7 mph. **Chance of precipitation is 90%. New precipitation amounts between a quarter and half of an inch possible.**
Sunday Night: Rain likely, mainly before 11pm. Cloudy, with a low around 42. East southeast wind 5 to 7 mph. **Chance of precipitation is 70%. New precipitation amounts between a tenth and quarter of an inch possible.**
Monday: A 30 percent chance of rain before 11am. Mostly cloudy, with a high near 58.
Monday Night: A 40 percent chance of rain. Mostly cloudy, with a low around 39.
Tuesday: A 20 percent chance of rain before 11am. Mostly sunny, with a high near 54.

Tuesday Night: Mostly clear, with a low around 31.
Wednesday: Sunny, with a high near 55.
Wednesday Night: Mostly clear, with a low around 33.
Thursday: Mostly sunny, with a high near 58.
Thursday Night: Partly cloudy, with a low around 33.
Friday: Mostly sunny, with a high near 56.

Forecast Discussion

Area Forecast Discussion
National Weather Service Boise ID
253 PM MST Fri Feb 21 2025

.SHORT TERM...Tonight through Sunday night...A weak upper wave will track across the region late tonight and Saturday. Outside of a low chance of showers across e-central Oregon and w-central Idaho, it most areas remain dry through the day. Any areas that pick up light snow will see less than a 1/2 inch through midday Saturday.

A much wetter pattern will unfold late Saturday night into Sunday as an atmospheric river pushes into the Pac NW. Modeled precipitable water data show this plume (1-1.5" values) to have a sub-tropical connection west of the Date Line. While the core of strongest winds aloft are forecast to remain just north and west of the region, there will be plenty of moisture transport in from the coast to generate rain and high elevation snow. Precipitable water values reach the 98%+ with W-SW winds at ~10kft MSL reaching 30-50 mph. **This will favor a period of continuous moderate to locally heavy precipitation on Sunday, especially across e-central Oregon, and the w-central ID and Boise mtns.** In these areas snow levels will start between 3500-4500 feet MSL Saturday night, allowing for minor accumulation of wet snow. The incoming Pacific air mass will quickly raise snow levels to between 6-8kft across the region on Sunday, bringing a rain/snow mix or changeover to rain except across the highest elevations. Total liquid amounts will reach 0.75-1.25" across the mountains with locally higher amounts of 1.5-1.75" translating to a wet 6-12" of snow above 7kft MSL through Sunday night. **At lower elevations, rain totals of 0.1-0.3" are forecast through Sunday night.** Valleys and mtn valleys will see breezy winds while higher mountains, tapping into the flow aloft, realize the strongest winds with gusts of 30-40 mph. Temperatures will be near normal Saturday and Sunday.

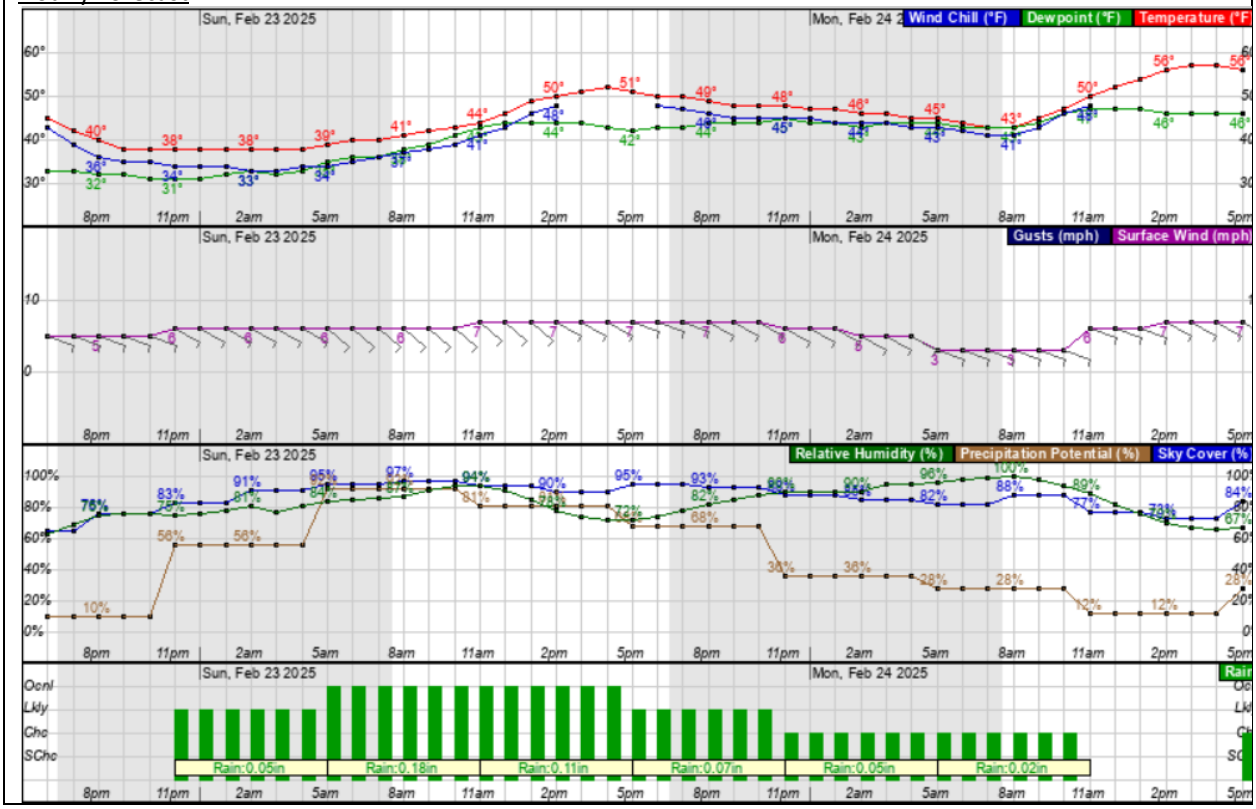
At this point we expect much of the mtn snowpack to be able to absorb the rain with minimal snowmelt. Some runoff is expected and with frozen ground this could lead to water ponding in low lying areas where drainage is limited. There is of some question on how the lower elevation snowpack will respond but we do expect rain/melt/higher elevation runoff to impact river flow. While all rivers are showing forecast rises, the Weiser, Malheur, Payette and Donner und Blitzen are a few that we`re keeping an eye on as hydrologic forecasts show a more notable response in these rivers by Monday. Otherwise expect to see smaller streams running near bankfull early next week.

.LONG TERM...Monday through Friday...The atmospheric river will

weaken on Monday, as zonal upper level low begins to strengthen over the region. Snow and rain showers will continue over the mountains through Tuesday, with snow levels rising to around 6500-7500 feet by Monday afternoon. Monday will be the warmest day of the long term period, with lower elevation highs in the upper 50s to low 60s (Boise has a 20% chance of exceeding 60F!), and mountain daytime highs in the mid 30s to mid 40s. Large precipitation totals from the Sunday-Monday atmospheric river event will occur, with valleys seeing anywhere from 0.25-0.50 inches of rain and mountains 1.00- 1.25 inches of rain for the 48 hour totals. Snow amounts above 6500- 7500 feet will be low, with most populated locations/roadways seeing anywhere from 1-3 inches, with high summits seeing up to 12-16 inches.

A weak low will skirt to north of us on Tuesday, dropping temperatures by 3-6 degrees and decreasing snow levels to 4500-5500 feet. Lingering snow showers will persist in the West Central Mountains on Tuesday, but a deep upper level ridge of high pressure will begin to build across the Western US by late Tuesday. This will keep our temperatures above normal with dry conditions through Friday. Excellent model agreement remains through the long term period in the evolution of the ridge, so forecast confidence in dry and warm conditions is high.

Hourly Forecast



Storm Event QA/QC Checklist – Phase I

STORM DATE: 02/23/2025				
A. Event and Data Completeness	**Yes**	**No**	**N/A**	**Notes**
1. Field data sheets filled out completely and clearly	X			
2. Field parameters reviewed, and any problems/issues addressed	X			
3. All samples collected as specified	X			
4. All samples delivered to lab promptly (review chain of custody rpts)	X			Lucky Comp received at 6.6° C
5. Inconsistencies/clarifications discussed with sampling team member			X	
6. All analytical reports from lab received	X			
B. Validation and Verification Methods	**Yes**	**No**	**N/A**	**Notes**
1. Outliers and unexpected values discussed with lab			X	
2. Appropriate analytical methods used	X			
3. All lab QA samples were within method acceptance criteria	X			
4. All samples reviewed and data qualifiers assigned if needed	X			
5. Data quality objective achieved	X			

C. Specific Storm and Sample QA/QC Criteria	Lucky	Whitewater	Main	Americana	AS_6	Program Criteria	Met	Qualify	Reject
1. Antecedent dry period (inches in previous 72-hours)	0.00"	0.02"	0.00"	0.00"	0.00"	< 0.11" in 72 hrs	X		
2. Precipitation (inches)	0.37"	0.31"	0.27	0.27"/ 0.38"	0.27"/ 0.38"	> 0.10"	X		
3. Sampled amount (% of total run-off)	92%	-	90%	71%	90%	>= 75% or >= 6 hrs: no qualifier >= 50% and <75%: qualify < 50%: reject	X		
4. Composite sample duration (hours)	11.5	-	10	11.5	11				
4. Ecoli sample holding time (hours)	3.5	2.5	2.5	5	3	<=8 hrs: no qualifier >8 and <=16 hrs.: qualify >16 hrs.: reject	X		
5. Filtering of samples for dissolved parameter analysis (hours)	14	-	14	12.5	14.5	<= 24 hrs: no qualifier > 24 hrs.: reject	X		

D. Notes

Whitewater – Composite not submitted to the WQ Lab due to lack of representativeness. It was later found that the sampler tubing had come loose from its mounting points in the pipe halfway through the storm.
Americana – Composite sample qualified due to lack of representativeness (50 – 75%).

Reviewed by: Glenn Timm **Date:** 4/29/25 **Approved by** Monica Love **Date** 4/29/25

Updated 220718 TL

Storm Runoff Estimates and Trigger Volumes

Step 1. Enter runoff coefficients in yellow cells.
Step 2. Enter expected precipitation depth (in) in blue cell.
Step 3. Read trigger volumes (**bold**) in green cells.

Expected Precipitation Depth =	0.15
Aliquots per Sample =	17

Site	Area (ac)	Using RC calculated from flow data		
		RC	Expected Vol (ft^3)	Trigger Vol (ft^3)
Lucky	105	0.157	8976.1	**528**
Whitewater	498	0.069	18574.5	**1093**
Main	79	0.246	10581.8	**622**
Main Alt	60	0.200	6534.0	**384**
Americana	875	0.144	68607.0	**4036**
Americana Alt	869	0.144	68136.6	**4008**
AS_6	204	0.046	5109.6	**301**
State	34	0.127	2351.2	**138**

Notes:

Calculated RC = runoff volume (ft^3) / [precip (ft) x area (ft^2)]

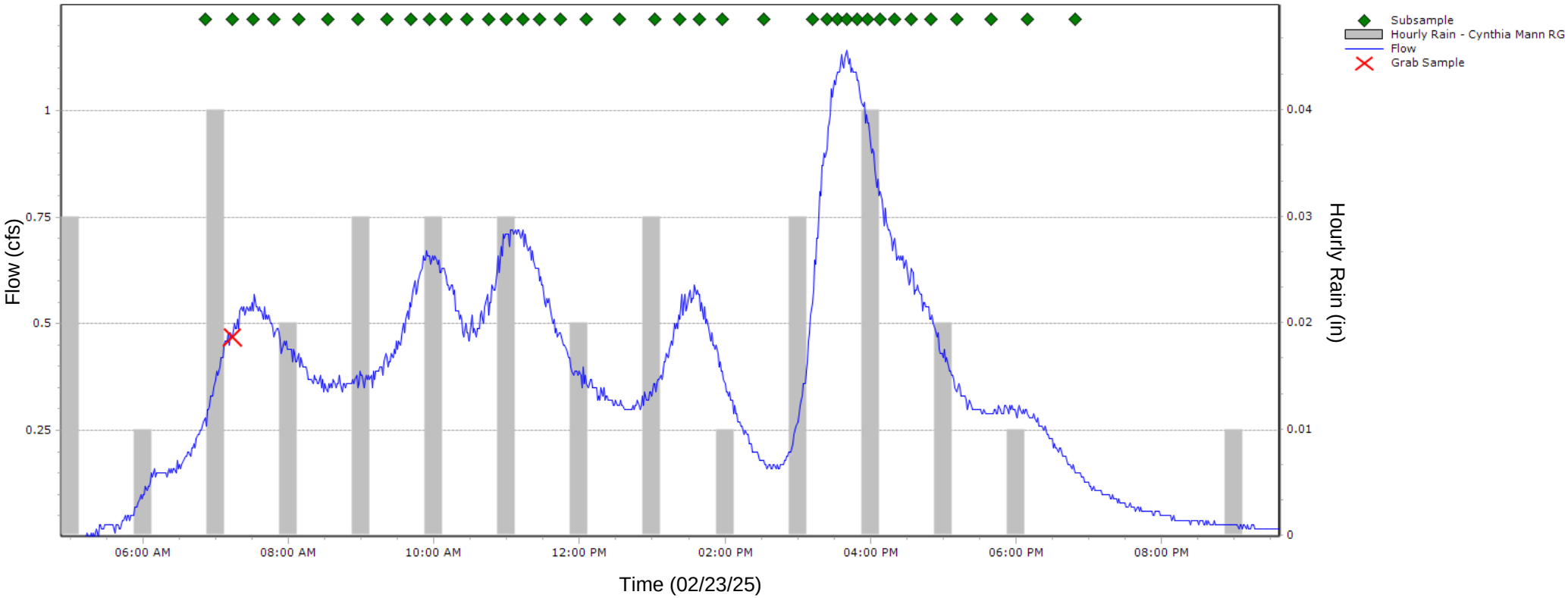
Where volume (ft^3) is the measured discharge, precip (ft) is the measured amount from local rain guage, and area (ft^2) is the watershed area.

Expected volume (ft^3) = RC x expected precip (ft) x area (ft^2)

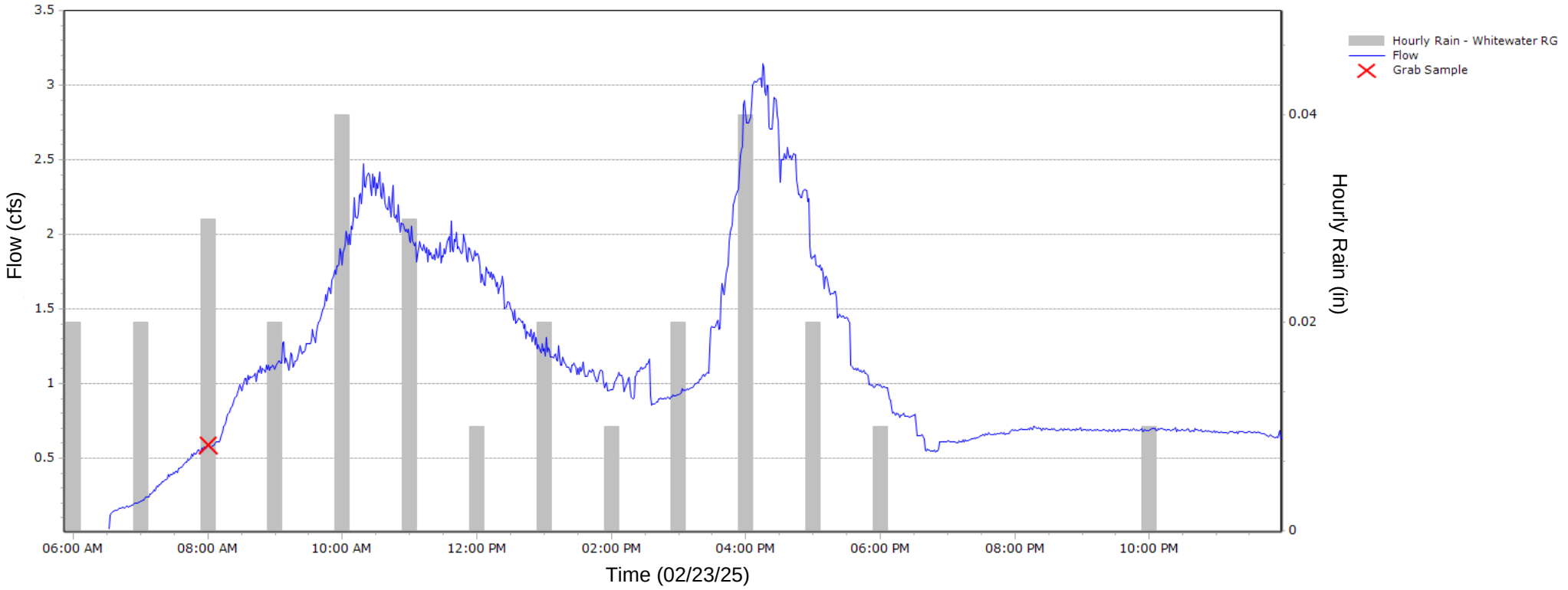
Updated 250213 KJ

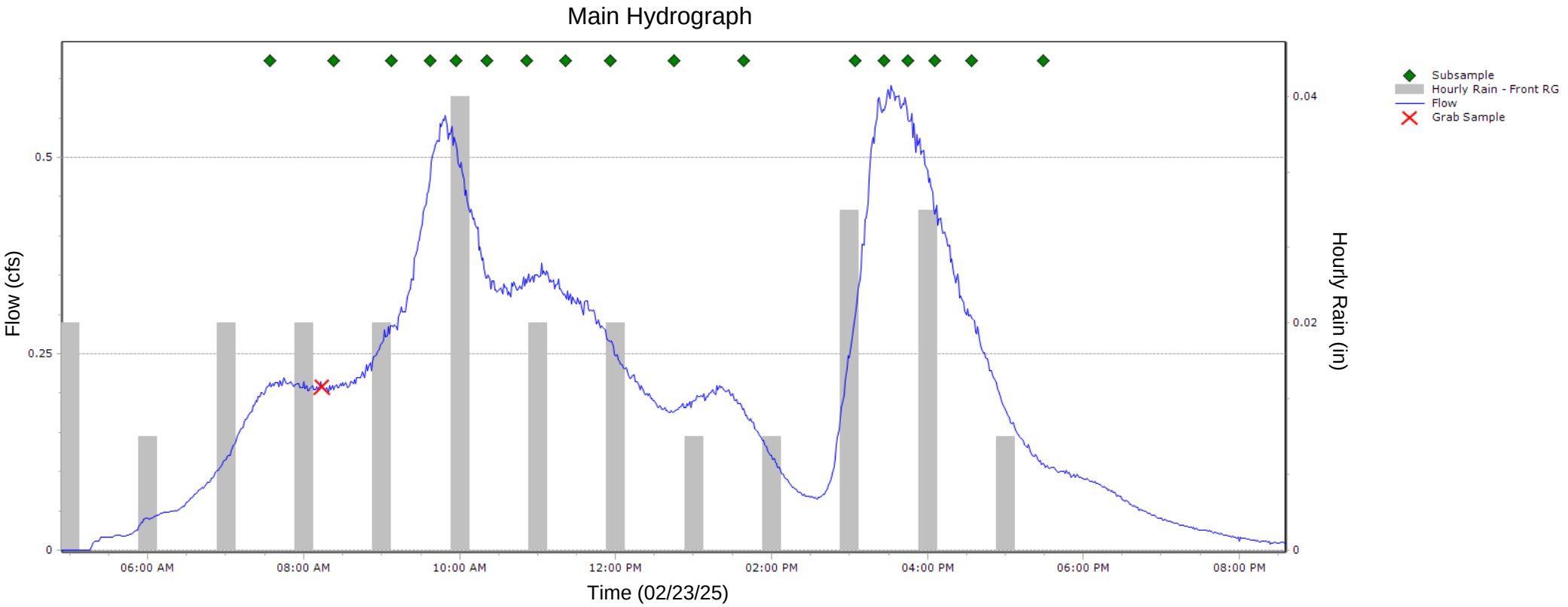
Attachment B: Storm Event Hydrographs

Lucky Hydrograph

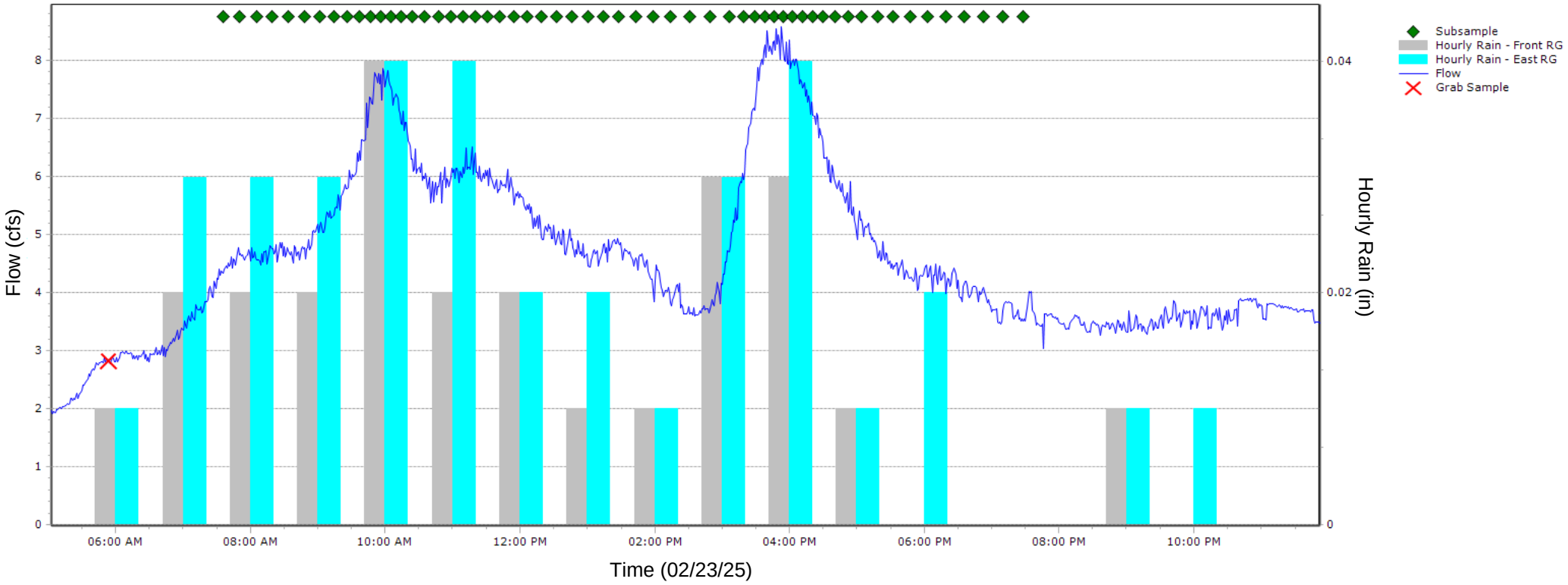


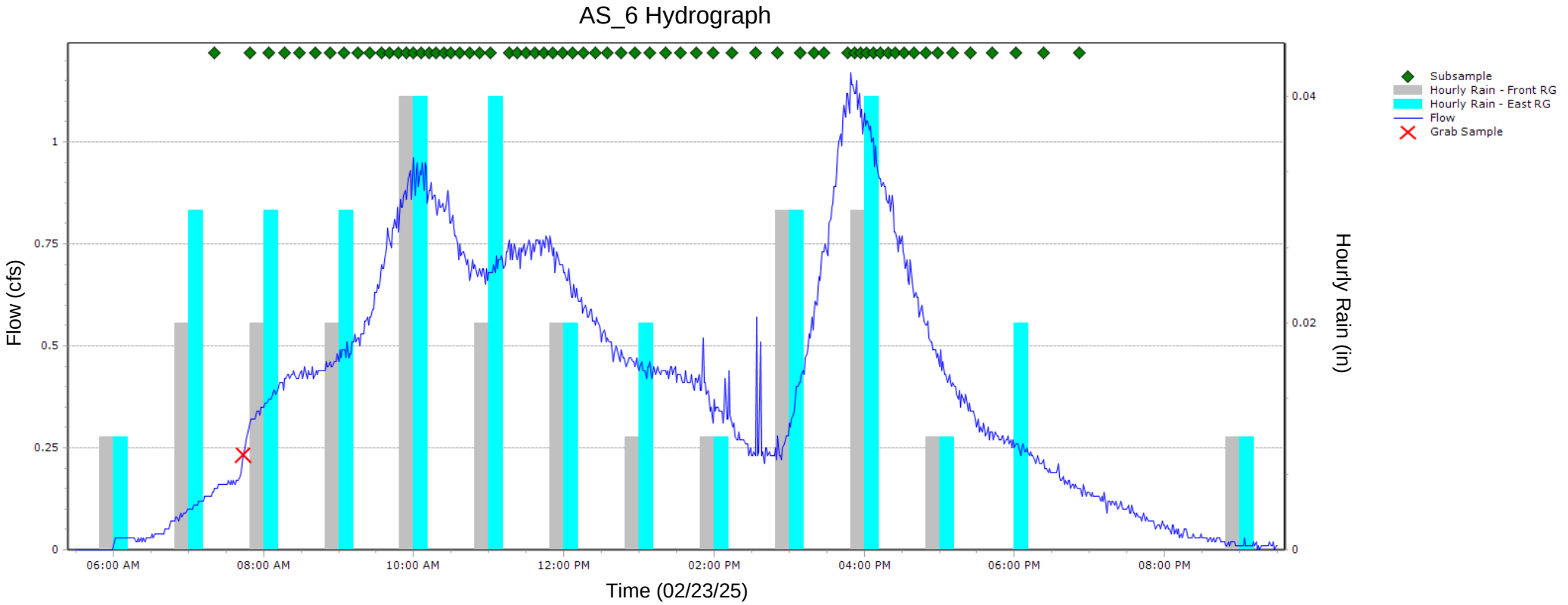
Whitewater Hydrograph




Main Hydrograph
Flow (cfs)
0.5
0.25
0
06:00 AM
08:00 AM
10:00 AM
12:00 PM
02:00 PM
04:00 PM
06:00 PM
08:00 PM
Time (02/23/25)
0.04
0.02
0
Hourly Rain (in)
Subsample
Hourly Rain - Front RG
Flow
Grab Sample

Americana Hydrograph




AS_6 Hydrograph
Flow (cfs)
Hourly Rain (in)
Time (02/23/25)
0
0.25
0.5
0.75
1
0.02
0.04
06:00 AM
08:00 AM
10:00 AM
12:00 PM
02:00 PM
04:00 PM
06:00 PM
08:00 PM
Subsample
Hourly Rain - Front RG
Hourly Rain - East RG
Flow
Grab Sample

Attachment C: Field Forms

Grab Sample Data Form

STATION: LW CK

Personnel: ST, PB **Date/Time On-Site:** 2025/02/23 700 am

Flow Meter Current Status						
Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)	Flow Start (date/time)	Rainfall (in)
7:01 am	4.62	215.58 9FM	0.96	13	—	—

Grab Information				
	Sample ID	Date	Time	Labeled?
Site *E.Coli*	250223-03 -WG	2/23/2025	7:14	☑
Field Duplicate *E.Coli*	-101			☐
Field Blank *E.Coli*	-001			☐

*Note: time on bottle for QC samples is 1200

Field Parameters					
Meter number	Time	Temp (C)	D.O. (mg/L)	pH (S.U.)	SpCond (uS/cm)
MP 12	7:14 am	~~8.14~~ 8.01 PB	10.03	~~7.98~~ 7.99 PB	114.81

Sampler Current Status	
First Subsample Date/Time	
Last Subsample Date/Time	
# of Subsamples taken	

Comments:

Grab Sample Data Form

STATION: Whitewater

Personnel: ST, PB **Date/Time On-Site:** 2/23/25 7:36

Flow Meter Current Status					
Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)	Rainfall (in) (Whitewater Only)
7:44	3.26	0.50	0.98	—	—

Grab Information				
	Sample ID	Date	Time	Labeled?
Site *E.Coli*	250223-11 -WG	2/23/25	8.00	☒
Field Duplicate *E.Coli*	250223-11 -101	2/23/25	8:07	☒
Field Blank *E.Coli*	250223-11 -001	2/23/25	8:04	☒

*Note: time on bottle for QC samples is 1200

Field Parameters					
Meter number	Time	Temp (C)	D.O. (mg/L)	pH (S.U.)	SpCond (uS/cm)
MF12	7:51 am	6.34	10.22	7.64	180.45

Sampler Current Status	
First Subsample Date/Time	
Last Subsample Date/Time	
# of Subsamples taken	

Comments:

Date/Time Off-Site: 2/23/25 8:10

Grab Sample Data Form

STATION: MAIN

Personnel: KJ + MV **Date/Time On-Site:** ~~2/23/25~~ 2/23/25 8:07 am

Flow Meter Current Status						
Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)	Flow Start (date/time)	Rainfall (in)
8:09	4.152	0.2	0.84	11.63		

Grab Information				
	Sample ID	Date	Time	Labeled?
Site *E.Coli*	250223-12 -WG	2/23/25	8:14 am	☒
Field Duplicate *E.Coli*	250223-12 -101	2/23/25	8:15 am	☒
Field Blank *E.Coli*	250223-12 -001	2/23/25	8:20 am	☒

*Note: time on bottle for QC samples is 1200

Field Parameters					
Meter number	Time	Temp (C)	D.O. (mg/L)	pH (S.U.)	SpCond (uS/cm)
MP-13	8:21	7.74	10.87	7.98	203.06

Sampler Current Status	
First Subsample Date/Time	2/23/25 7:32 am
Last Subsample Date/Time	2/23/25 7:32 am
# of Subsamples taken	1

Comments:

Grab Sample Data Form

STATION: Americana

Personnel: KJ, MVL **Date/Time On-Site:** 2/23/25 0545

Flow Meter Current Status					
Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)	Rainfall (in) (Whitewater Only)
5:53	6.84	2.93	2.577	12.04	

Grab Information				
	Sample ID	Date	Time	Labeled?
Site *E.Coli*	250223-14 -WG	2/23/25	5:53 pm	☒
Field Duplicate *E.Coli*	-101			☐
Field Blank *E.Coli*	-001			☐

*Note: time on bottle for QC samples is 1200

Field Parameters					
Meter number	Time	Temp (C)	D.O. (mg/L)	pH (S.U.)	SpCond (uS/cm)
MP-13	5:58	12.19	5.59	8.04	120130

714.07

Sampler Current Status	
First Subsample Date/Time	2/22 @ 17:05
Last Subsample Date/Time	5:51 pm 2/23
# of Subsamples taken	20

Comments:

RECHECKED CONDUCTIVITY AFTER RECALIBRATION

Date/Time Off-Site: 06:00 am

Grab Sample Data Form

STATION: AS-6

Personnel: KJ & MV **Date/Time On-Site:** 2/23/25 7:42

Flow Meter Current Status					
Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)	Rainfall (in) (Whitewater Only)
7:49	3.21	135.88 (gpm)	1.09	12.6	

Grab Information				
	Sample ID	Date	Time	Labeled?
Site *E.Coli*	250223-206 -WG	2/23/25	7:44 am	☒
Field Duplicate *E.Coli*	-101			☐
Field Blank *E.Coli*	-001			☐

*Note: time on bottle for QC samples is 1200

Field Parameters					
Meter number	Time	Temp (C)	D.O. (mg/L)	pH (S.U.)	SpCond (uS/cm)
MP-13	7:51	6.25	10.85	8.23	320.50

Sampler Current Status	
First Subsample Date/Time	2/23/25 7:21
Last Subsample Date/Time	2/23/25 7:49
# of Subsamples taken	2

Comments:

Date/Time Off-Site: 2/23/25 7:50 am

Revised 240123 KC

Set Up/ Shut Down Form – HACH (Lucky [redacted], AS_6)

STATION: Lucky

SET UP

Personnel: ST, KJ

Date/Time On-Site: 2/22/25 10:10

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
10:17	1.69	0.00	0.00	12.9

Enable Condition or Velocity Cutoff:	2.69"
Deadband:	1
Trigger Volume:	3950 gal

- [x] Install batteries on flowmeter and sampler
- [x] Perform decon. cycle
- [x] Install 15L sample bottle, with ice
- [x] Leave bottle lid at site, in a clean re-sealable plastic bag
- [x] Verify all cable and tubing connections
- [x] Check date and time on flowmeter and sampler
- [x] Set flowmeter program and sampler program parameters
- [x] Set logging interval to 1 minute
- [x] Start flowmeter program and sampler program
- [x] Verify running

Comments:

offsite 10:34

SHUT DOWN

Personnel: ST

Date/Time On-Site: 2/24/25 1455

Time	Level (in)	Flow ~~(cfs)~~ gpm	Velocity (fps)	Total (cf)	Battery (V)
1458	1.95	8.14	0.13	-	12.4
Downloaded to:		Stevens USB			

If flow monitoring is complete:	**If continuing to monitor flow:**
[x] Halt program on flowmeter	[x] Replace flowmeter battery
[x] Download flowmeter data	[x] Reset logging interval to 15 minutes
[x] Remove flowmeter battery	[x] Change velocity cutoff to 0.02 fps
	[x] Start program
	[x] Verify running

Comments:

offsite: 1504

Composite Sample Collection

STATION: Lucky **Bottle** 1 **of** 2

Personnel: ST, PB **Date/Time On-Site:** 2/23/25 8:54

☒ Halt sampler program		
☒ Put lid on sample bottle; label sample bottle		
Sample ID:	250223-03	-WC
Approx Sample Volume (mL):	13250 mL	
Clarity (ex. Clear, Cloudy, Silty):	Silty	
Color (ex. Clear, Gray, Tan, Brown, Black):	Gray	
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	2/23/25 651	Success	13	2/23/25 1045	Success
2	714		14	1100	
3	731		15	1113	
4	748		16	1127	
5	808		17	1144	
6	832		18	1206	
7	857		19	1233	
8	921		20	1302	
9	941		21	1323	
10	956		22	1339	
11	1010		23	1358	
12	~~1027~~		24	1432	

Comments:

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle, add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: 2/23/25 1438
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	~~9.5"~~	~~13250 mL~~	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: Lucky **Bottle** 2 **of** 2

Personnel: KS, ST **Date/Time On-Site:** _____

☐ Halt sampler program		
☐ Put lid on sample bottle; label sample bottle		
Sample ID:	250223-03	-WC
Approx Sample Volume (mL):	8000 ml	
Clarity (ex. Clear, Cloudy, Silty):	Clear	
Color (ex. Clear, Gray, Tan, Brown, Black):	Tan	
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	2/23/25 1512	Success	13	2/23/25 1810	Success
2	1524		14	1849	
3	1533		15		
4	1541		16		
5	1549		17		
6	1558		18		
7	1608		19		
8	1620		20		
9	1634		21		
10	1650		22		
11	1711		23		
12	1740		24		

Comments:

Date/Time Off-Site: 2/23/25 1910

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☐ Keep flowmeter running
☒ Keep flowmeter running	☐ Install new 15L bottle; add ice
☒ Add ice to sample transport cooler	☐ Restart program from beginning
	Date/Time Restarted: _____
	☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Set Up/ Shut Down Form – ISCO (Whitewater, Americana, State, Main)

STATION: Whitewater

SET UP

Personnel: KJ, ST

Date/Time On-Site: 2/22/25 1047

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
10:52	1.57	0.00	0.00	–

Enable Condition:	~~2.0~~ 2.57"
Hysteresis:	1"
Flow Pulse Interval:	1093.0 cf

On-Site
- ☒ Replace flowmeter battery, install sampler battery
- ☒ Perform decon. cycle
- ☒ Install 15L sample bottle, with ice
- ☒ Leave bottle lid at site, in a clean re-sealable plastic bag
- ☒ Set sampler program parameters
- ☒ Check date/time on sampler
- ☒ Verify all cable and tubing connections
- ☒ Verify sampler program is running

Flowlink (Refer to PG 411 or PG 412, if needed)
- ☒ Direct or Remote; Date/time 2/22 10:54
- ☐ Retrieve data and review recent flow history
- ☒ Change Wireless Power Control to Storm Event
- ☒ Change Data Storage Rates to 1 minute for Level, Velocity, Total Flow, and Flow Rate
- ☒ Enable Sampler: On Trigger, and set Sampler Enable equation
- ☒ Set Sampler Pacing to Flow Paced, and set trigger volume

Comments:

Date/Time Off-Site: 2/22/25 1109

SHUT DOWN

Personnel: ST

Date/Time On-Site: 2/24/25 9:54

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
9:55	7.827	1.466	0.826	–
	Downloaded to:	Stevens Laptop		

On-Site
- ☒ Replace flowmeter battery
- ☒ Remove battery from sampler

Flowlink (Refer to Flowlink Instructions, if needed)
- ☒ Direct or Remote; Date/time 2/24 9:54
- ☒ Retrieve data
- ☒ Change Wireless Power Control to Dry Weather
- ☒ Change Data Storage Rates to 15 minutes for Level, Velocity, Total Flow, and Flow Rate
- ☒ Enable Sampler: Never

Comments:

Date/Time Off-Site: 2/24/25 10:05

Composite Sample Collection

STATION: Wakewater
Personnel: ST, PB
Bottle 1 **of** 0
Date/Time On-Site: 2/23/25 9:16

☒ Halt sampler program		
☒ Put lid on sample bottle; label sample bottle		
Sample ID:	250223-11-	-WC
Approx Sample Volume (mL):	11750 ml	
Clarity (ex. Clear, Cloudy, Silty):	cloudy	
Color (ex. Clear, Gray, Tan, Brown, Black):	Brown	
QA/QC Sample ID:		-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	2/23/25 7:40	No liquid detected	13	2/23/25 10:33	Success
2	8:13	Success	14	1041	
3	834		15	1049	
4	851		16	1058	
5	9:07	Power failed	17	1107	
6	923		18	1117	
7	937	Success	19	1127	
8	949		20	1136	
9	959		21	1146	
10	1009		22	1155	
11	1017		23	1205	
12	1025		24	1216	

Comments: 0.6 amp-hr used on battery. ~~Unsure of [illegible] for 40[illegible]~~ ~~failed [illegible]~~ ST Replacing battery @ 9:25

Date/Time Off-Site: 2/23/25

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: 2/23/25 1225
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: Whitewater
Personnel: KJ/ST
Bottle 2 **of** 6
Date/Time On-Site: 2/23/25 1740

☐ Halt sampler program		
☐ Put lid on sample bottle; label sample bottle		
Sample ID:	250223--11	-WC
Approx Sample Volume (mL):	4250 ml	
Clarity (ex. Clear, Cloudy, Silty):	Clear	
Color (ex. Clear, Gray, Tan, Brown, Black):	tan	
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	1227	Success	13	1542	No liquid detected
2	1239	↓	14	1551	↓
3	1253	↓	15	1558	↓
4	1308	↓	16	1605	Sample skipped
5	1324	↓	17	1611	No liquid detected
6	1340	↓	18	1617	↓
7	1358	↓	19	1623	↓
8	1416	No more liquid	20	1630	↓
9	1433	No liquid detected	21	1637	↓
10	1453	↓	22	1644	↓
11	1513	↓	23	1652	↓
12	1530	↓	24	1701	↓

Comments: Purged line to attempt to clear the strainer. Restarted the program with a new bottle.

Date/Time Off-Site: 2/23/25

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☐ Keep flowmeter running
☐ Keep flowmeter running	☑ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☑ Restart program from beginning
	Date/Time Restarted: 2/23/25 1745
	☑ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	3.0"	3500 mL	5.5"	7250 mL	8.0"	11000 mL	10.5"	14750 mL
1.0"	800 mL	3.5"	4250 mL	6.0"	8000 mL	8.5"	11750 mL	11.0"	15500 mL
1.5"	1400 mL	4.0"	5000 mL	6.5"	8750 mL	9.0"	12500 mL	11.5"	16250 mL
2.0"	2000 mL	4.5"	5750 mL	7.0"	9500 mL	9.5"	13250 mL	After 12"	1" = 1500 mL
2.5"	2750 mL	5.0"	6500 mL	7.5"	10250 mL	10.0"	14000 mL	Lab min	8,000 mL

Composite Sample Collection

STATION: Whitewater
Personnel: KS, ST
Bottle 3 **of** 30 ST
Date/Time On-Site: 2/23/25 @ 2000

☐ Halt sampler program	
☐ Put lid on sample bottle; label sample bottle	
Sample ID:	-WC
Approx Sample Volume (mL):	
Clarity (ex. Clear, Cloudy, Silty):	
Color (ex. Clear, Gray, Tan, Brown, Black):	
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	2/23/25 1753	No Liquid detected	13		
2	1812	↓	14		
3	1836		15		
4	1907		16		
5	1936		17		
6			18		
7			19		
8			20		
9			21		
10			22		
11			23		
12			24		

Comments: Composite bottle not submitted to the WQL due to lack of representativeness. Duration of error messages accounted for > 50% of total composite sample time. Later determined the sampler tubing disconnected from its mounting points on the Pipe and the strainer disconnected from the tubing.

Date/Time Off-Site: _____

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☐ Keep flowmeter running
☐ Keep flowmeter running	☐ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☐ Restart program from beginning
	Date/Time Restarted: _____
	☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Set Up/ Shut Down Form – ISCO (Whitewater, Americana, State), Main)

STATION: Main

SET UP

Personnel: ST, ~~KC~~ ST KJ

Date/Time On-Site: 2/22/25 12:03

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
12:09	1.214	0.00	0.00	

Enable Condition:	2.2
Hysteresis:	1
Flow Pulse Interval:	622 cf

On-Site

- ☒ Replace flowmeter battery, install sampler battery
- ☒ Perform decon. cycle
- ☒ Install 15L sample bottle, with ice
- ☒ Leave bottle lid at site, in a clean re-sealable plastic bag
- ☒ Set sampler program parameters
- ☒ Check date/time on sampler
- ☒ Verify all cable and tubing connections
- ☒ Verify sampler program is running

Flowlink (Refer to PG 411 or PG 412, if needed)

- ☒ Direct or Remote; Date/time 2/22 12:12
- ☐ Retrieve data and review recent flow history
- ☒ Change Wireless Power Control to Storm Event
- ☒ Change Data Storage Rates to 1 minute for Level, Velocity, Total Flow, and Flow Rate
- ☒ Enable Sampler: On Trigger, and set Sampler Enable equation
- ☒ Set Sampler Pacing to Flow Paced, and set trigger volume

Comments:

Date/Time Off-Site: 2/22/25 1218

SHUT DOWN

Personnel: ST

Date/Time On-Site: 2/26/25 13:27

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
13:27	1.109	0.00	0.04	
	Downloaded to:	Stevens USB		

On-Site

- ☒ Replace flowmeter battery
- ☒ Remove battery from sampler

Flowlink (Refer to Flowlink Instructions, if needed)

- ☒ Direct or Remote; Date/time 1327 2/26
- ☒ Retrieve data
- ☐ Change Wireless Power Control to Dry Weather
- ☐ Change Data Storage Rates to 15 minutes for Level, Velocity, Total Flow, and Flow Rate
- ☐ Enable Sampler: Never

Comments:

Date/Time Off-Site: 2/26/25 13:31

Composite Sample Collection

STATION: Main
Personnel: KJ, ST

Bottle 1 **of** 1
Date/Time On-Site: 2/23/25 1950

☒ Halt sampler program			
☒ Put lid on sample bottle; label sample bottle			
Sample ID:	250223-12	-WC	
Approx Sample Volume (mL):	7500 ml		
Clarity (ex. Clear, Cloudy, Silty):	Cloudy		
Color (ex. Clear, Gray, Tan, Brown, Black):	Brown		
QA/QC Sample ID:		-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	2/23 7:32	Success	13	2/23/25 1525	Success
2	821		14	1544	
3	906		15	1604	
4	936		16	1632	
5	955		17	1728	
6	1019		18		
7	1050		19		
8	1120		20		
9	1154		21		
10	1244		22		
11	1338		23		
12	1503		24		

Comments:

Date/Time Off-Site: 2/23/25 1951

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☒ Power off sampler, if separate from flowmeter ☒ Keep flowmeter running ☒ Add ice to sample transport cooler	☐ Keep flowmeter running ☐ Install new 15L bottle; add ice ☐ Restart program from beginning **Date/Time Restarted:** _____ ☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Set Up/ Shut Down Form – ISCO (Whitewater, Americana, State) and Main

TATION: Americana

SET UP

Personnel: ST, KJ

Date/Time On-Site: 2/22/25 11:40

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
11:45	4.98	1.36	1.964	12.17

Enable Condition:	6.00"
Hysteresis:	1
Flow Pulse Interval:	4036 cf

On-Site
- ☒ Replace flowmeter battery, install sampler battery
- ☒ Perform decon. cycle
- ☒ Install 15L sample bottle, with ice
- ☒ Leave bottle lid at site, in a clean re-sealable plastic bag
- ☒ Set sampler program parameters
- ☒ Check date/time on sampler
- ☒ Verify all cable and tubing connections
- ☒ Verify sampler program is running

Flowlink (Refer to PG 411 or PG 412, if needed)
- ☒ Direct or Remote; Date/time 2/22 11:48
- ☒ Retrieve data and review recent flow history
- ☒ Change Wireless Power Control to Storm Event
- ☒ Change Data Storage Rates to 1 minute for Level, Velocity, Total Flow, and Flow Rate
- ☒ Enable Sampler: On Trigger, and set Sampler Enable equation
- ☒ Set Sampler Pacing to Flow Paced, and set trigger volume

Comments:

Date/Time Off-Site: 2/22/25 11:57

SHUT DOWN

Personnel: ST

Date/Time On-Site: 2/24/25 9:45

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
9:47	14.407	13.026	4.105	12.4
	Downloaded to:	Stevens Laptop		

On-Site
- ☐ Replace flowmeter battery
- ☐ Remove battery from sampler

Flowlink (Refer to Flowlink Instructions, if needed)
- ☒ Direct or Remote; Date/time 2/24/25 9:47
- ☒ Retrieve data
- ☒ Change Wireless Power Control to Dry Weather
- ☒ Change Data Storage Rates to 15 minutes for Level, Velocity, Total Flow, and Flow Rate
- ☒ Enable Sampler: Never

Comments:

Date/Time Off-Site: 2/24/25

Composite Sample Collection

STATION: AMBAG CATCH
Personnel: KJ, DMW

Bottle 1ST of 4TH
Date/Time On-Site: 2/23/25 7:25

☐ Halt sampler program	
☐ Put lid on sample bottle; label sample bottle	
Sample ID:	250223-14 -WC
Approx Sample Volume (mL):	1400 mL
Clarity (ex. Clear, Cloudy, Silty):	CLEAR
Color (ex. Clear, Gray, Tan, Brown, Black):	CLEAR
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	2/22 17:05	Success	13	2/23 01:57	Success
2	19:25		14	2:32	
3	20:05		15	3:07	
4	20:41		16	3:42	
5	21:16		17	4:16	
6	21:51		18	4:51	
7	22:26		19	5:25	
8	23:02		20	5:51	
9	23:37		21	6:14	
10	2/23 00:12		22	6:37	
11	00:47		23	6:59	
12	01:22		24	7:17	

Comments: Bottle 1 was discarded because it contained primarily pre storm dry weather samples.

Date/Time Off-Site: 2/23/25 7:27

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: 7:25
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: Americana **Bottle** ~~2~~ 1ST **of** 4

Personnel: ST, KT **Date/Time On-Site:** 2/23/25 1220

☐ Halt sampler program	
☐ Put lid on sample bottle; label sample bottle	
Sample ID:	250223-14 -WC
Approx Sample Volume (mL):	14750 ml
Clarity (ex. Clear, Cloudy, Silty):	Cloudy
Color (ex. Clear, Gray, Tan, Brown, Black):	Tan
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	2/23/25 734	Success	13	2/23/25 1004	Success
2	749		14	1013	
3	804		15	1023	
4	818		16	1034	
5	832		17	1046	
6	847		18	1057	
7	900		19	1108	
8	913		20	1119	
9	925		21	1130	
10	936		22	1141	
11	946		23	1153	
12	955		24	1205	

Comments:

Date/Time Off-Site: 2/23/25 1216

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: 2/23/25 ~~1216~~ 1208
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	~~10.5"~~	~~14750 mL~~
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: Americana **Bottle** ~~3~~ 3ST **of** ~~4~~ 5

Personnel: KJ, ST **Date/Time On-Site:** 2/23/25 1705

☐ Halt sampler program		
☐ Put lid on sample bottle; label sample bottle		
Sample ID:	250223 - 14	-WC
Approx Sample Volume (mL):	14000	
Clarity (ex. Clear, Cloudy, Silty):	Silty	
Color (ex. Clear, Gray, Tan, Brown, Black):	Tan	
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	2/23/25 1217	Success	13	2/23/25 1518	Success
2	1231		14	1528	
3	1245		15	1537	
4	1259		16	1545	
5	1313		17	1553	
6	1327		18	1601	
7	1342		19	1610	
8	1357		20	1619	
9	1413		21	1628	
10	1430		22	1639	
11	1448		23	1651	
12	1505		24	1703	

Comments:

Date/Time Off-Site: _____

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: 2/23/25 1710
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	~ 14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

3 of 3

STATION: Americana **Bottle** ~~1~~ 3rd **of** ~~1~~ 4

Personnel: ST, KS **Date/Time On-Site:** 2/23/25 1940

☐ Halt sampler program		
☐ Put lid on sample bottle; label sample bottle		
Sample ID:	250223-14-WC	-WC
Approx Sample Volume (mL):	5000 ml	
Clarity (ex. Clear, Cloudy, Silty):	Silty	
Color (ex. Clear, Gray, Tan, Brown, Black):	Clear	
QA/QC Sample ID:		-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	2/23/25 1717	Success	13		
2	1731		14		
3	1746		15		
4	1802		16		
5	1818		17		
6	1834		18		
7	1851		19		
8	1909		20		
9	1927		21		
10			22		
11			23		
12			24		

Comments:

Date/Time Off-Site: 2/23/25 1947

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☒ Power off sampler, if separate from flowmeter	☐ Keep flowmeter running
☒ Keep flowmeter running	☐ Install new 15L bottle; add ice
☒ Add ice to sample transport cooler	☐ Restart program from beginning
	Date/Time Restarted: _____
	☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Set Up/ Shut Down Form – HACH (Lucky, [redacted], AS_6)

STATION: AS-6

SET UP

Personnel: KJ, ST

Date/Time On-Site: 2/22/25 1118

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
11.23	0.05	0.00	0.00	~~12.3~~ ST
				13.5 V

Enable Condition or Velocity Cutoff:	1.05"
Deadband:	1
Trigger Volume:	2252 gal

- [x] Install batteries on flowmeter and sampler
- [x] Perform decon. cycle
- [x] Install 15L sample bottle, with ice
- [x] Leave bottle lid at site, in a clean re-sealable plastic bag
- [x] Verify all cable and tubing connections
- [x] Check date and time on flowmeter and sampler
- [x] Set flowmeter program and sampler program parameters
- [x] Set logging interval to 1 minute
- [x] Start flowmeter program and sampler program
- [x] Verify running

Comments:

Date/Time Off-Site: 2/22/25 1132

SHUT DOWN

Personnel: ST

Date/Time On-Site: 2/24/25 15:39

Time	Level (in)	Flow ~~(cfs)~~ gpm	Velocity (fps)	Total (cf)	Battery (V)
15:39	1.26	0.00	0.00	–	12.8
Downloaded to:					

If flow monitoring is complete:	**If continuing to monitor flow:**
☒ Halt program on flowmeter	☐ Replace flowmeter battery
☐ Download flowmeter data	☐ Reset logging interval to 15 minutes
☐ Remove flowmeter battery	☐ Change velocity cutoff to 0.02 fps
	☐ Start program
	☐ Verify running

Comments:

Date/Time Off-Site: _____

Composite Sample Collection

STATION: AS-6 **Bottle** 1 **of** 3

Personnel: ST, RS **Date/Time On-Site:** 2/23 10:16

☒ Halt sampler program		
☒ Put lid on sample bottle; label sample bottle		
Sample ID:	250223-206	-WC
Approx Sample Volume (mL):	14750ml	
Clarity (ex. Clear, Cloudy, Silty):	Cloudy	
Color (ex. Clear, Gray, Tan, Brown, Black):	Tan	
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	2/23 721	Success	13	2/23/25 948	Success
2	749		14	954	
3	804		15	10:05	
4	817		16	10:06	
5	829		17	1012	
6	841		18	1018	
7	853		19	1024	
8	904		20	1030	
9	915		21	1037	
10	925		22	1045	
11	934		23	1053	
12	941		24	1101	

Comments:

Date/Time Off-Site: 2/23/25 1108

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☐ Install new 15L bottle, add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: 2/23/25 1104
	☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: AS_U **Bottle** 2 **of** 3

Personnel: ST, KS **Date/Time On-Site:** 2/23/25 1533

☒ Halt sampler program	
☒ Put lid on sample bottle; label sample bottle	
Sample ID:	250223-2006 -WC
Approx Sample Volume (mL):	14750 mL
Clarity (ex. Clear, Cloudy, Silty):	Silty
Color (ex. Clear, Gray, Tan, Brown, Black):	Brown
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	2/23/25 1116	Success	13	2/23/25 1257	Success
2	1123		14	1309	
3	1130		15	1321	
4	1137		16	1333	
5	1144		17	1346	
6	1151		18	1359	
7	1159		19	1414	
8	1207		20	1433	
9	1216		21	1451	
10	1225		22	1509	
11	1235		23	1520	
12	1246		24	1528	

Comments:

Date/Time Off-Site: 2/23/25 1548

If sampling is complete:	If continuing sampling (sample bottle change-out):
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: 2/23/25 1551
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: AS_6 **Bottle** 3 **of** 3

Personnel: KJ, ST **Date/Time On-Site:** _____

☒ Halt sampler program		
☒ Put lid on sample bottle; label sample bottle		
Sample ID:	250223-206	-WC
Approx Sample Volume (mL):	11000 ml	
Clarity (ex. Clear, Cloudy, Silty):	Cloudy	
Color (ex. Clear, Gray, Tan, Brown, Black):	Gray	
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	2/20/25 1547	Success	13	2/23/25 1711	Success
2	1552		14	1725	
3	1557		15	1742	
4	1602		16	1801	
5	1607		17	1823	
6	1613		18	1852	
7	1619		19		
8	1625		20		
9	1632		21		
10	1640		22		
11	1649		23		
12	1659		24		

Comments:

Date/Time Off-Site: 2/23/25

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☐ Keep flowmeter running
☒ Keep flowmeter running	☐ Install new 15L bottle; add ice
☒ Add ice to sample transport cooler	☐ Restart program from beginning
	Date/Time Restarted: _____
	☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Attachment D: Storm Event Analytical Reports

Report Date: 03/03/2025 13:14

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Samples in this Report

Lab ID	Sample	Sample Description	Matrix	Qualifiers	Sampled	Received
AC00393-01	ACST1B	250223-03-WG	Water		2/23/25 7:14	2/23/25 9:21
AC00393-02	ACST1B	250223-11-WG	Water		2/23/25 8:00	2/23/25 9:21
AC00393-03	ACST1B	250223-11-101	Water		2/23/25 12:00	2/23/25 9:21
AC00393-04	ACST1B	250223-11-001	Water		2/23/25 12:00	2/23/25 9:21
AC00393-05	ACST1B	250223-12-WG	Water		2/23/25 8:14	2/23/25 9:21
AC00393-06	ACST1B	250223-14-WG	Water		2/23/25 5:50	2/23/25 9:21

The contents of this report apply to the sample(s) analyzed in accordance with the Chain of Custody document.
No duplication of this report is allowed, except in its entirety

Report Date: 03/03/2025 13:14

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	250223-03-WG
Date/Time Collected:	02/23/2025 07:14		
Lab Number:	AC00393-01	Sample Collector:	S.T
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B250605	35.0	MPN/100 mL	1.0	1.0	IDEXX - Colilert	02/23/25 10:44	2/24/25 11:22	ALG	
Wet Chemistry										
Chlorine Screen	B250606	Absent	mg/L			SM 4500-CL G-2000 mod	02/23/25	2/23/25 10:03	ASE	

* The reported adjusted "MDL" is sample-specific. The analysis MDL as defined by 40 CFR pt 136 App.B. was corrected for dilution, dry weight, or method-defined ML.

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Report Date: 03/03/2025 13:14

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	250223-11-WG
Date/Time Collected:	02/23/2025 08:00		
Lab Number:	AC00393-02	Sample Collector:	S.T
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B250605	127.4	MPN/100 mL	1.0	1.0	IDEXX - Colilert	02/23/25 10:44	2/24/25 11:22	ALG	
Wet Chemistry										
Chlorine Screen	B250606	Absent	mg/L			SM 4500-CL G-2000 mod	02/23/25	2/23/25 10:03	ASE	

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Report Date: 03/03/2025 13:14

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	250223-11-101
Date/Time Collected:	02/23/2025 12:00		
Lab Number:	AC00393-03	Sample Collector:	S.T
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B250605	98.7	MPN/100 mL	1.0	1.0	IDEXX - Colilert	02/23/25 10:44	2/24/25 11:22	ALG	
Wet Chemistry										
Chlorine Screen	B250606	Absent	mg/L			SM 4500-CL G-2000 mod	02/23/25	2/23/25 10:03	ASE	

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Report Date: 03/03/2025 13:14

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	250223-11-001
Date/Time Collected:	02/23/2025 12:00		
Lab Number:	AC00393-04	Sample Collector:	S.T
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B250605	<1.0	MPN/100 mL	1.0	1.0	IDEXX - Colilert	02/23/25 10:44	2/24/25 11:22	ALG	U
Wet Chemistry										
Chlorine Screen	B250606	Absent	mg/L			SM 4500-CL G-2000 mod	02/23/25	2/23/25 10:03	ASE	

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Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	250223-12-WG
Date/Time Collected:	02/23/2025 08:14		
Lab Number:	AC00393-05	Sample Collector:	K.J
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B250605	18.9	MPN/100 mL	1.0	1.0	IDEXX - Colilert	02/23/25 10:44	2/24/25 11:22	ALG	
Wet Chemistry										
Chlorine Screen	B250606	Absent	mg/L			SM 4500-CL G-2000 mod	02/23/25	2/23/25 10:03	ASE	

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Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	250223-14-WG
Date/Time Collected:	02/23/2025 05:50		
Lab Number:	AC00393-06	Sample Collector:	K.J
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B250605	17.3	MPN/100 mL	1.0	1.0	IDEXX - Colilert	02/23/25 10:44	2/24/25 11:22	ALG	
Wet Chemistry										
Chlorine Screen	B250606	Absent	mg/L			SM 4500-CL G-2000 mod	02/23/25	2/23/25 10:03	ASE	

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Report Date: 03/03/2025 13:14

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Quality Control Report

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Microbiology									
Batch: B250605									
Blank (B250605-BLK1)									
E. Coli	Absent						02/24/2025	ALG	
LCS (B250605-BS1)									
E. Coli				Present			02/24/2025	ALG	
Duplicate (B250605-DUP1)	Source ID: AC00393-06								
E. Coli					Pass	128	02/24/2025	ALG	

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Report Date: 03/03/2025 13:14

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Notes and Definitions

Item	Definition
U	Analyte included in the analysis, but not detected
NR	No result for this parameter.

Method Reference Acronyms

Colilert	Colilert, IDEXX Laboratories, Inc.
EPA	Manual of Methods for Chemical Analysis of Water and Wastes, USEPA
GS	USGS Techniques of Water-Resources Investigations
HH	Hach Spectrophotometer Procedures Manual
SM	Standard Methods for the Examination of Water and Wastewater
SW	Test methods for Evaluating Solid Waste, SW-846

Stephen Quintero or Azubike Emenari
QA/QC Coordinator

Leslea Basterrechea
Water Quality Laboratory Manager

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Ada County Highway District

ACHD

Attn: Steven Turner
3775 Adams Street
Garden City, Idaho 83714-6418
Tel. (208) 407-4284

Purchase Order: 63069586

Project: Stormwater PI

Sampler(s): Steven Turner
Kristen Jolliffe
Mike VanLydegraf Paul Bomber

Lab#	Begin Date	End Date	Begin Time	End Time	Sample Identification	Sampler Initials	Matrix: Water	Type: Grab	Type: Composite	BOD5 - SM 5210 B	COD - Hach 8000	TSS - SM 2540 D	TDS - SM 2540 C	TKN - EPA 351.2	TP - EPA 200.7	Orthophosphate - EPA 365.1	Total As, Cd, Pb - EPA 200.8	Diss. Cd Cu, Pb, Zn - EPA 200.8	Total Hg - EPA 245.1	E. Coli - IDEXX Colilert	Turbidity - EPA 180.1	Hardness - SM 2340 B-2011	NO3+NO2 - EPA 353.2	Timberline Ammonia-001	Chloride - EPA 300.0	Total Containers
AC00393-01	2/23/25		0714		250223-03-WG	ST	X	X												X						1
-02			0800		250223-11-WG	ST	X	X												X						1
-03			1200		250223-11-101	ST	X	X												X						1
-04			1200		250223-11-001	ST	X	X												X						1
-05			0814		250223-12-WG	KJ	X	X												X						1
-06			0550		250223-14-WG	KJ	X	X												X						1

Relinquished by (sign)	Date &Time Transferred	Received by (sign)	Comments/ Special Instructions
Kristen Jolliffe	3/27/25 ~~2256~~ 0356	ASE 2/23/25 0921	

AC00393

Report Date: 03/03/2025 13:14

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Samples in this Report

Lab ID	Sample	Sample Description	Matrix	Qualifiers	Sampled	Received
AC00392-01	ACST1B	250223-206-WG	Water		2/23/25 7:44	2/23/25 9:21

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Report Date: 03/03/2025 13:14

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	250223-206-WG
Date/Time Collected:	02/23/2025 07:44		
Lab Number:	AC00392-01	Sample Collector:	K.J
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B250605	161.6	MPN/100 mL	1.0	1.0	IDEXX - Colilert	02/23/25 10:44	2/24/25 11:22	ALG	
Wet Chemistry										
Chlorine Screen	B250606	Absent	mg/L			SM 4500-CL G-2000 mod	02/23/25	2/23/25 10:03	ASE	

* The reported adjusted "MDL" is sample-specific. The analysis MDL as defined by 40 CFR pt 136 App.B. was corrected for dilution, dry weight, or method-defined ML.

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Report Date: 03/03/2025 13:14

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Quality Control Report

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Microbiology									
Batch: B250605									
Blank (B250605-BLK1)									
E. Coli	Absent						02/24/2025	ALG	
LCS (B250605-BS1)									
E. Coli				Present			02/24/2025	ALG	
Duplicate (B250605-DUP1)	Source ID: AC00393-06								
E. Coli					Pass	128	02/24/2025	ALG	

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Report Date: 03/03/2025 13:14

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Notes and Definitions

Item	Definition
NR	No result for this parameter.

Method Reference Acronyms

Colilert	Colilert, IDEXX Laboratories, Inc.
EPA	Manual of Methods for Chemical Analysis of Water and Wastes, USEPA
GS	USGS Techniques of Water-Resources Investigations
HH	Hach Spectrophotometer Procedures Manual
SM	Standard Methods for the Examination of Water and Wastewater
SW	Test methods for Evaluating Solid Waste, SW-846

Stephen Quintero or Azubike Emenari
QA/QC Coordinator

Leslea Basterrechea
Water Quality Laboratory Manager

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Ada County Highway District

ACHD

Attn: Steven Turner
3775 Adams Street
Garden City, Idaho 83714-6418
Tel. (208) 407-4284

Purchase Order: 63069586

Project: Stormwater PI

Sampler(s): Kristin Jolliffe
Steven Turner
Mike Van Lydegraf Paul Bomber

Lab#	Begin Date	End Date	Begin Time	End Time	Sample Identification	Sampler Initials	Matrix: Water	Type: Grab	Type: Composite	Analysis Methods: E. Coli - IDEXX Colilert	Total Containers
AC00392-01	2/23/25		0744		250223-206-WG	KJ KE	X	X		X	1

Relinquished by (sign)	Date &Time Transferred	Received by (sign)	Comments/ Special Instructions
Kristin Jolliffe	2/23/25 ~~2356~~ 0356	KSE 2/23/250921	

AC00392

Report Date: 03/14/2025 09:57

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Samples in this Report

Lab ID	Sample	Sample Description	Matrix	Qualifiers	Sampled	Received
AC00396-01	ACST1C	250223-03-WC	Water		2/23/25 18:49	2/24/25 7:03
Comments:	Temperature at receipt: 6.6 degrees C					
AC00396-02	ACST1C	250223-12-WC	Water		2/23/25 17:28	2/24/25 7:03
Comments:	Temperature at receipt: 1.9 degrees C					
AC00396-03	ACST1C	250223-14-WC	Water		2/23/25 19:27	2/24/25 7:03
Comments:	Temperature at receipt: 4.7 degrees C					

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Report Date: 03/14/2025 09:57

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1C	Location Description:	250223-03-WC
Date/Time Collected:	02/23/2025 06:51 - 02/23/2025 18:49		
Lab Number:	AC00396-01	Sample Collector:	K.J
Sample Type:	Composite	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
Ammonia, as N	B250688	0.127	mg/L	0.0450	0.0450	Timberline Ammonia-001	03/03/25	3/3/25 14:27	ALN	
BOD5	B250618	2.77	mg/L	2.00	2.00	SM 5210 B-2016	02/24/25	3/1/25 9:48	MCB	
Chloride	B250609	3.93	mg/L	0.0200	0.0200	EPA 300.0, Rev. 2.1 (1993)	02/24/25	2/24/25 20:46	ALN	
COD	B250612	22.0	mg/L	7.00	7.00	HH 8000, Standard Method 5220 D	02/24/25	2/24/25 12:50	NTS	
Nitrate-Nitrite, as N	B250662	0.193	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	02/27/25	2/27/25 11:16	RKG	
TKN	B250705	0.546	mg/L	0.100	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	03/05/25	3/5/25 10:24	JAL	
Total Dissolved Solids	B250636	39.0	mg/L	25.0	25.0	SM 2540 C-2015	02/25/25	2/27/25 9:08	MCB	
Total Suspended Solids	B250614	12.6	mg/L	0.900	0.900	SM 2540 D-2015	02/24/25	2/24/25 12:04	RHC	
Turbidity	B250617	25.8	NTU	0.3	0.3	EPA 180.1, Rev. 2.0 (1993)	02/24/25	2/24/25 9:21	ALN	
Dissolved Wet Chemistry										
Orthophosphate, as P	B250619	0.0512	mg/L	3.00E-3	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	02/24/25	2/24/25 11:35	JAL	
Total Metals										
Mercury	B250697	<0.0100	ug/L	0.0100	0.0100	EPA 245.1	03/06/25	3/6/25 12:33	SAS	U
Arsenic	B250684	0.89	ug/L	0.050	0.050	EPA 200.8	03/02/25	3/5/25 14:08	DMW	
Cadmium	B250684	<0.0200	ug/L	0.020	0.020	EPA 200.8	03/02/25	3/5/25 14:08	DMW	U
Calcium	B250639	5.17	mg/L	0.0400	0.0400	EPA 200.7	02/26/25	3/3/25 12:59	SMC	
Lead	B250684	0.61	ug/L	0.010	0.010	EPA 200.8	03/02/25	3/5/25 14:08	DMW	
Magnesium	B250639	790	ug/L	80.0	80.0	EPA 200.7	02/26/25	3/3/25 12:59	SMC	
Phosphorus as P	B250639	0.103	mg/L	0.0120	0.0120	EPA 200.7	02/26/25	3/3/25 12:59	SMC	
Hardness	B250639	16.2	mg/L	0.100	0.100	SM 2340 B-2011	02/26/25	3/3/25 12:59	SMC	
Dissolved Metals										
Cadmium	B250685	<0.0100	ug/L	0.010	0.010	EPA 200.8	03/01/25	3/1/25 18:14	DMW	U
Copper	B250685	1.9	ug/L	0.14	0.14	EPA 200.8	03/01/25	3/1/25 18:14	DMW	
Lead	B250685	0.026	ug/L	0.010	0.010	EPA 200.8	03/01/25	3/1/25 18:14	DMW	
Zinc	B250685	10.2	ug/L	0.50	0.50	EPA 200.8	03/01/25	3/1/25 18:14	DMW	

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Report Date: 03/14/2025 09:57

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1C	Location Description:	250223-12-WC
Date/Time Collected:	02/23/2025 07:32 - 02/23/2025 17:28		
Lab Number:	AC00396-02	Sample Collector:	K.J
Sample Type:	Composite	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
Ammonia, as N	B250688	0.302	mg/L	0.0450	0.0450	Timberline Ammonia-001	03/03/25	3/3/25 14:13	ALN	
BOD5	B250618	4.66	mg/L	2.00	2.00	SM 5210 B-2016	02/24/25	3/1/25 9:44	MCB	
Chloride	B250609	28.0	mg/L	0.0200	0.0200	EPA 300.0, Rev. 2.1 (1993)	02/24/25	2/24/25 22:32	ALN	
COD	B250612	51.0	mg/L	7.00	7.00	HH 8000, Standard Method 5220 D	02/24/25	2/24/25 10:58	NTS	
Nitrate-Nitrite, as N	B250662	0.133	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	02/27/25	2/27/25 11:17	RKG	
TKN	B250705	0.783	mg/L	0.100	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	03/05/25	3/5/25 10:25	JAL	
Total Dissolved Solids	B250636	75.3	mg/L	25.0	25.0	SM 2540 C-2015	02/25/25	2/27/25 9:09	MCB	
Total Suspended Solids	B250614	29.1	mg/L	0.900	0.900	SM 2540 D-2015	02/24/25	2/24/25 10:09	RHC	
Turbidity	B250617	32.9	NTU	0.3	0.3	EPA 180.1, Rev. 2.0 (1993)	02/24/25	2/24/25 9:11	ALN	
Dissolved Wet Chemistry										
Orthophosphate, as P	B250619	0.0395	mg/L	3.00E-3	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	02/24/25	2/24/25 11:36	JAL	
Total Metals										
Mercury	B250697	<0.0100	ug/L	0.0100	0.0100	EPA 245.1	03/06/25	3/6/25 12:53	SAS	U
Arsenic	B250684	0.90	ug/L	0.050	0.050	EPA 200.8	03/02/25	3/5/25 14:26	DMW	
Cadmium	B250684	0.047	ug/L	0.020	0.020	EPA 200.8	03/02/25	3/5/25 14:26	DMW	
Calcium	B250639	4.52	mg/L	0.0400	0.0400	EPA 200.7	02/26/25	3/3/25 13:02	SMC	
Lead	B250684	2.3	ug/L	0.010	0.010	EPA 200.8	03/02/25	3/5/25 14:26	DMW	
Magnesium	B250639	2310	ug/L	80.0	80.0	EPA 200.7	02/26/25	3/3/25 13:02	SMC	
Phosphorus as P	B250639	0.100	mg/L	0.0120	0.0120	EPA 200.7	02/26/25	3/3/25 13:02	SMC	
Hardness	B250639	20.8	mg/L	0.100	0.100	SM 2340 B-2011	02/26/25	3/3/25 13:02	SMC	
Dissolved Metals										
Cadmium	B250685	0.016	ug/L	0.010	0.010	EPA 200.8	03/01/25	3/1/25 18:32	DMW	
Copper	B250685	2.9	ug/L	0.14	0.14	EPA 200.8	03/01/25	3/1/25 18:32	DMW	
Lead	B250685	0.044	ug/L	0.010	0.010	EPA 200.8	03/01/25	3/1/25 18:32	DMW	
Zinc	B250685	24.0	ug/L	0.50	0.50	EPA 200.8	03/01/25	3/1/25 18:32	DMW	

* The reported adjusted "MDL" is sample-specific. The analysis MDL as defined by 40 CFR pt 136 App.B. was corrected for dilution, dry weight, or method-defined ML.

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Report Date: 03/14/2025 09:57

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Analysis Report

Location:	ACST1C	Location Description:	250223-14-WC
Date/Time Collected:	02/23/2025 07:34 - 02/23/2025 19:27		
Lab Number:	AC00396-03	Sample Collector:	K.J
Sample Type:	Composite	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
Ammonia, as N	B250688	0.0779	mg/L	0.0450	0.0450	Timberline Ammonia-001	03/03/25	3/3/25 14:10	ALN	
BOD5	B250618	3.56	mg/L	2.00	2.00	SM 5210 B-2016	02/24/25	3/1/25 9:39	MCB	
Chloride	B250609	72.4	mg/L	0.0200	0.0200	EPA 300.0, Rev. 2.1 (1993)	02/24/25	2/24/25 22:59	ALN	
COD	B250612	31.0	mg/L	7.00	7.00	HH 8000, Standard Method 5220 D	02/24/25	2/24/25 10:58	NTS	
Nitrate-Nitrite, as N	B250662	0.687	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	02/27/25	2/27/25 11:18	RKG	
TKN	B250705	0.583	mg/L	0.100	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	03/05/25	3/5/25 10:26	JAL	
Total Dissolved Solids	B250636	214	mg/L	25.0	25.0	SM 2540 C-2015	02/25/25	2/27/25 9:09	MCB	
Total Suspended Solids	B250614	21.3	mg/L	0.900	0.900	SM 2540 D-2015	02/24/25	2/24/25 10:08	RHC	
Turbidity	B250617	13.9	NTU	0.3	0.3	EPA 180.1, Rev. 2.0 (1993)	02/24/25	2/24/25 10:56	ALN	
Dissolved Wet Chemistry										
Orthophosphate, as P	B250619	0.0604	mg/L	3.00E-3	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	02/24/25	2/24/25 11:41	JAL	
Total Metals										
Mercury	B250697	<0.0100	ug/L	0.0100	0.0100	EPA 245.1	03/06/25	3/6/25 13:04	SAS	U
Arsenic	B250684	3.4	ug/L	0.050	0.050	EPA 200.8	03/02/25	3/5/25 14:31	DMW	
Cadmium	B250684	0.032	ug/L	0.020	0.020	EPA 200.8	03/02/25	3/5/25 14:31	DMW	
Calcium	B250639	26.5	mg/L	0.0400	0.0400	EPA 200.7	02/26/25	3/3/25 13:19	SMC	
Lead	B250684	1.9	ug/L	0.010	0.010	EPA 200.8	03/02/25	3/5/25 14:31	DMW	
Magnesium	B250639	5260	ug/L	80.0	80.0	EPA 200.7	02/26/25	3/3/25 13:19	SMC	
Phosphorus as P	B250639	0.123	mg/L	0.0120	0.0120	EPA 200.7	02/26/25	3/3/25 13:19	SMC	
Hardness	B250639	87.8	mg/L	0.100	0.100	SM 2340 B-2011	02/26/25	3/3/25 13:19	SMC	
Dissolved Metals										
Cadmium	B250685	0.012	ug/L	0.010	0.010	EPA 200.8	03/01/25	3/1/25 18:36	DMW	
Copper	B250685	2.0	ug/L	0.14	0.14	EPA 200.8	03/01/25	3/1/25 18:36	DMW	
Lead	B250685	0.036	ug/L	0.010	0.010	EPA 200.8	03/01/25	3/1/25 18:36	DMW	
Zinc	B250685	15.4	ug/L	0.50	0.50	EPA 200.8	03/01/25	3/1/25 18:36	DMW	

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Report Date: 03/14/2025 09:57

Quality Control Report

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry									
Batch: B250609									
Blank (B250609-BLK1)									
Chloride	<0.02	mg/L					02/24/2025	ALN	U
LCS (B250609-BS1)									
Chloride			99.7	90-110			02/24/2025	ALN	
Duplicate (B250609-DUP1) Source ID: BB04543-04									
Chloride					0.0651	10	02/24/2025	ALN	D
Duplicate (B250609-DUP2) Source ID: AC00396-01									
Chloride					0.104	10	02/24/2025	ALN	
Matrix Spike (B250609-MS1) Source ID: BB04543-04									
Chloride			98.4	90-110			02/24/2025	ALN	D
Matrix Spike (B250609-MS2) Source ID: AC00396-01									
Chloride			99.7	90-110			02/24/2025	ALN	
Matrix Spike (B250609-MS3) Source ID: WQ00263-05									
Chloride			93.1	90-110			02/24/2025	ALN	
Matrix Spike Dup (B250609-MSD1) Source ID: BB04543-04									
Chloride			97.5	90-110	0.731	10	02/24/2025	ALN	D
Matrix Spike Dup (B250609-MSD2) Source ID: AC00396-01									
Chloride			98.1	90-110	1.37	10	02/24/2025	ALN	
Batch: B250612									
Blank (B250612-BLK1)									
COD	<7	mg/L					02/24/2025	NTS	U
LCS (B250612-BS1)									
COD			98.7	90-110			02/24/2025	NTS	
Duplicate (B250612-DUP1) Source ID: AC00396-01									
COD					4.44	10	02/24/2025	NTS	
Batch: B250614									
Blank (B250614-BLK1)									
Total Suspended Solids	<0.9	mg/L					02/24/2025	RHC	U
LCS (B250614-BS1)									
Total Suspended Solids			99.2	90-110			02/24/2025	RHC	
Duplicate (B250614-DUP1) Source ID: LS02266-02									
Total Suspended Solids					0.367	20	02/24/2025	RHC	
Duplicate (B250614-DUP2) Source ID: BB04547-01									
Total Suspended Solids					3.61	20	02/24/2025	RHC	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B250617									
Blank (B250617-BLK1)									
Turbidity	<0.3	NTU					02/24/2025	ALN	U
LCS (B250617-BS1)									
Turbidity			100	90-110			02/24/2025	ALN	
Duplicate (B250617-DUP1)	Source ID: AC00396-02								
Turbidity					1.81	25	02/24/2025	ALN	
Batch: B250618									
Blank (B250618-BLK1)									
BOD5	<2	mg/L					03/01/2025	MCB	U
LCS (B250618-BS1)									
BOD5			98.3	84.6-115.4			03/01/2025	MCB	
LCS (B250618-BS2)									
BOD5			108	84.6-115.4			03/01/2025	MCB	
Duplicate (B250618-DUP1)	Source ID: WB03632-07								
BOD5					0.532	30	03/01/2025	MCB	
Duplicate (B250618-DUP2)	Source ID: LS02266-02								
BOD5					1.48	30	03/01/2025	MCB	
Batch: B250636									
Blank (B250636-BLK1)									
Total Dissolved Solids	<25	mg/L					02/27/2025	MCB	U
LCS (B250636-BS1)									
Total Dissolved Solids			96.2	90-110			02/27/2025	MCB	
Duplicate (B250636-DUP1)	Source ID: EN00062-02								
Total Dissolved Solids					1.76	10	02/27/2025	MCB	
Batch: B250662									
Blank (B250662-BLK1)									
Nitrate-Nitrite, as N	<0.025	mg/L					02/27/2025	RKG	U
Blank (B250662-BLK2)									
Nitrate-Nitrite, as N	<0.025	mg/L					02/27/2025	RKG	U
LCS (B250662-BS1)									
Nitrate-Nitrite, as N			99.1	90-110			02/27/2025	RKG	
LCS (B250662-BS2)									
Nitrate-Nitrite, as N			102	90-110			02/27/2025	RKG	
Duplicate (B250662-DUP1)	Source ID: AC00395-01								
Nitrate-Nitrite, as N					13.1	10	02/27/2025	RKG	QC-02
Duplicate (B250662-DUP2)	Source ID: LS02262-01								
Nitrate-Nitrite, as N					0.0258	10	02/27/2025	RKG	
Duplicate (B250662-DUP3)	Source ID: LS02268-02								
Nitrate-Nitrite, as N					0.805	10	02/27/2025	RKG	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B250662 (Continued)									
Matrix Spike (B250662-MS1) Source ID: AC00395-01									
Nitrate-Nitrite, as N			94.2	90-110			02/27/2025	RKG	
Matrix Spike (B250662-MS2) Source ID: LS02262-01									
Nitrate-Nitrite, as N			107	90-110			02/27/2025	RKG	
Matrix Spike (B250662-MS3) Source ID: LS02268-02									
Nitrate-Nitrite, as N			103	90-110			02/27/2025	RKG	
Matrix Spike Dup (B250662-MSD1) Source ID: AC00395-01									
Nitrate-Nitrite, as N			93.8	90-110	0.360	10	02/27/2025	RKG	
Matrix Spike Dup (B250662-MSD2) Source ID: LS02262-01									
Nitrate-Nitrite, as N			109	90-110	0.324	10	02/27/2025	RKG	
Matrix Spike Dup (B250662-MSD3) Source ID: LS02268-02									
Nitrate-Nitrite, as N			101	90-110	0.639	10	02/27/2025	RKG	
Batch: B250688									
Blank (B250688-BLK1)									
Ammonia, as N	<0.045	mg/L					03/03/2025	ALN	U
Blank (B250688-BLK2)									
Ammonia, as N	<0.045	mg/L					03/03/2025	ALN	U
LCS (B250688-BS1)									
Ammonia, as N			98.2	90-110			03/03/2025	ALN	
LCS (B250688-BS2)									
Ammonia, as N			104	90-110			03/03/2025	ALN	
Duplicate (B250688-DUP1) Source ID: AC00396-02									
Ammonia, as N					2.79	20	03/03/2025	ALN	
Duplicate (B250688-DUP2) Source ID: BB04550-03									
Ammonia, as N					1.58	20	03/03/2025	ALN	D
Matrix Spike (B250688-MS1) Source ID: AC00396-02									
Ammonia, as N			103	84-115			03/03/2025	ALN	
Matrix Spike (B250688-MS2) Source ID: BB04550-03									
Ammonia, as N			99.6	84-115			03/03/2025	ALN	D
Matrix Spike Dup (B250688-MSD1) Source ID: AC00396-02									
Ammonia, as N			102	84-115	0.355	20	03/03/2025	ALN	
Matrix Spike Dup (B250688-MSD2) Source ID: BB04550-03									
Ammonia, as N			98.5	84-115	0.618	20	03/03/2025	ALN	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B250705									
Blank (B250705-BLK1)									
TKN	<0.1	mg/L					03/05/2025	JAL	U
Blank (B250705-BLK2)									
TKN	<0.1	mg/L					03/05/2025	JAL	U
LCS (B250705-BS1)									
TKN			95.2	80-120			03/05/2025	JAL	
LCS (B250705-BS2)									
TKN			100	80-120			03/05/2025	JAL	
Duplicate (B250705-DUP1) Source ID: BB04538-01									
TKN					0.799	20	03/05/2025	JAL	D
Duplicate (B250705-DUP2) Source ID: BB04543-04									
TKN					0.223	20	03/05/2025	JAL	
Duplicate (B250705-DUP3) Source ID: WB03626-06									
TKN					0.366	20	03/05/2025	JAL	D
Matrix Spike (B250705-MS1) Source ID: BB04538-01									
TKN			97.3	80-120			03/05/2025	JAL	D
Matrix Spike (B250705-MS2) Source ID: BB04543-04									
TKN			93.5	80-120			03/05/2025	JAL	
Matrix Spike (B250705-MS3) Source ID: WB03626-06									
TKN			111	80-120			03/05/2025	JAL	D
Matrix Spike Dup (B250705-MSD1) Source ID: BB04538-01									
TKN			97.6	80-120	0.101	20	03/05/2025	JAL	D
Matrix Spike Dup (B250705-MSD2) Source ID: BB04543-04									
TKN			95.8	80-120	0.595	20	03/05/2025	JAL	
Matrix Spike Dup (B250705-MSD3) Source ID: WB03626-06									
TKN			108	80-120	0.876	20	03/05/2025	JAL	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Dissolved Wet Chemistry									
Batch: B250619									
Blank (B250619-BLK1)									
Orthophosphate, as P	<0.003	mg/L					02/24/2025	JAL	U
LCS (B250619-BS1)									
Orthophosphate, as P			96.7	90-110			02/24/2025	JAL	
Duplicate (B250619-DUP1) Source ID: AC00396-02									
Orthophosphate, as P					0.574	10	02/24/2025	JAL	
Matrix Spike (B250619-MS1) Source ID: AC00396-02									
Orthophosphate, as P			101	90-110			02/24/2025	JAL	
Matrix Spike Dup (B250619-MSD1) Source ID: AC00396-02									
Orthophosphate, as P			101	90-110	0.188	10	02/24/2025	JAL	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals									
Batch: B250639									
Blank (B250639-BLK1)									
Calcium	<0.04	mg/L					03/03/2025	SMC	U
Magnesium	<80	ug/L					03/03/2025	SMC	U
Phosphorus as P	<0.012	mg/L					03/03/2025	SMC	U
LCS (B250639-BS1)									
Calcium			102	85-115			03/03/2025	SMC	
Magnesium			102	85-115			03/03/2025	SMC	
Phosphorus as P			103	85-115			03/03/2025	SMC	
Duplicate (B250639-DUP1) Source ID: AC00396-02									
Calcium					0.624	20	03/03/2025	SMC	
Magnesium					1.18	20	03/03/2025	SMC	
Phosphorus as P					1.16	20	03/03/2025	SMC	
Matrix Spike (B250639-MS1) Source ID: AC00396-02									
Calcium			102	70-130			03/03/2025	SMC	
Magnesium			103	70-130			03/03/2025	SMC	
Phosphorus as P			105	70-130			03/03/2025	SMC	
Matrix Spike Dup (B250639-MSD1) Source ID: AC00396-02									
Calcium			103	70-130	0.470	20	03/03/2025	SMC	
Magnesium			103	70-130	0.0382	20	03/03/2025	SMC	
Phosphorus as P			106	70-130	0.912	20	03/03/2025	SMC	
Batch: B250684									
Blank (B250684-BLK1)									
Arsenic	<0.050	ug/L					03/05/2025	DMW	U
Cadmium	<0.020	ug/L					03/05/2025	DMW	U
Lead	<0.010	ug/L					03/05/2025	DMW	U
LCS (B250684-BS1)									
Arsenic			102	85-115			03/05/2025	DMW	
Cadmium			104	85-115			03/05/2025	DMW	
Lead			99.4	85-115			03/05/2025	DMW	
Duplicate (B250684-DUP1) Source ID: AC00396-01									
Arsenic					1.97	20	03/05/2025	DMW	
Cadmium					NR	20	03/05/2025	DMW	U
Lead					2.25	20	03/05/2025	DMW	
Matrix Spike (B250684-MS1) Source ID: AC00396-01									
Arsenic			102	70-130			03/05/2025	DMW	
Cadmium			104	70-130			03/05/2025	DMW	
Lead			99.4	70-130			03/05/2025	DMW	
Matrix Spike Dup (B250684-MSD1) Source ID: AC00396-01									
Arsenic			100	70-130	1.49	20	03/05/2025	DMW	
Cadmium			104	70-130	0.377	20	03/05/2025	DMW	
Lead			98.1	70-130	1.27	20	03/05/2025	DMW	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals (Continued)									
Batch: B250697									
Blank (B250697-BLK1)									
Mercury	<0.01	ug/L					03/06/2025	SAS	U
LCS (B250697-BS1)									
Mercury			102	85-115			03/06/2025	SAS	
Duplicate (B250697-DUP1) Source ID: AC00396-01									
Mercury					NR	20	03/06/2025	SAS	U
Duplicate (B250697-DUP2) Source ID: BB04543-03									
Mercury					37.9	20	03/06/2025	SAS	QC-02
Matrix Spike (B250697-MS1) Source ID: AC00396-01									
Mercury			103	70-130			03/06/2025	SAS	
Matrix Spike (B250697-MS2) Source ID: BB04543-03									
Mercury			96.7	70-130			03/06/2025	SAS	
Matrix Spike Dup (B250697-MSD1) Source ID: AC00396-01									
Mercury			107	70-130	3.44	20	03/06/2025	SAS	
Matrix Spike Dup (B250697-MSD2) Source ID: BB04543-03									
Mercury			103	70-130	5.72	20	03/06/2025	SAS	
Dissolved Metals									
Batch: B250685									
Blank (B250685-BLK1)									
Cadmium	<0.010	ug/L					03/01/2025	DMW	U
Copper	<0.14	ug/L					03/01/2025	DMW	U
Lead	<0.010	ug/L					03/01/2025	DMW	U
Zinc	<0.50	ug/L					03/01/2025	DMW	U
LCS (B250685-BS1)									
Cadmium			103	85-115			03/01/2025	DMW	
Copper			100	85-115			03/01/2025	DMW	
Lead			99.6	85-115			03/01/2025	DMW	
Zinc			99.8	85-115			03/01/2025	DMW	
Duplicate (B250685-DUP1) Source ID: AC00396-01									
Cadmium					NR	10	03/01/2025	DMW	U
Copper					0.728	10	03/01/2025	DMW	
Lead					1.01	10	03/01/2025	DMW	
Zinc					1.04	10	03/01/2025	DMW	
Matrix Spike (B250685-MS1) Source ID: AC00396-01									
Cadmium			102	70-130			03/01/2025	DMW	
Copper			97.0	70-130			03/01/2025	DMW	
Lead			96.0	70-130			03/01/2025	DMW	
Zinc			100	70-130			03/01/2025	DMW	
Matrix Spike Dup (B250685-MSD1) Source ID: AC00396-01									
Cadmium			101	70-130	1.13	10	03/01/2025	DMW	
Copper			96.3	70-130	0.609	10	03/01/2025	DMW	
Lead			95.5	70-130	0.513	10	03/01/2025	DMW	
Zinc			98.4	70-130	1.33	10	03/01/2025	DMW	

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Report Date: 03/14/2025 09:57

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Notes and Definitions

Item	Definition
D	Data reported from a dilution
QC-02	The RPD is greater than the method acceptance criteria. At least one of the values used to calculate the RPD, is less than or equal to the PQL.
U	Analyte included in the analysis, but not detected
NR	No result for this parameter.

Method Reference Acronyms

Colilert	Colilert, IDEXX Laboratories, Inc.
EPA	Manual of Methods for Chemical Analysis of Water and Wastes, USEPA
GS	USGS Techniques of Water-Resources Investigations
HH	Hach Spectrophotometer Procedures Manual
SM	Standard Methods for the Examination of Water and Wastewater
SW	Test methods for Evaluating Solid Waste, SW-846

Stephen Quintero or Azubike Emenari
QA/QC Coordinator

Leslea Basterrechea
Water Quality Laboratory Manager

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Ada County Highway District

ACHD

Attn: Steven Turner
3775 Adams Street
Garden City, Idaho 83714–6418
Tel. (208) 407–4284

Purchase Order: 63069586
Project: Stormwater PI
Sampler(s): Kristen Jolliffe
Steven Turner

Samples left in receiving room overnight in coolers. Too temp. in the morning.

Lab#	Begin Date	End Date	Begin Time	End Time	Sample Identification	Temp	Sampler Initials	Matrix: Water	Type: Grab	Type: Composite	BOD$_5$ - SM 5210 B	COD - Hach 8000	TSS - SM 2540 D	TDS - SM 2540 C	TKN - EPA 351.2	TP - EPA 200.7	Orthophosphate - EPA 365.1	Total As, Cd, Pb - EPA 200.8	Diss. Cd Cu, Pb, Zn - EPA 200.8	Total Hg - EPA 245.1	E. Coli - IDEXX Colilert	Turbidity - EPA 180.1	Hardness - SM 2340 B-2011	NO3+NO2 - EPA 353.2	Timberline Ammonia-001	Chloride – EPA 300.0	Total Containers
ACO0396-01	2/23/25	2/23/25	0651	1849	250223-03-WC	6.6°C	KJ	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	2
-02	2/23/25	2/23/25	0732	1728	250223-12-WC	1.9	KJ	X		X																		1
-03	2/23/25	2/23/25	0734	1927	250223-14-WC	4.7	KJ	X		X																		3

Relinquished by (sign)	Date &Time Transferred	Received by (sign)	Comments/ Special Instructions
~~2/23/25 2044~~ Kristen Jolliffe	2/23/25 2044	ASC 3/24/25 0703	Please split 250223-03-WC for a duplicate called 250223-03-103. ↑ Did not use 250223-03-WC as a duplicate as per ACHD's request ASC ACO0396

241010 ST

Leslea Basterrechea

From: April Griffith
Sent: Friday, March 14, 2025 8:42 AM
To: Leslea Basterrechea
Subject: ACHD 2/24/25

Hi Leslea,

On the morning of 2/24/25, I contacted Steven Turner and notified him that one of the storm samples for composite was above 6.0 °C, at 6.6 °C. He said to go ahead and process the sample with comments of the noted temperature.

Thank you,

April Griffith
Water Quality Lab Supervisor
Public Works
Office: (208)608-7299
agriffith@cityofboise.org
cityofboise.org

Creating a city for everyone.

Report Date: 03/14/2025 09:58

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Samples in this Report

Lab ID	Sample	Sample Description	Matrix	Qualifiers	Sampled	Received
AC00395-01	ACST1C	250223-206-WC	Water		2/23/25 18:52	2/24/25 7:03
Comments:	Temperature at receipt: 6.0 degrees C					
AC00395-02	ACST1C	250223-206-103	Water		2/23/25 18:52	2/24/25 7:03
Comments:	dup of 250223-206-WC, Temperature at receipt: 6.0 degrees C					

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Analysis Report

Location:	ACST1C	Location Description:	250223-206-WC
Date/Time Collected:	02/23/2025 07:21 - 02/23/2025 18:52		
Lab Number:	AC00395-01	Sample Collector:	K.J
Sample Type:	Composite	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
Ammonia, as N	B250688	0.0719	mg/L	0.0450	0.0450	Timberline Ammonia-001	03/03/25	3/3/25 14:34	ALN	
BOD5	B250618	6.17	mg/L	2.00	2.00	SM 5210 B-2016	02/24/25	3/1/25 10:00	MCB	
Chloride	B250609	17.8	mg/L	0.0200	0.0200	EPA 300.0, Rev. 2.1 (1993)	02/24/25	2/24/25 19:53	ALN	
COD	B250612	56.0	mg/L	7.00	7.00	HH 8000, Standard Method 5220 D	02/24/25	2/24/25 12:50	NTS	
Nitrate-Nitrite, as N	B250662	0.0847	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	02/27/25	2/27/25 11:10	RKG	
TKN	B250705	0.905	mg/L	0.100	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	03/05/25	3/5/25 10:21	JAL	
Total Dissolved Solids	B250636	76.5	mg/L	25.0	25.0	SM 2540 C-2015	02/25/25	2/27/25 9:21	MCB	
Total Suspended Solids	B250614	37.6	mg/L	0.900	0.900	SM 2540 D-2015	02/24/25	2/24/25 12:07	RHC	
Turbidity	B250617	45.2	NTU	0.6	0.3	EPA 180.1, Rev. 2.0 (1993)	02/24/25	2/24/25 10:45	ALN	D
Dissolved Wet Chemistry										
Orthophosphate, as P	B250619	0.104	mg/L	3.00E-3	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	02/24/25	2/24/25 11:33	JAL	
Total Metals										
Mercury	B250697	<0.0100	ug/L	0.0100	0.0100	EPA 245.1	03/06/25	3/6/25 12:46	SAS	U
Arsenic	B250684	2.1	ug/L	0.050	0.050	EPA 200.8	03/02/25	3/5/25 13:59	DMW	
Cadmium	B250684	0.044	ug/L	0.020	0.020	EPA 200.8	03/02/25	3/5/25 13:59	DMW	
Calcium	B250639	3.04	mg/L	0.0400	0.0400	EPA 200.7	02/26/25	3/3/25 12:53	SMC	
Lead	B250684	4.2	ug/L	0.010	0.010	EPA 200.8	03/02/25	3/5/25 13:59	DMW	
Magnesium	B250639	1660	ug/L	80.0	80.0	EPA 200.7	02/26/25	3/3/25 12:53	SMC	
Phosphorus as P	B250639	0.224	mg/L	0.0120	0.0120	EPA 200.7	02/26/25	3/3/25 12:53	SMC	
Hardness	B250639	14.4	mg/L	0.100	0.100	SM 2340 B-2011	02/26/25	3/3/25 12:53	SMC	
Dissolved Metals										
Cadmium	B250685	<0.0100	ug/L	0.010	0.010	EPA 200.8	03/01/25	3/1/25 18:04	DMW	U
Copper	B250685	3.7	ug/L	0.14	0.14	EPA 200.8	03/01/25	3/1/25 18:04	DMW	
Lead	B250685	0.21	ug/L	0.010	0.010	EPA 200.8	03/01/25	3/1/25 18:04	DMW	
Zinc	B250685	10.1	ug/L	0.50	0.50	EPA 200.8	03/01/25	3/1/25 18:04	DMW	

* The reported adjusted "MDL" is sample-specific. The analysis MDL as defined by 40 CFR pt 136 App.B. was corrected for dilution, dry weight, or method-defined ML.

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Report Date: 03/14/2025 09:58

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1C	Location Description:	250223-206-103
Date/Time Collected:	02/23/2025 07:21 - 02/23/2025 18:52		
Lab Number:	AC00395-02	Sample Collector:	K.J
Sample Type:	Composite	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
Ammonia, as N	B250688	0.0784	mg/L	0.0450	0.0450	Timberline Ammonia-001	03/03/25	3/3/25 14:31	ALN	
BOD5	B250618	6.18	mg/L	2.00	2.00	SM 5210 B-2016	02/24/25	3/1/25 9:56	MCB	
Chloride	B250609	18.3	mg/L	0.0200	0.0200	EPA 300.0, Rev. 2.1 (1993)	02/24/25	2/24/25 20:19	ALN	
COD	B250612	61.0	mg/L	7.00	7.00	HH 8000, Standard Method 5220 D	02/24/25	2/24/25 12:50	NTS	
Nitrate-Nitrite, as N	B250662	0.0970	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	02/27/25	2/27/25 11:14	RKG	
TKN	B250705	0.941	mg/L	0.100	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	03/05/25	3/5/25 10:23	JAL	
Total Dissolved Solids	B250636	75.0	mg/L	25.0	25.0	SM 2540 C-2015	02/25/25	2/27/25 9:20	MCB	
Total Suspended Solids	B250614	36.8	mg/L	0.900	0.900	SM 2540 D-2015	02/24/25	2/24/25 12:06	RHC	
Turbidity	B250617	46.3	NTU	0.6	0.3	EPA 180.1, Rev. 2.0 (1993)	02/24/25	2/24/25 10:51	ALN	D
Dissolved Wet Chemistry										
Orthophosphate, as P	B250619	0.103	mg/L	3.00E-3	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	02/24/25	2/24/25 11:34	JAL	
Total Metals										
Mercury	B250697	<0.0100	ug/L	0.0100	0.0100	EPA 245.1	03/06/25	3/6/25 12:50	SAS	U
Arsenic	B250684	2.0	ug/L	0.050	0.050	EPA 200.8	03/02/25	3/5/25 14:04	DMW	
Cadmium	B250684	0.038	ug/L	0.020	0.020	EPA 200.8	03/02/25	3/5/25 14:04	DMW	
Calcium	B250639	3.03	mg/L	0.0400	0.0400	EPA 200.7	02/26/25	3/3/25 12:56	SMC	
Lead	B250684	4.0	ug/L	0.010	0.010	EPA 200.8	03/02/25	3/5/25 14:04	DMW	
Magnesium	B250639	1660	ug/L	80.0	80.0	EPA 200.7	02/26/25	3/3/25 12:56	SMC	
Phosphorus as P	B250639	0.222	mg/L	0.0120	0.0120	EPA 200.7	02/26/25	3/3/25 12:56	SMC	
Hardness	B250639	14.4	mg/L	0.100	0.100	SM 2340 B-2011	02/26/25	3/3/25 12:56	SMC	
Dissolved Metals										
Cadmium	B250685	<0.0100	ug/L	0.010	0.010	EPA 200.8	03/01/25	3/1/25 18:09	DMW	U
Copper	B250685	4.9	ug/L	0.14	0.14	EPA 200.8	03/01/25	3/1/25 18:09	DMW	
Lead	B250685	0.16	ug/L	0.010	0.010	EPA 200.8	03/01/25	3/1/25 18:09	DMW	
Zinc	B250685	9.6	ug/L	0.50	0.50	EPA 200.8	03/01/25	3/1/25 18:09	DMW	

* The reported adjusted "MDL" is sample-specific. The analysis MDL as defined by 40 CFR pt 136 App.B. was corrected for dilution, dry weight, or method-defined ML.

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Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
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Quality Control Report

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry									
Batch: B250609									
Blank (B250609-BLK1)									
Chloride	<0.02	mg/L					02/24/2025	ALN	U
LCS (B250609-BS1)									
Chloride			99.7	90-110			02/24/2025	ALN	
Duplicate (B250609-DUP1) Source ID: BB04543-04									
Chloride					0.0651	10	02/24/2025	ALN	D
Duplicate (B250609-DUP2) Source ID: AC00396-01									
Chloride					0.104	10	02/24/2025	ALN	
Matrix Spike (B250609-MS1) Source ID: BB04543-04									
Chloride			98.4	90-110			02/24/2025	ALN	D
Matrix Spike (B250609-MS2) Source ID: AC00396-01									
Chloride			99.7	90-110			02/24/2025	ALN	
Matrix Spike (B250609-MS3) Source ID: WQ00263-05									
Chloride			93.1	90-110			02/24/2025	ALN	
Matrix Spike Dup (B250609-MSD1) Source ID: BB04543-04									
Chloride			97.5	90-110	0.731	10	02/24/2025	ALN	D
Matrix Spike Dup (B250609-MSD2) Source ID: AC00396-01									
Chloride			98.1	90-110	1.37	10	02/24/2025	ALN	
Batch: B250612									
Blank (B250612-BLK1)									
COD	<7	mg/L					02/24/2025	NTS	U
LCS (B250612-BS1)									
COD			98.7	90-110			02/24/2025	NTS	
Duplicate (B250612-DUP1) Source ID: AC00396-01									
COD					4.44	10	02/24/2025	NTS	
Batch: B250614									
Blank (B250614-BLK1)									
Total Suspended Solids	<0.9	mg/L					02/24/2025	RHC	U
LCS (B250614-BS1)									
Total Suspended Solids			99.2	90-110			02/24/2025	RHC	
Duplicate (B250614-DUP1) Source ID: LS02266-02									
Total Suspended Solids					0.367	20	02/24/2025	RHC	
Duplicate (B250614-DUP2) Source ID: BB04547-01									
Total Suspended Solids					3.61	20	02/24/2025	RHC	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B250617									
Blank (B250617-BLK1)									
Turbidity	<0.3	NTU					02/24/2025	ALN	U
LCS (B250617-BS1)									
Turbidity			100	90-110			02/24/2025	ALN	
Duplicate (B250617-DUP1)	Source ID: AC00396-02								
Turbidity					1.81	25	02/24/2025	ALN	
Batch: B250618									
Blank (B250618-BLK1)									
BOD5	<2	mg/L					03/01/2025	MCB	U
LCS (B250618-BS1)									
BOD5			98.3	84.6-115.4			03/01/2025	MCB	
LCS (B250618-BS2)									
BOD5			108	84.6-115.4			03/01/2025	MCB	
Duplicate (B250618-DUP1)	Source ID: WB03632-07								
BOD5					0.532	30	03/01/2025	MCB	
Duplicate (B250618-DUP2)	Source ID: LS02266-02								
BOD5					1.48	30	03/01/2025	MCB	
Batch: B250636									
Blank (B250636-BLK1)									
Total Dissolved Solids	<25	mg/L					02/27/2025	MCB	U
LCS (B250636-BS1)									
Total Dissolved Solids			96.2	90-110			02/27/2025	MCB	
Duplicate (B250636-DUP1)	Source ID: EN00062-02								
Total Dissolved Solids					1.76	10	02/27/2025	MCB	
Batch: B250662									
Blank (B250662-BLK1)									
Nitrate-Nitrite, as N	<0.025	mg/L					02/27/2025	RKG	U
Blank (B250662-BLK2)									
Nitrate-Nitrite, as N	<0.025	mg/L					02/27/2025	RKG	U
LCS (B250662-BS1)									
Nitrate-Nitrite, as N			99.1	90-110			02/27/2025	RKG	
LCS (B250662-BS2)									
Nitrate-Nitrite, as N			102	90-110			02/27/2025	RKG	
Duplicate (B250662-DUP1)	Source ID: AC00395-01								
Nitrate-Nitrite, as N					13.1	10	02/27/2025	RKG	QC-02
Duplicate (B250662-DUP2)	Source ID: LS02262-01								
Nitrate-Nitrite, as N					0.0258	10	02/27/2025	RKG	
Duplicate (B250662-DUP3)	Source ID: LS02268-02								
Nitrate-Nitrite, as N					0.805	10	02/27/2025	RKG	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B250662 (Continued)									
Matrix Spike (B250662-MS1) Source ID: AC00395-01									
Nitrate-Nitrite, as N			94.2	90-110			02/27/2025	RKG	
Matrix Spike (B250662-MS2) Source ID: LS02262-01									
Nitrate-Nitrite, as N			107	90-110			02/27/2025	RKG	
Matrix Spike (B250662-MS3) Source ID: LS02268-02									
Nitrate-Nitrite, as N			103	90-110			02/27/2025	RKG	
Matrix Spike Dup (B250662-MSD1) Source ID: AC00395-01									
Nitrate-Nitrite, as N			93.8	90-110	0.360	10	02/27/2025	RKG	
Matrix Spike Dup (B250662-MSD2) Source ID: LS02262-01									
Nitrate-Nitrite, as N			109	90-110	0.324	10	02/27/2025	RKG	
Matrix Spike Dup (B250662-MSD3) Source ID: LS02268-02									
Nitrate-Nitrite, as N			101	90-110	0.639	10	02/27/2025	RKG	
Batch: B250688									
Blank (B250688-BLK1)									
Ammonia, as N	<0.045	mg/L					03/03/2025	ALN	U
Blank (B250688-BLK2)									
Ammonia, as N	<0.045	mg/L					03/03/2025	ALN	U
LCS (B250688-BS1)									
Ammonia, as N			98.2	90-110			03/03/2025	ALN	
LCS (B250688-BS2)									
Ammonia, as N			104	90-110			03/03/2025	ALN	
Duplicate (B250688-DUP1) Source ID: AC00396-02									
Ammonia, as N					2.79	20	03/03/2025	ALN	
Duplicate (B250688-DUP2) Source ID: BB04550-03									
Ammonia, as N					1.58	20	03/03/2025	ALN	D
Matrix Spike (B250688-MS1) Source ID: AC00396-02									
Ammonia, as N			103	84-115			03/03/2025	ALN	
Matrix Spike (B250688-MS2) Source ID: BB04550-03									
Ammonia, as N			99.6	84-115			03/03/2025	ALN	D
Matrix Spike Dup (B250688-MSD1) Source ID: AC00396-02									
Ammonia, as N			102	84-115	0.355	20	03/03/2025	ALN	
Matrix Spike Dup (B250688-MSD2) Source ID: BB04550-03									
Ammonia, as N			98.5	84-115	0.618	20	03/03/2025	ALN	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B250705									
Blank (B250705-BLK1)									
TKN	<0.1	mg/L					03/05/2025	JAL	U
Blank (B250705-BLK2)									
TKN	<0.1	mg/L					03/05/2025	JAL	U
LCS (B250705-BS1)									
TKN			95.2	80-120			03/05/2025	JAL	
LCS (B250705-BS2)									
TKN			100	80-120			03/05/2025	JAL	
Duplicate (B250705-DUP1) Source ID: BB04538-01									
TKN					0.799	20	03/05/2025	JAL	D
Duplicate (B250705-DUP2) Source ID: BB04543-04									
TKN					0.223	20	03/05/2025	JAL	
Duplicate (B250705-DUP3) Source ID: WB03626-06									
TKN					0.366	20	03/05/2025	JAL	D
Matrix Spike (B250705-MS1) Source ID: BB04538-01									
TKN			97.3	80-120			03/05/2025	JAL	D
Matrix Spike (B250705-MS2) Source ID: BB04543-04									
TKN			93.5	80-120			03/05/2025	JAL	
Matrix Spike (B250705-MS3) Source ID: WB03626-06									
TKN			111	80-120			03/05/2025	JAL	D
Matrix Spike Dup (B250705-MSD1) Source ID: BB04538-01									
TKN			97.6	80-120	0.101	20	03/05/2025	JAL	D
Matrix Spike Dup (B250705-MSD2) Source ID: BB04543-04									
TKN			95.8	80-120	0.595	20	03/05/2025	JAL	
Matrix Spike Dup (B250705-MSD3) Source ID: WB03626-06									
TKN			108	80-120	0.876	20	03/05/2025	JAL	D

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Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Dissolved Wet Chemistry									
Batch: B250619									
Blank (B250619-BLK1)									
Orthophosphate, as P	<0.003	mg/L					02/24/2025	JAL	U
LCS (B250619-BS1)									
Orthophosphate, as P			96.7	90-110			02/24/2025	JAL	
Duplicate (B250619-DUP1) Source ID: AC00396-02									
Orthophosphate, as P					0.574	10	02/24/2025	JAL	
Matrix Spike (B250619-MS1) Source ID: AC00396-02									
Orthophosphate, as P			101	90-110			02/24/2025	JAL	
Matrix Spike Dup (B250619-MSD1) Source ID: AC00396-02									
Orthophosphate, as P			101	90-110	0.188	10	02/24/2025	JAL	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals									
Batch: B250639									
Blank (B250639-BLK1)									
Calcium	<0.04	mg/L					03/03/2025	SMC	U
Magnesium	<80	ug/L					03/03/2025	SMC	U
Phosphorus as P	<0.012	mg/L					03/03/2025	SMC	U
LCS (B250639-BS1)									
Calcium			102	85-115			03/03/2025	SMC	
Magnesium			102	85-115			03/03/2025	SMC	
Phosphorus as P			103	85-115			03/03/2025	SMC	
Duplicate (B250639-DUP1) Source ID: AC00396-02									
Calcium					0.624	20	03/03/2025	SMC	
Magnesium					1.18	20	03/03/2025	SMC	
Phosphorus as P					1.16	20	03/03/2025	SMC	
Matrix Spike (B250639-MS1) Source ID: AC00396-02									
Calcium			102	70-130			03/03/2025	SMC	
Magnesium			103	70-130			03/03/2025	SMC	
Phosphorus as P			105	70-130			03/03/2025	SMC	
Matrix Spike Dup (B250639-MSD1) Source ID: AC00396-02									
Calcium			103	70-130	0.470	20	03/03/2025	SMC	
Magnesium			103	70-130	0.0382	20	03/03/2025	SMC	
Phosphorus as P			106	70-130	0.912	20	03/03/2025	SMC	
Batch: B250684									
Blank (B250684-BLK1)									
Arsenic	<0.050	ug/L					03/05/2025	DMW	U
Cadmium	<0.020	ug/L					03/05/2025	DMW	U
Lead	<0.010	ug/L					03/05/2025	DMW	U
LCS (B250684-BS1)									
Arsenic			102	85-115			03/05/2025	DMW	
Cadmium			104	85-115			03/05/2025	DMW	
Lead			99.4	85-115			03/05/2025	DMW	
Duplicate (B250684-DUP1) Source ID: AC00396-01									
Arsenic					1.97	20	03/05/2025	DMW	
Cadmium					NR	20	03/05/2025	DMW	U
Lead					2.25	20	03/05/2025	DMW	
Matrix Spike (B250684-MS1) Source ID: AC00396-01									
Arsenic			102	70-130			03/05/2025	DMW	
Cadmium			104	70-130			03/05/2025	DMW	
Lead			99.4	70-130			03/05/2025	DMW	
Matrix Spike Dup (B250684-MSD1) Source ID: AC00396-01									
Arsenic			100	70-130	1.49	20	03/05/2025	DMW	
Cadmium			104	70-130	0.377	20	03/05/2025	DMW	
Lead			98.1	70-130	1.27	20	03/05/2025	DMW	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals (Continued)									
Batch: B250697									
Blank (B250697-BLK1)									
Mercury	<0.01	ug/L					03/06/2025	SAS	U
LCS (B250697-BS1)									
Mercury			102	85-115			03/06/2025	SAS	
Duplicate (B250697-DUP1) Source ID: AC00396-01									
Mercury					NR	20	03/06/2025	SAS	U
Duplicate (B250697-DUP2) Source ID: BB04543-03									
Mercury					37.9	20	03/06/2025	SAS	QC-02
Matrix Spike (B250697-MS1) Source ID: AC00396-01									
Mercury			103	70-130			03/06/2025	SAS	
Matrix Spike (B250697-MS2) Source ID: BB04543-03									
Mercury			96.7	70-130			03/06/2025	SAS	
Matrix Spike Dup (B250697-MSD1) Source ID: AC00396-01									
Mercury	.		107	70-130	3.44	20	03/06/2025	SAS	
Matrix Spike Dup (B250697-MSD2) Source ID: BB04543-03									
Mercury			103	70-130	5.72	20	03/06/2025	SAS	
Dissolved Metals									
Batch: B250685									
Blank (B250685-BLK1)									
Cadmium	<0.010	ug/L					03/01/2025	DMW	U
Copper	<0.14	ug/L					03/01/2025	DMW	U
Lead	<0.010	ug/L					03/01/2025	DMW	U
Zinc	<0.50	ug/L					03/01/2025	DMW	U
LCS (B250685-BS1)									
Cadmium			103	85-115			03/01/2025	DMW	
Copper			100	85-115			03/01/2025	DMW	
Lead			99.6	85-115			03/01/2025	DMW	
Zinc			99.8	85-115			03/01/2025	DMW	
Duplicate (B250685-DUP1) Source ID: AC00396-01									
Cadmium					NR	10	03/01/2025	DMW	U
Copper					0.728	10	03/01/2025	DMW	
Lead					1.01	10	03/01/2025	DMW	
Zinc					1.04	10	03/01/2025	DMW	
Matrix Spike (B250685-MS1) Source ID: AC00396-01									
Cadmium			102	70-130			03/01/2025	DMW	
Copper			97.0	70-130			03/01/2025	DMW	
Lead			96.0	70-130			03/01/2025	DMW	
Zinc			100	70-130			03/01/2025	DMW	
Matrix Spike Dup (B250685-MSD1) Source ID: AC00396-01									
Cadmium			101	70-130	1.13	10	03/01/2025	DMW	
Copper			96.3	70-130	0.609	10	03/01/2025	DMW	
Lead			95.5	70-130	0.513	10	03/01/2025	DMW	
Zinc			98.4	70-130	1.33	10	03/01/2025	DMW	

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Report Date: 03/14/2025 09:58

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Notes and Definitions

Item	Definition
D	Data reported from a dilution
QC-02	The RPD is greater than the method acceptance criteria. At least one of the values used to calculate the RPD, is less than or equal to the PQL.
U	Analyte included in the analysis, but not detected
NR	No result for this parameter.

Method Reference Acronyms

Colilert	Colilert, IDEXX Laboratories, Inc.
EPA	Manual of Methods for Chemical Analysis of Water and Wastes, USEPA
GS	USGS Techniques of Water-Resources Investigations
HH	Hach Spectrophotometer Procedures Manual
SM	Standard Methods for the Examination of Water and Wastewater
SW	Test methods for Evaluating Solid Waste, SW-846

Stephen Quintero or Azubike Emenari
QA/QC Coordinator

Leslea Basterrechea
Water Quality Laboratory Manager

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Ada County Highway District

ACHD

Attn: Steven Turner
3775 Adams Street
Garden City, Idaho 83714-6418
Tel. (208) 407-4284

Purchase Order: 63069586
Project: Stormwater PI
Sampler(s): Kristen Jolliffe
Steven Turner

Samples left in receiving room overnight in coolers. Took temp in the morning.

Lab#	Begin Date	End Date	Begin Time	End Time	Sample Identification	Temp	Sampler Initials	Matrix: Water	Type: Grab	Type: Composite	BOD5 - SM 5210 B	COD - Hach 8000	TSS - SM 2540 D	TDS - SM 2540 C	TKN - EPA 351.2	TP - EPA 200.7	Orthophosphate - EPA 365.1	Total As, Cd, Pb - EPA 200.8	Diss. Cd Cu, Pb, Zn - EPA 200.8	Total Hg - EPA 245.1	E. Coli - IDEXX Colilert	Turbidity - EPA 180.1	Hardness - SM 2340 B-2011	NO3+NO2 - EPA 353.2	Timberline Ammonia-001	Chloride - EPA 300.0	Total Containers
ACC0395-01	2/23/25	2/23/25	0721	1852	250223-206-WC	6.0	KS	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	3

Relinquished by (sign)	Date &Time Transferred	Received by (sign)	Comments/ Special Instructions
Kristen Jolliffe	2/23/25 1644	ASE 2/24/25 0703	Split 250223-206-WC for a duplicate per ACHD's request and called 250223-~~06~~206-103 ASE ACC0395

241010 ST

Technical Memorandum

1290 W. Myrtle St. Suite 340
Boise, ID 83702

Phone: 801.316.9859

Prepared for: Ada County Highway District

Project Title: NPDES Phase I Stormwater Support WY 2025

Project No.: 196784

Technical Memorandum

Subject: ACHD Phase I Storm Event Report for May 17, 2025

Date: July 22, 2025

To: Monica Lowe

Cc: Steven Turner
Kristen Jolliffe

From: Zuly Lapa, Project Engineer

Prepared by: Reghan Hodges, Project Engineer

Reviewed by: Zuly Lapa, EIT, Project Engineer
Nikki McDonald, PE, Project Manager

Limitations:

This document was prepared solely for ACHD in accordance with professional standards at the time the services were performed and in accordance with the contract between ACHD and Brown and Caldwell dated September 14, 2024. This document is governed by the specific scope of work authorized by ACHD; it is not intended to be relied upon by any other party except for regulatory authorities contemplated by the scope of work. We have relied on information or instructions provided by ACHD and other parties and, unless otherwise expressly indicated, have made no independent investigation as to the validity, completeness, or accuracy of such information.

Section 1: Introduction

The Environmental Protection Agency Region 10 reissued a Municipal Separate Storm Sewer System Phase I National Pollutant Discharge Elimination System Permit (NPDES Permit), effective October 1, 2021, to Ada County Highway District (ACHD), Boise City, Ada County Drainage District No. 3, Idaho Transportation Department District 3, Boise State University, and Garden City. Under the NPDES Permit, Permittees are required to continue to conduct wet weather stormwater outfall monitoring and subwatershed monitoring. Four outfall monitoring sites (Lucky, Whitewater, Main, and Americana) and one subwatershed monitoring site (AS_6) have been established. The AS_6 site represents a subwatershed located within the Americana watershed. The Main Alternate (Main Alt) monitoring site may be used when high river flows surcharge the Main storm drain pipes. At each site, a minimum of three composite and three grab samples will be collected during Water Year (WY) 2025 (October 1, 2024, through September 30, 2025). The following storm event report summarizes stormwater sampling results from the May 17, 2025, storm event.

Section 2: Project Status

Table 2-1 is a summary of the sample types collected to date for WY 2025 Phase I Stormwater Outfall Monitoring. When samples are qualified, additional samples will be attempted from subsequent storms to collect unqualified samples.

Table 2-1. WY 2025 Samples Collected

Date	Lucky	Whitewater	Main	Main Alt	Americana	AS_6
December 14, 2024	G, C[1]	G, C	G, C	--	G, C	G, C
January 31, 2025	--, C	--, C[2]	--. C	--	--, C[2]	--, C[3]
February 23, 2025	G, C[4]	G, --	G, C	--	G, C[2]	G, C
May 17, 2025	G, C	--, C	--	G,--	G, C	G, C[4]
Unqualified Samples:	3G, 2C	2G, 2C	3G, 3C		3G, 2C	3G, 2C
Samples Remaining:	0G, 1C	1G, 1C	0G, 0C		0G, 1C	0G, 1C

Notes:

-- = no samples taken.

C = composite sample.

G = grab sample.

[1] *Equipment installation error resulted in negative flow and velocity; therefore, no composite subsamples were taken.*

[2] *Composite sample qualified due to lack of representativeness (50%–75%).*

[3] *Sample rejected due to lack of representativeness (<50%).*

[4] *Composite sample qualified due to exceedance of 6.0 °C.*

Section 3: Storm Event Summary

The May 17, 2025, storm event and the subsequent preparation and sampling efforts are detailed in the following sections.

3.1 Storm Detail

A summary of the forecast on which monitoring decisions were based is detailed below. The sampling event communication form that describes the forecast and summarizes the decision-making process from May 17, 2025, is included in Attachment A for reference.

Friday, May 16, 2025 (Sampling Event Communication & Set up)

- On the morning of May 16, the National Weather Service issued a forecast for a showery, convective system starting May 17 at 0900 until 2200. The chance of precipitation was 90%, with a 75% probability of rain amounts to be greater than 0.1 inches over a 12-hour period. The forecasted precipitation for this event was 0.25 inches of rain.
- Setup was accomplished on the morning of May 16. An expected precipitation depth of 0.15 inches was used to set trigger volumes at monitoring stations. A runoff calculations worksheet showing how the trigger volumes were calculated is included in Attachment A.

Saturday, May 17, 2025 (Storm Event)

- The runoff started on May 17 at approximately 1044 and ended on May 18 at approximately 0641.
- Precipitation totals ranged between 0.42 and 0.51 inches at local rain gauges.

Flow measurements and precipitation data are listed in Table 1 along with a sampling summary. Hydrographs for the Lucky, Whitewater, Main Alt, Americana and AS_6 sites showing flow, rain, and sample collection data are included in Attachment B.

3.2 Sampling Summary

Lucky, Whitewater, Americana and AS_6 monitoring stations were set up on May 16, 2025, to collect flow-proportional composite samples during the storm. Sampler enable conditions were programmed into the Lucky, Whitewater, Americana and AS_6 flowmeters. Setup and sampling information are included in Table 1. The field forms completed during setup/shutdown and sampling are included in Attachment C.

Grab Samples

Two, two-member teams mobilized to collect stormwater runoff grab samples and verify operation of the automatic sampling equipment on May 17 around 1143. Grab samples for Lucky, Main Alt, and Americana were submitted to the Boise City Public Works Water Quality Laboratory (WQL) at 1354 on May 17. The grab sample for AS_6 was submitted thereafter at 1727. Results for grab samples, including field parameter and analytical data, are included in Table 2. Laboratory analytical reports are included in Attachment D.

Composite Samples

Composite samples were collected at the Lucky, Whitewater, Americana and AS_6 monitoring stations and submitted to the WQL at 1230 on May 18. Analytical results are shown in Table 2 and pollutant loading estimates for the event are detailed in Table 3. Laboratory analytical reports are included in Attachment D.

Section 4: Quality Assurance/Quality Control

A summary of quality control samples collected during the May 17, 2025, storm event is presented below in Table 4-1. A field blank and a field duplicate were collected from the Main Alt monitoring station. The analytical results are included in Table 4-1.

Table 4-1. Quality Control Samples			
Sample ID	Sample Type	Parent Sample	Conclusions
250517-12-001	Field blank	Main Alternate grab	No *E. coli* detected in the field blank.
250517-12-101	Field duplicate	Main Alternate grab	Relative percent difference was within the acceptable range.

Data quality objectives for this storm were evaluated and tracked using the data validation review checklist included in Attachment A.

An acceptable composite sample represents at least 75 percent of the total discharge or at least 6 hours of the storm duration. All composite samples met the criteria. However, the composite sample collected at AS_6 exceeded the preservation temperature maximum. Therefore, all constituents analyzed are considered estimates with the exception of total metals, hardness, and chloride, in accordance with 40CFR136.

Acceptance and performance criteria for analytical and non-analytical data were met for Lucky, Whitewater and Americana composite samples.

All grab samples collected met acceptance criteria.

Section 5: Notes and Recommendations

Whitewater

During the storm event, the sampler at Whitewater displayed a “No liquid detected” message during the composite sample attempt for Bottle 2. The “No liquid detected” message initially appeared at sample attempt 0109 and continued until attempt 0145. However, after arriving onsite at 0147, ACHD observed that despite the message, water was flowing through the tubing and into the composite bottle during this time. ACHD restarted the program with the same bottle. Other sample messages (“No more liquid”, “No liquid detected”, and “Sample skipped”) were recorded from attempt 0151 to attempt 0207. Subsamples were successful after the attempt at 0212. Bottle 2 was full prior to switching it with Bottle 3.

After the storm event, ACHD troubleshot the sampling equipment and discovered the pump tubing on the sampler was misaligned on the liquid detect sensor resulting in the “No liquid detected” subsample messages. Since all the subsamples from the first and third bottles resulted in “Success”, the tubing misalignment likely occurred when the second composite bottle was installed. Given the observation of the sampler taking subsamples despite the “No liquid detected” message, the volumes from attempt 0109 to 0145 were added to the total Bottle 2 volume. The volumes from attempt 0151 to attempt 0207 were not added to the total Bottle 2 volume.

AS_6

ACHD installed a cooler on-site with a lid to address the composite bottle’s temperature exceedance during sample collection. This, along with increased ice during transport, will be essential in maintaining the composite bottles below 6.0°C.

Data Tables

Table 1. Sampling and Flow Summary					
	Lucky	Whitewater	Main Alt	Americana	AS_6
Grab samples collected and submitted?	YES	NO	YES	YES	YES
Composite samples collected and submitted?	YES	YES	NO	YES	YES
Trigger volume	3,950 gal	1,093 cf	--	4,036 cf	2,252 gal
Sampler enable condition (in) or Velocity cutoff (fps)	Level > 2.62	Level > 5.25	--	Level > 7.0	Level > 1.0
Deadband/ Hysteresis (in)	1.0"	1.0"	1.0"	1.0"	1.0"
Runoff start time	1117[1]	1044[1]	1133[1]	1100[1]	1632[1]
Grab sample collection time	1202	--	1150	1214	1652
Composite sample stop time	0318	0503	--	0603	0513
Runoff stop time	0330[2]	0515[2]	0530[2]	0641[2]	0515[2]
Volume of discharge sampled (ft^3)	17,531	71,430	--	210,689	13,697
Total runoff volume (ft^3)	19,373	102,805	16,049	246,235	19,063
Percent of storm flow sampled (%)	90%	69%	--	86%	72%
Composite sample duration (hrs)	7	8	--	17	9
Storm Precipitation (in)	0.42	0.44	0.45	0.45/0.51	0.45/0.51
Referenced Rain Gauge	Cynthia Mann	Whitewater	Front	Front/East	Front/East
Sampler messages (counts): Success	32	35	--	49	43
:No More Liquid	--	3	--	--	--
:No Liquid Detected	--	18	--	--	--
:Sample Skipped	--	1	--	--	--
Number of composite bottles filled	2	3	--	3	2
Composite sample volume (Approx.; ml)	17,500 mL	36,000 mL	--	28,500 mL	24,250 mL

Notes:

– = No data.

[1] Storm runoff started on 5/17/25.

[2] Storm runoff ended on 5/18/25.

Table 2. Field and Analytical Data Summary

Monitoring Station	Sample Date	Sample ID Grab	Field Parameters				Analytical Parameters																				
			Dissolved Oxygen	pH	Conductivity	Temperature	E. coli	Sample ID Composite	BOD_5	COD	Chloride	Hardness as $CaCO_3$	Turbidity	TSS	TDS	Total Phosphorus	Orthophosphate as P	Ammonia as N	Nitrate + Nitrite as N	TKN	Arsenic, total	Cadmium, dissolved	Cadmium, total	Copper, dissolved	Lead, dissolved	Lead, total	Mercury, total	Zinc, dissolved
			mg/L	S.U.	uS/cm	C	mpn/100 mL		mg/L	mg/L	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Lucky	5/17/2025	250517-03-WG	4.33	7.36	285.77	13.97	131.4	250517-03-WC	37.8	188	1.67	20.3	58.0	149	50.7	0.558	0.272	0.500	0.225	3.80	2.0	<0.0100	0.12	5.4	0.086	3.1	0.0138	32.9
Whitewater	5/17/2025	--	--	--	--	--	--	250517-11-WC	31.6	135	8.01	31.9	48.5	97.7	80.8	0.435	0.225	0.242	0.237	2.40	2.0	<0.0100	0.078	4.3	0.19	5.1	0.0146	20.8
Main Alt	5/17/2025	250517-12-WG	7.30	6.48	194.17	17.60	5,210	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Americana	5/17/2025	250517-14-WG	8.39	6.93	385.45	15.56	248.9	250517-14-WC	25.4	132	17.2	53.9	38.9	74.8	104	0.320	0.163	0.323	0.429	1.64	3.0	0.012	0.070	5.0	0.10	4.1	<0.0100	26.8
AS_6	5/17/2025	250517-206-WG	4.81	6.96	216.39	16.29	7,270	250517-206-WC	67.6 [2J]	262 [2J]	4.36	27.8	67.3 [2J]	169 [2J]	106 [2J]	1.09 [2J]	0.543 [2J]	0.338 [2J]	0.213 [2J]	4.45 [2J]	2.5	0.015 [2J]	0.10	9.4 [2J]	0.41 [2J]	7.7	0.0179	40.4 [2J]

Notes:

-- = No data.

[2J] Composite sample qualified due to exceedance of 6.0° C.

Table 3. Event Pollutant Loading Estimates in Pounds						
Monitoring Station	Event Date	TSS	Total Phosphorus	Ammonia as N	Nitrate + Nitrite as N	TKN
Lucky	5/17/2025	180	0.675	0.605	0.272	4.59
Whitewater	5/17/2025	627	2.79	1.55	1.52	15.4
Main Alt	5/17/2025	--	--	--	--	--
Americana	5/17/2025	1149	4.92	4.96	6.59	25.2
AS_6	5/17/2025	201[2J]	1.30[2J]	0.402[2J]	0.253[2J]	5.29[2J]

Notes:

-- = No data

[2J] Composite sample qualified due to exceedance of 6.0° C.

Table 4. QC Sample Summary				
Date	Parent Sample	Sample ID	Type	E. coli
				mpn/100 mL
5/17/2025	250517-12-WG	250517-12-001	Field Blank	<1.0
5/17/2025	250517-12-WG	250517-12-101	Field Duplicate	6,090
Calculated parent/duplicate RPD				2%
Allowable RPD				40%

Attachment A: Supplemental Documents

Sampling Event Communication Form

Data Validation Checklist

Runoff Calculation Worksheet

SAMPLING EVENT COMMUNICATION FORM

Date: 5/16/2025	Time: 8:15 AM	Initials: ST
Is there a targeted sampling event during the next 36 hours? (Or, if it is Friday, is a targeted event expected before 5:00 PM Monday?)		Yes

Past 72 hr Precip	
Date and time of expected event	5/17 9:00 AM – 10:00 PM
Expected amount of precipitation	0.25"
Percent chance of precipitation	90%
Percent chance of >0.10" over 12 hours	75%

NWS Update

Spoke to Corey with NWS. A showery, convective system with lots of moisture will arrive on Saturday morning coming from the northwest. Showers will continue throughout the day with rain ending around 10:00 pm. We can expect to see 0.25" of rain through that time period.

Targeted Station & Samples

Lucky	Whitewater	Main Alternate	Americana	AS_6	State (Phase II)
☒ Grab	☒ Grab	☒ Grab	☒ Grab	☒ Grab	☒ Grab
☒ Composite	☒ Composite	☐ Composite	☒ Composite	☒ Composite	☒ Composite

Type of Forecasted Precipitation

☐ Light Rain	☐ Rain	☐ Rain on Snow
☒ Scattered Showers	☒ Thunder Showers	☐ Snowmelt
☐ Other:		

Reasons for Not Targeting a Forecasted Storm and/or Stations

☐ Holiday
☐ Waiting on Antecedent Dry Period –
☐ Equipment Concerns:
☐ Other:

Text Forecast

NWS Forecast for: Boise ID
Issued by: National Weather Service Boise, ID
Last Update: 2:23 am MDT May 16, 2025

Today: A 40 percent chance of showers before noon. Cloudy through mid morning, then gradual clearing, with a high near 67. Northwest wind 3 to 6 mph.
Tonight: Increasing clouds, with a low around 48. Northwest wind around 6 mph becoming calm in the evening.
Saturday: Showers likely, then showers and possibly a thunderstorm after noon. High near 62. Light and variable wind becoming west northwest around 6 mph in the afternoon. **Chance of precipitation is 80%. New rainfall amounts between a tenth and quarter of an inch, except higher amounts possible in thunderstorms.**
Saturday Night: Showers likely and possibly a thunderstorm before midnight, then a chance of showers. Mostly cloudy, with a low around 44. West northwest wind 8 to 11 mph, with gusts as high as 21 mph. **Chance of precipitation is 70%. New precipitation amounts between a tenth and quarter of an inch, except higher amounts possible in thunderstorms.**
Sunday: A 30 percent chance of showers, mainly before noon. Partly sunny, with a high near 60. West northwest wind 10 to 17 mph, with gusts as high as 29 mph.

Sunday Night: Partly cloudy, with a low around 38.
Monday: Sunny, with a high near 68.
Monday Night: Mostly clear, with a low around 45.
Tuesday: Sunny, with a high near 76.
Tuesday Night: Clear, with a low around 47.
Wednesday: Sunny, with a high near 78.
Wednesday Night: Mostly clear, with a low around 48.
Thursday: Sunny, with a high near 77.

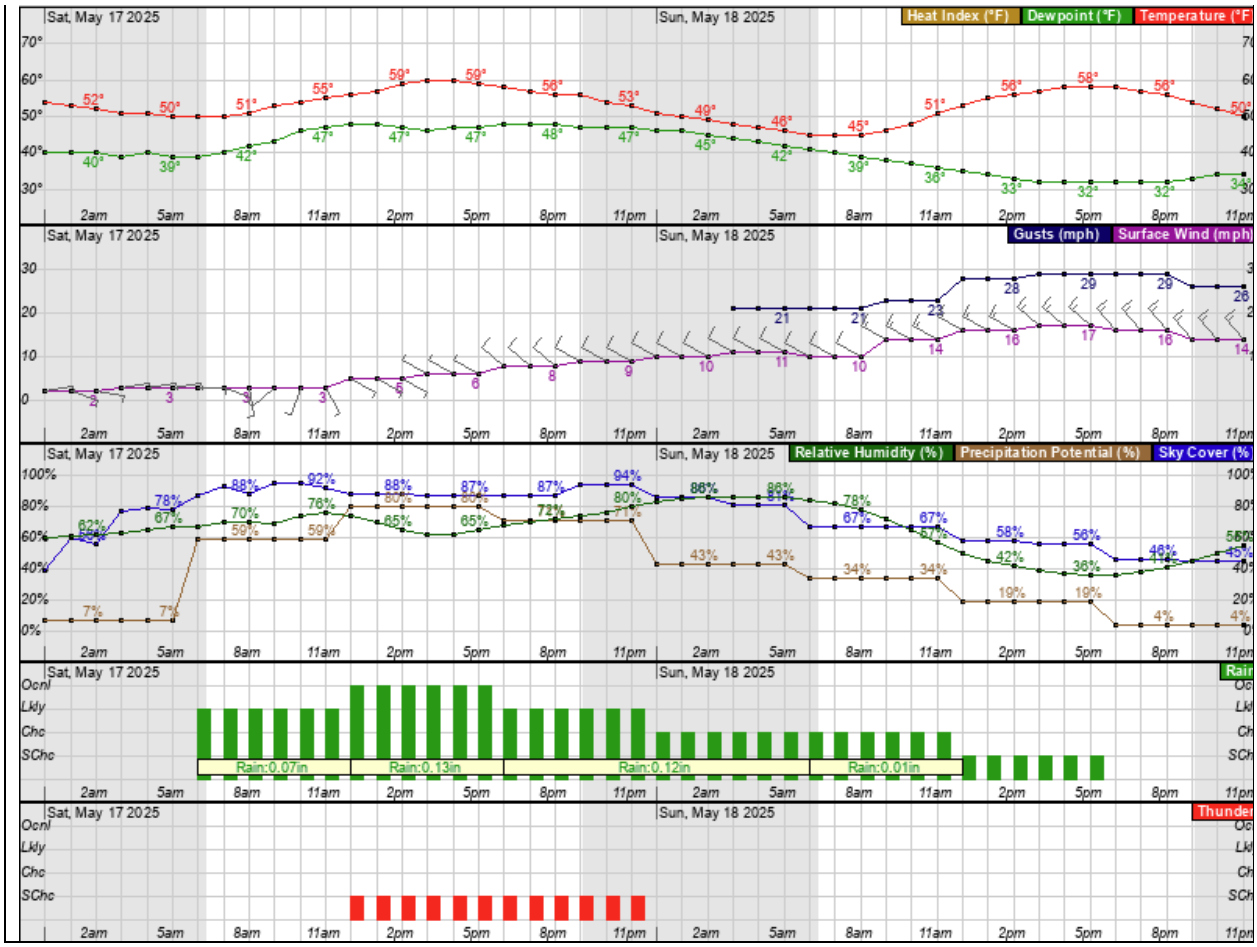
Forecast Discussion

Area Forecast Discussion
National Weather Service Boise ID
218 AM MDT Fri May 16 2025

.SHORT TERM...Today through Sunday night...A weak shortwave trough will bring light showers this morning. Skies will mostly clear out from west to east this afternoon. **A much more significant shortwave trough will move through the area late tonight and Saturday, bringing high chances (70-99%) of rain/snow and a chance of thunderstorms. QPF Saturday through Sunday night will range from 0.2-0.4 at lower elevations** up to 0.5 to 1 inch in the mountains. A cold front will accompany the system, moving through Saturday afternoon through Sunday morning. Snow accumulations Sat through Sunday night will range from 2 to 6 inches above around 7000 ft MSL. Temperatures today will be about 10 degrees below normal, then get a few degrees cooler Saturday and Sunday. Showers will decrease from west to east Sunday, and most showers will be in the higher terrain on the Idaho side Sunday afternoon. Winds will become fairly strong early Sunday, with gusts 30-45 mph common Sunday afternoon. The strongest winds will be south and east of Boise, and a wind advisory is likely to be needed as we get closer in time if guidance doesn`t change much.

.LONG TERM...Monday through Friday...An small upper level ridge will race over the area Monday, and should be followed by a weak and slightly moist shortwave embedded in zonal flow Tuesday. The result is a chance of showers across the higher terrain of the north Tuesday into Tuesday evening. Snow levels in the north will range from 6500 to 7500 ft MSL, with only minimal snow accumulations forecast. Zonal flow is forecast to continue Wed and Thu before being replaced by WSW flow Friday. This will lead to a dry period with a warming trend. Temperatures should climb to near normal Tue and Wed, before rising to a few degrees above normal Thu and Fri.

Hourly Forecast


Sat, May 17 2025
Sun, May 18 2025
Heat Index (°F)
Dewpoint (°F)
Temperature (°F
Gusts (mph)
Surface Wind (mph)
Relative Humidity (%)
Precipitation Potential (%)
Sky Cover (%
Rain:0.07in
Rain:0.13in
Rain:0.12in
Rain:0.01in
Ocnl
Lkly
Chc
SChc
2am
5am
8am
11am
2pm
5pm
8pm
11pm

Storm Runoff Estimates and Trigger Volumes

Step 1. Enter runoff coefficients in yellow cells.
Step 2. Enter expected precipitation depth (in) in blue cell.
Step 3. Read trigger volumes (**bold**) in green cells.

Expected Precipitation Depth = 0.15
Aliquots per Sample = 17

Site	Area (ac)	Using RC calculated from flow data		
		RC	Expected Vol (ft^3)	Trigger Vol (ft^3)
Lucky	105	0.157	8976.1	**528**
Whitewater	498	0.069	18574.5	**1093**
Main	79	0.246	10581.8	**622**
Main Alt	60	0.200	6534.0	**384**
Americana	875	0.144	68607.0	**4036**
Americana Alt	869	0.144	68136.6	**4008**
AS_6	204	0.046	5109.6	**301**
State	34	0.127	2351.2	**138**

Notes:

Calculated RC = runoff volume (ft^3) / [precip (ft) x area (ft^2)]

Where volume (ft^3) is the measured discharge, precip (ft) is the measured amount from local rain guage, and area (ft^2) is the watershed area.

Expected volume (ft^3) = RC x expected precip (ft) x area (ft^2)

STORM DATE: 05/17/2025

A. Event and Data Completeness	Yes	No	N/A	Notes
1. Field data sheets filled out completely and clearly	X			
2. Field parameters reviewed, and any problems/issues addressed	X			
3. All samples collected as specified	X			
4. All samples delivered to lab promptly (review chain of custody rpts)	X			AS_6 Comp received at 7.6°C
5. Inconsistencies/clarifications discussed with sampling team member	X			Discussed sampler messages at Whitewater
6. All analytical reports from lab received	X			

B. Validation and Verification Methods	Yes	No	N/A	Notes
1. Outliers and unexpected values discussed with lab			X	
2. Appropriate analytical methods used	X			
3. All lab QA samples were within method acceptance criteria	X			
4. All samples reviewed and data qualifiers assigned if needed	X			
5. Data quality objective achieved	X			

C. Specific Storm and Sample QA/QC Criteria	Lucky	Whitewater	Main Alt	Americana	AS_6	Program Criteria	Met	Qualify	Reject
1. Antecedent dry period (inches in previous 72-hours)	0.00"	0.00"	0.00"	0.00"	0.00"	< 0.11" in 72 hrs	X		
2. Precipitation (inches)	0.42"	0.44"	0.45"	0.45"/ 0.51"	0.45"/ 0.51"	> 0.10"	X		
3. Sampled amount (% of total run-off)	90%	69%	-	86%	72%	>= 75% or >= 6 hrs: no qualifier >= 50% and <75%: qualify < 50%: reject	X	X AS_6	
4. Composite sample duration (hours)	7	8	-	17	9				
4. Ecoli sample holding time (hours)	3.5	-	4	3.5	1	<=8 hrs: no qualifier >8 and <=16 hrs.: qualify >16 hrs.: reject	X		
5. Filtering of samples for dissolved parameter analysis (hours)	11.5	9.5	-	7.5	8	<= 24 hrs: no qualifier > 24 hrs.: reject	X		

D. Notes

- AS_6 composite exceeded preservation temperature maximum, qualifying the sample. Therefore, all constituents are considered estimates with the exception of total metals, hardness and chloride.
- Main Alt composites completed for the water year, not targeted for this storm.

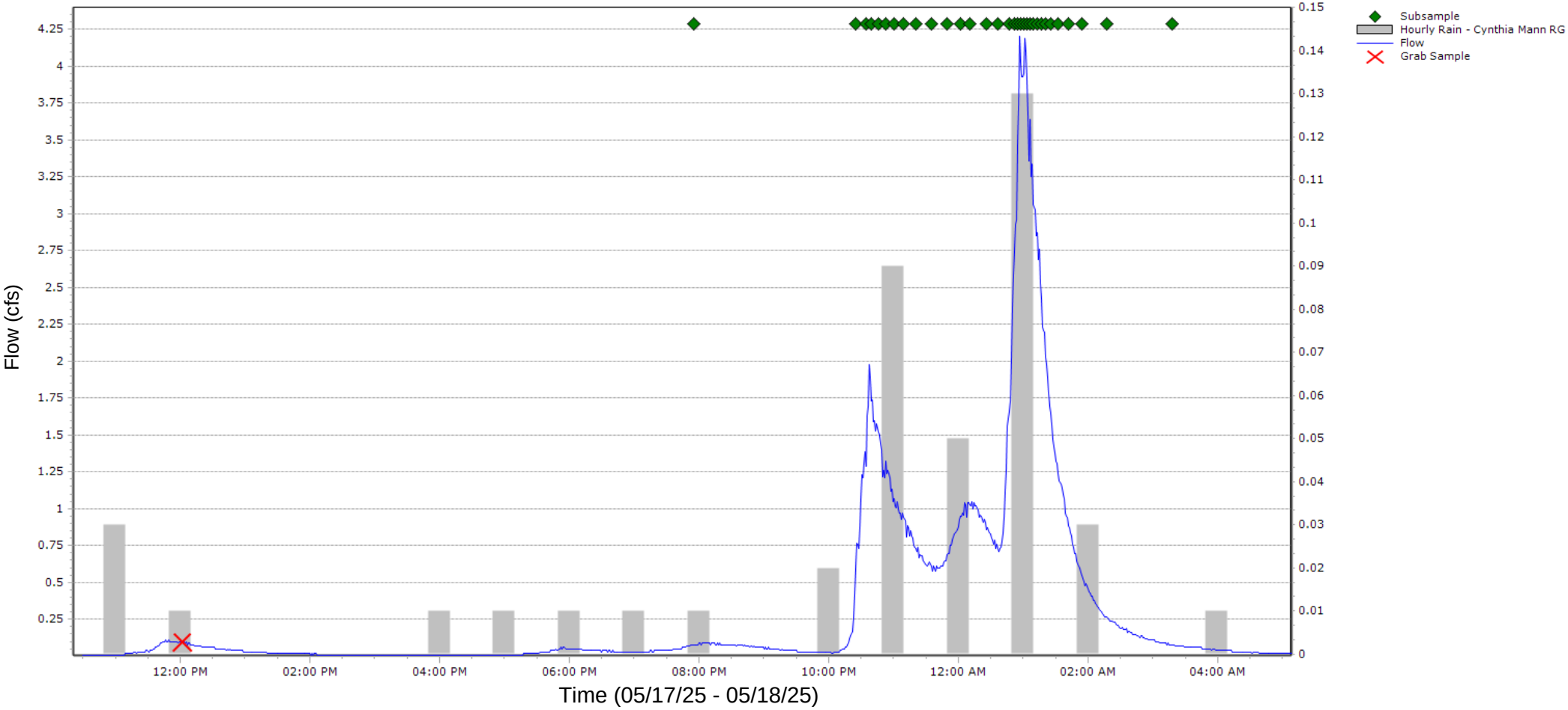
Reviewed by: Heather Person **Date:** 7/10/25

Approved by Monica Rowe **Date** 7/10/25

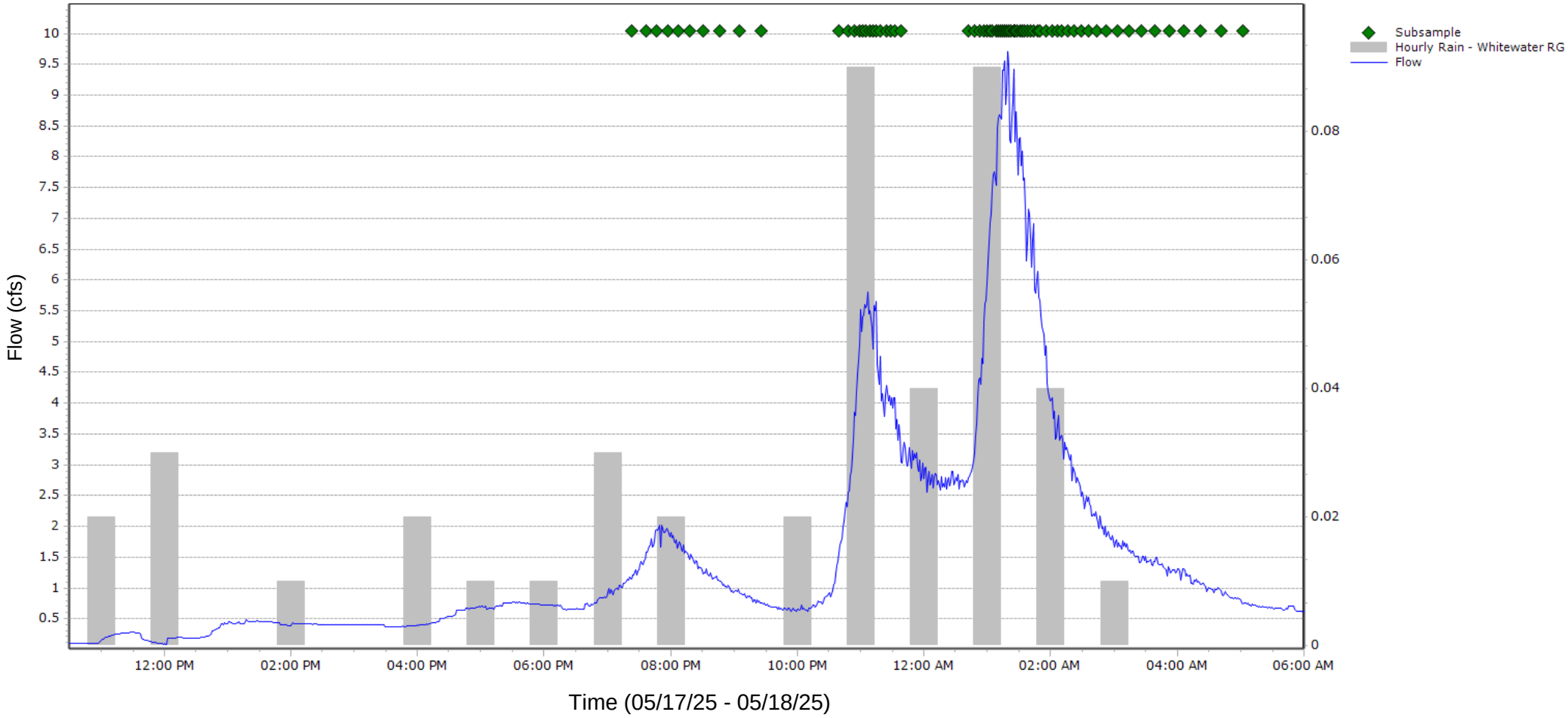
Updated 220718 TL

Attachment B: Storm Event Hydrographs

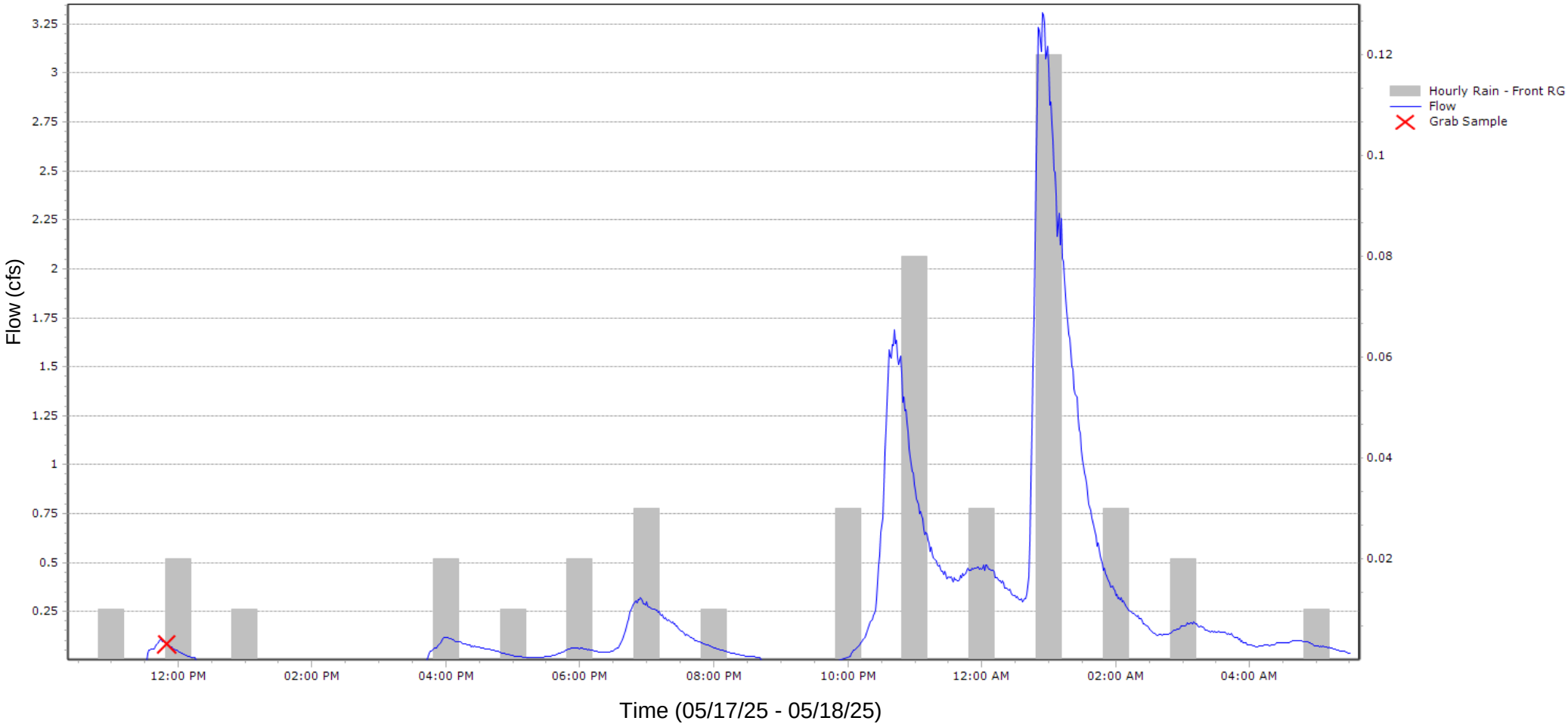
Lucky Hydrograph



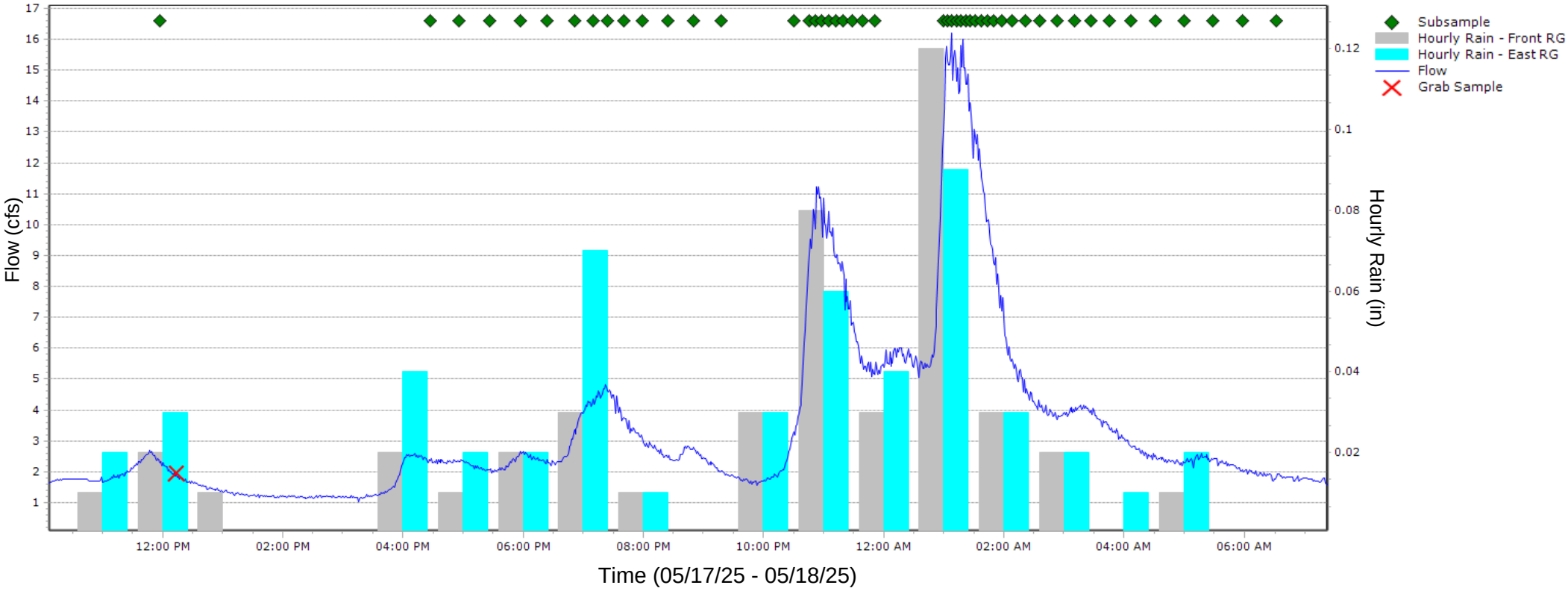
Whitewater Hydrograph

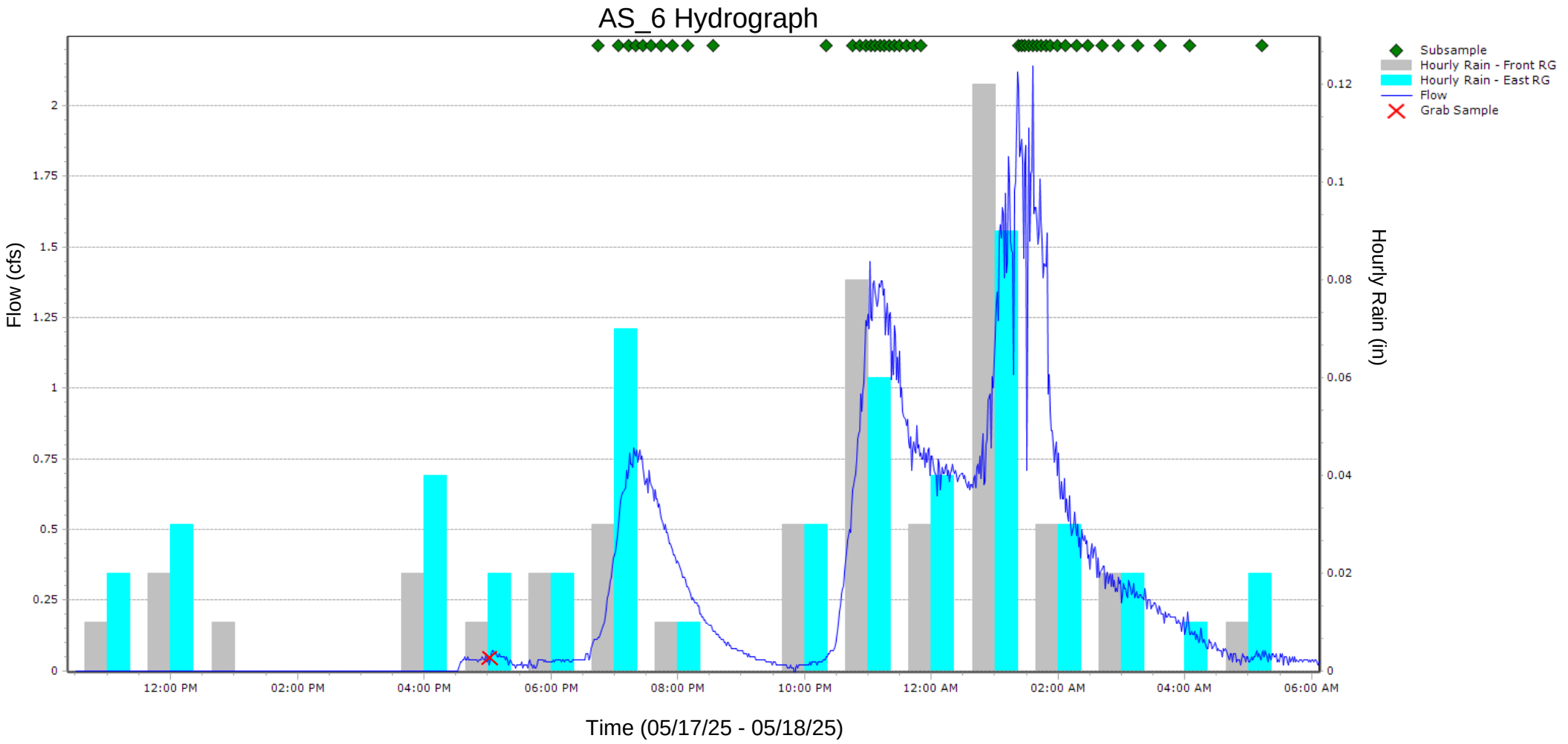


Main Alternative Hydrograph



Americana Hydrograph




AS_6 Hydrograph
Subsample
Hourly Rain - Front RG
Hourly Rain - East RG
Flow
Grab Sample
Flow (cfs)
Hourly Rain (in)
0
0.25
0.5
0.75
1
1.25
1.5
1.75
2
0.02
0.04
0.06
0.08
0.1
0.12
12:00 PM
02:00 PM
04:00 PM
06:00 PM
08:00 PM
10:00 PM
12:00 AM
02:00 AM
04:00 AM
06:00 AM
Time (05/17/25 - 05/18/25)

Attachment C: Field Forms

Grab Sample Data Form

STATION: Lucky

Personnel: ST IRR **Date/Time On-Site:** 05/17/25 1150

Flow Meter Current Status					
Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)	Rainfall (in) (Whitewater Only)
12:23	2.47	~~0.32~~ 27.90 gpm	0.32	13.0	—

Grab Information				
	Sample ID	Date	Time	Labeled?
Site *E.Coli*	250517-03 -WG	05/17/25	1202	☒
Field Duplicate *E.Coli*	250517-03 -101	05/17/25	1205	☒
Field Blank *E.Coli*	250517-03 -001	05/17/25	1207	☒

*Note: time on bottle for QC samples is 1200

Field Parameters					
Meter number	Time	Temp (C)	D.O. (mg/L)	pH (S.U.)	SpCond (uS/cm)
MP12	12:20	13.97	4.33	7.36	285.77

Sampler Current Status	
First Subsample Date/Time	
Last Subsample Date/Time	
# of Subsamples taken	0

Comments: Alternate site QC samples discarded due to successful collection of samples at primary QC site (Main).

Date/Time Off-Site: 5/17/25 12:24

Grab Sample Data Form

STATION: Main Alt

Personnel: KJ, TA **Date/Time On-Site:** 5/17/25 1143

Flow Meter Current Status					
Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)	Rainfall (in) (Whitewater Only)
1155	1.836	0.07	0.61	12.59	—

Grab Information				
	Sample ID	Date	Time	Labeled?
Site *E.Coli*	250517-12 -WG	5/17/25	1150	☒
Field Duplicate *E.Coli*	250517-12 -101	5/17/25	1152	☒
Field Blank *E.Coli*	250517-12 -001	5/17/25	1148	☒

*Note: time on bottle for QC samples is 1200

Field Parameters					
Meter number	Time	Temp (C)	D.O. (mg/L)	pH (S.U.)	SpCond (uS/cm)
~~H73246~~ ST MP14	1154	17.60	7.30	6.48	194.17

Sampler Current Status	
First Subsample Date/Time	
Last Subsample Date/Time	
# of Subsamples taken	

Comments:

Date/Time Off-Site: 5/17/25 1200

Grab Sample Data Form

STATION: Americana

Personnel: KS, TA **Date/Time On-Site:** 5/17/25 1210

Flow Meter Current Status					
Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)	Rainfall (in) (Whitewater Only)
1210	6.44	2.00 (TA)	1.978	12.13	

Grab Information				
	Sample ID	Date	Time	Labeled?
Site *E.Coli*	250517-14-~~1214~~ (TA) -WG	5-17-25	1214	☑
Field Duplicate *E.Coli*	-101			☐
Field Blank *E.Coli*	-001			☐

*Note: time on bottle for QC samples is 1200

Field Parameters					
Meter number	Time	Temp (C)	D.O. (mg/L)	pH (S.U.)	SpCond (uS/cm)
~~#2~~ MPH (TA)	1217	15.56	8.39	6.93	385.45

Sampler Current Status	
First Subsample Date/Time	1154 5/17/25
Last Subsample Date/Time	
# of Subsamples taken	7

Comments:

Date/Time Off-Site: 5/17/25 1223

Grab Sample Data Form

STATION: AS-6

Personnel: ST, KJ **Date/Time On-Site:** 5/17/25 16:42

Flow Meter Current Status						
Time	Level (in)	Flow ~~(cfs)~~ GPM	Velocity (fps)	Battery (V)	Flow Start (date/time)	Rainfall (in)
16:43	1.45	17.31	0.44	12.8	-	-

Grab Information				
	Sample ID	Date	Time	Labeled?
Site *E.Coli*	250517-206-WG	5/17/25	16:52	☒
Field Duplicate *E.Coli*	-101			☐
Field Blank *E.Coli*	-001			☐

*Note: time on bottle for QC samples is 1200

Field Parameters					
Meter number	Time	Temp (C)	D.O. (mg/L)	pH (S.U.)	SpCond (uS/cm)
MP12	16:55	16.29	4.81	6.96	216.39

Sampler Current Status	
First Subsample Date/Time	
Last Subsample Date/Time	
# of Subsamples taken	0

Comments:

Set Up/ Shut Down Form – HACH (Lucky, AS_6)

STATION: Lucky

SET UP

Personnel: ST, KJ

Date/Time On-Site: 5/16/25 10:22

Time	Level (in)	Flow ~~(cfs)~~ gpm	Velocity (fps)	Battery (V)
10:31	1.62"	3.66	~~1.62~~ ST	12.9
			0.08	

Enable Condition or Velocity Cutoff:	2.62"
Deadband:	1
Trigger Volume:	3950 gal

- ☒ Install batteries on flowmeter and sampler
- ☒ Perform decon. cycle
- ☒ Install 15L sample bottle, with ice
- ☒ Leave bottle lid at site, in a clean re-sealable plastic bag
- ☒ Verify all cable and tubing connections
- ☒ Check date and time on flowmeter and sampler
- ☒ Set flowmeter program and sampler program parameters
- ☒ Set logging interval to 1 minute
- ☒ Start flowmeter program and sampler program
- ☒ Verify running

Comments:

Date/Time Off-Site: 5/16/25 10:45

SHUT DOWN

Personnel: ST

Date/Time On-Site: ~~5/21~~ 5/20/25 11:02

Time	Level (in)	Flow ~~(cfs)~~ gpm	Velocity (fps)	Total (cf)	Battery (V)
11:06	1.51"	3.36	0.08		12.3
Downloaded to:		Red USB			

If flow monitoring is complete:	**If continuing to monitor flow:**
☒ Halt program on flowmeter	☐ Replace flowmeter battery
☒ Download flowmeter data	☐ Reset logging interval to 15 minutes
☒ Remove flowmeter battery	☐ Change velocity cutoff to 0.02 fps
	☐ Start program
	☐ Verify running

Comments:

Date/Time Off-Site: 5/20/25 11:18

STATION: Lucky **Bottle** 1 **of** 2

Personnel: ST, KS **Date/Time On-Site:**

☒ Halt sampler program		
☒ Put lid on sample bottle; label sample bottle		
Sample ID:	250517-03	-WC
Approx Sample Volume (mL):	7250 ml	
Clarity (ex. Clear, Cloudy, Silty):	Cloudy	
Color (ex. Clear, Gray, Tan, Brown, Black):	Black	
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	5/17/25 1956	Success	13	5/18/25 0011	Success
2	2225		14		
3	2235		15		
4	2240		16		
5	2246		17		
6	~~2250~~	2253	18		
7	2301		19		
8	2310		20		
9	2321		21		
10	2335		22		
11	2350		23		
12	5/18/25 0002		24		

Comments:

Date/Time Off-Site: 5/18/25 0020

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☐ Keep flowmeter running
☐ Keep flowmeter running	☐ Install new 15L bottle, add ice
☐ Add ice to sample transport cooler	☐ Restart program from beginning
	Date/Time Restarted: 5/18/25 0015
	☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: Lucky 7 **Bottle** 2 **of** 2

Personnel: KJ, ST **Date/Time On-Site:** 5/18/25 1105

☒ Halt sampler program		
☒ Put lid on sample bottle; label sample bottle		
Sample ID:	250517-83	-WC
Approx Sample Volume (mL):	10250 ml	
Clarity (ex. Clear, Cloudy, Silty):	Silty	
Color (ex. Clear, Gray, Tan, Brown, Black):	Gray	
QA/QC Sample ID:		-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	5/18/25 0026	Success	13	5/18/25 0121	Success
2	0037		14	0126	
3	0047		15	0133	
4	0052		16	0142	
5	0052 ~~0058~~		17	0155	
6	0058		18	0218	
7	0101		19	0318	
8	0104		20		
9	0107		21		
10	0110		22		
11	0113		23		
12	0117		24		

Comments:

~~offsite~~: off site 5/18/25 1114

If sampling is complete:
- ☒ Power off sampler, if separate from flowmeter
- ☒ Keep flowmeter running
- ☒ Add ice to sample transport cooler

If continuing sampling (sample bottle change-out):
- ☐ Keep flowmeter running
- ☐ Install new 15L bottle; add ice
- ☐ Restart program from beginning

Date/Time Restarted: _____

- ☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Set Up/ Shut Down Form – ISCO (Whitewater, Americana, Main, State)

STATION: Whitewater

SET UP

Personnel: ST, KJ

Date/Time On-Site: 5/16/25 10:59

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
10:59	2.18	0.17	0.61	-

Enable Condition:	5.25"
Hysteresis:	1
Flow Pulse Interval:	1093 cf

On-Site

- ☒ Replace flowmeter battery, install sampler battery
- ☒ Perform decon. cycle
- ☐ Install 15L sample bottle, with ice
- ☐ Leave bottle lid at site, in a clean re-sealable plastic bag
- ☒ Set sampler program parameters
- ☒ Check date/time on sampler
- ☐ Verify all cable and tubing connections
- ☐ Verify sampler program is running

Flowlink (Refer to PG 411 or PG 412, if needed)

- ☒ Direct or Remote; Date/time 5/16/25 ~~11:40~~ ST
- ☒ Retrieve data and review recent flow history
- ☒ Change Wireless Power Control to Storm Event
- ☒ Change Data Storage Rates to 1 minute for Level, Velocity, Total Flow, and Flow Rate
- ☒ Enable Sampler: On Trigger, and set Sampler Enable equation
- ☒ Set Sampler Pacing to Flow Paced, and set trigger volume

Comments: Enable condition set to 5.25" because previous flows from 72 hours indicate a maximum of 5.0".

Date/Time Off-Site: 5/16/25 11:40

SHUT DOWN

Personnel: ST

Date/Time On-Site: 5/20/25 12:29

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
5/19 9:08	3.02	0.34	0.76	-
	Downloaded to:	Stevens laptop		

On-Site

- ☒ Replace flowmeter battery
- ☒ Remove battery from sampler

Flowlink (Refer to Flowlink Instructions, if needed)

- ☒ Direct or Remote; Date/time 5/19/25 9:04
- ☒ Retrieve data
- ☒ Change Wireless Power Control to Dry Weather
- ☒ Change Data Storage Rates to 15 minutes for Level, Velocity, Total Flow, and Flow Rate
- ☒ Enable Sampler: Never

Comments:

Date/Time Off-Site: 5/20/25 12:32

STATION: Whitewater **Bottle** 1 **of** 3

Personnel: LS, ST **Date/Time On-Site:** 5/18/25 0835

- [x] Halt sampler program
- [x] Put lid on sample bottle; label sample bottle

Sample ID:	250517-11	-WC
Approx Sample Volume (mL):	13250 ml	
Clarity (ex. Clear, Cloudy, Silty):	Cloudy	
Color (ex. Clear, Gray, Tan, Brown, Black):	Black	
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	5/17/25 1924	Success	13	5/17/25 2255	Success
2	1938		14	2300	
3	1949		15	2303	
4	1958		16	2307	
5	2008		17	2310	
6	2020		18	2313	
7	2032		19	2317	
8	2048		20	2321	
9	2100		21	2325	
10	2128		22	2329	
11	2240		23	2334	
12	2244		24	2339	

Comments:

Date/Time Off-Site: 5/18/25 0843

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☐ Keep flowmeter running
☐ Keep flowmeter running	☐ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☐ Restart program from beginning
	Date/Time Restarted: 5/18/25 ~~1342~~ 0842
	☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: Whitewater **Bottle** 2 **of** 3

Personnel: KS, ST **Date/Time On-Site:** 5/18/25 0147

- [x] Halt sampler program
- [x] Put lid on sample bottle; label sample bottle

Sample ID:	250517-11	-WC
Approx Sample Volume (mL):		
Clarity (ex. Clear, Cloudy, Silty):		
Color (ex. Clear, Gray, Tan, Brown, Black):		
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	5/18/25 0043	Success	13	5/18/25 0119	No liquid detect.
2	0049		14	0121	
3	0054		15	0123	
4	0058		16	0126	
5	0101		17	0128	
6	0104		18	0130	
7	0107		19	0132	
8	0109	No liquid detect.	20	0134	
9	0111		21	0137	
10	0113		22	0139	
11	0115		23	0142	
12	0117		24	0145	

Comments: Restarted program with the same bottle. Observed sampler pulling subsamples despite "No liquid detected" messages during 0145 (24) sample attempt.

Date/Time Off-Site: 5/18/25 0157

If sampling is complete:

- [ ] Power off sampler, if separate from flowmeter
- [ ] Keep flowmeter running
- [ ] Add ice to sample transport cooler

If continuing sampling (sample bottle change-out):

- [x] Keep flowmeter running
- [x] Install new 15L bottle; add ice
- [x] Restart program from beginning

Date/Time Restarted: 5/18/25 0150

- [x] Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: Whitewater **Bottle** 2 **of** 3

Personnel: KS, ST **Date/Time On-Site:** 5/18/25 0230

☒ Halt sampler program		
☒ Put lid on sample bottle; label sample bottle		
Sample ID:	250517-11	-WC
Approx Sample Volume (mL):	16250 mL	
Clarity (ex. Clear, Cloudy, Silty):	Cloudy	
Color (ex. Clear, Gray, Tan, Brown, Black):	Black	
QA/QC Sample ID:		-103 (Time: 1200)

Subsample Information					
Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	5/18/25 0151	No more liquid	13		
2	0154	Sample skipped	14		
3	0157	No liquid detect	15		
4	0202	No more liquid	16		
5	0207	↓	17		
6	0212	Success	18		
7	0217	↓	19		
8	0223		20		
9	0230	↓	21		
10			22		
11			23		
12			24		

Comments: Sample bottle was full upon arrival.

Date/Time Off-Site: 5/18/25 0240

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: 0236
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5”	400 mL	**3.0”**	3500 mL	**5.5”**	7250 mL	**8.0”**	11000 mL	**10.5”**	14750 mL
1.0”	800 mL	**3.5”**	4250 mL	**6.0”**	8000 mL	**8.5”**	11750 mL	**11.0”**	15500 mL
1.5”	1400 mL	**4.0”**	5000 mL	**6.5”**	8750 mL	**9.0”**	12500 mL	**11.5”**	16250 mL
2.0”	2000 mL	**4.5”**	5750 mL	**7.0”**	9500 mL	**9.5”**	13250 mL	**After 12”**	1” = 1500 mL
2.5”	2750 mL	**5.0”**	6500 mL	**7.5”**	10250 mL	**10.0”**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: Whitewater **Bottle** 3 **of** 3

Personnel: KS, ST **Date/Time On-Site:** 5/18/25 1046

☒ Halt sampler program

☒ Put lid on sample bottle; label sample bottle

Sample ID:	250517 - 11	-WC
Approx Sample Volume (mL):	6500 mL	
Clarity (ex. Clear, Cloudy, Silty):	Silty	
Color (ex. Clear, Gray, Tan, Brown, Black):	Tan	
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	5/18/25 0237	Success	13		
2	0245		14		
3	0255		15		
4	0305		16		
5	0316		17		
6	0327		18		
7	0340		19		
8	0353		20		
9	0408		21		
10	0424		22		
11	0442		23		
12	0503		24		

Comments: During troubleshooting, after the storm event, it was discovered the pump tubing on the whitewater sampler was misaligned on the liquid sensor resulting in "No More liquid" subsample messages during collection of the second composite bottle. Since all subsamples from the first and third bottles resulted in "success", the tubing misalignment likely occured when the second bottle was installed. Based on the volume of stormwater collected into the second bottle, the "No more liquid" may have resulted in inaccurate sample volumes, however, stormwater subsamples were still collected into the second bottle.

Date/Time Off-Site: 5/18/25 1051

If sampling is complete:

- ☒ Power off sampler, if separate from flowmeter
- ☒ Keep flowmeter running
- ☒ Add ice to sample transport cooler

If continuing sampling (sample bottle change-out):

- ☐ Keep flowmeter running
- ☐ Install new 15L bottle; add ice
- ☐ Restart program from beginning

Date/Time Restarted: _____

- ☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Set Up/ Shut Down Form – ISCO (Whitewater, Americana, Main, State)

STATION: Main Alt

SET UP

Personnel: ST, KJ

Date/Time On-Site: 5/16/25 11:50

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
11:56	0.252	0.00	0.00	12.7
Enable Condition:		—		
Hysteresis:		—		
Flow Pulse Interval:		—		

On-Site

- ☒ Replace flowmeter battery, install sampler battery
- ☐ Perform decon. cycle
- ☐ Install 15L sample bottle, with ice
- ☐ Leave bottle lid at site, in a clean re-sealable plastic bag
- ☐ Set sampler program parameters
- ☐ Check date/time on sampler
- ☐ Verify all cable and tubing connections
- ☐ Verify sampler program is running

Flowlink (Refer to PG 411 or PG 412, if needed)

- ☐ Direct or Remote; Date/time 5/16/25 11:52
- ☐ Retrieve data and review recent flow history
- ☐ Change Wireless Power Control to Storm Event
- ☒ Change Data Storage Rates to 1 minute for Level, Velocity, Total Flow, and Flow Rate
- ☐ Enable Sampler: On Trigger, and set Sampler Enable equation
- ☐ Set Sampler Pacing to Flow Paced, and set trigger volume

Comments: Composites completed for this water year. Grab only!

Date/Time Off-Site: 5/16/25 11:58

SHUT DOWN

Personnel: ST

Date/Time On-Site: 5/19/25 14:03

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
1405	0.300	0.00	0.08	-
Downloaded to:		Stevens USB		

On-Site

- ☐ Replace flowmeter battery
- ☐ Remove battery from sampler

Flowlink (Refer to Flowlink Instructions, if needed)

- ☒ Direct or Remote; Date/time 5/19 14:05
- ☒ Retrieve data
- ☐ Change Wireless Power Control to Dry Weather
- ☐ Change Data Storage Rates to 15 minutes for Level, Velocity, Total Flow, and Flow Rate
- ☐ Enable Sampler: Never

Comments:

Date/Time Off-Site: 5/19/25 14:07

Set Up/ Shut Down Form – ISCO (Whitewater, Americana, Main, State)

STATION: Americana

SET UP

Personnel: ST, KJ

Date/Time On-Site: 5/16/25 1210

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
1210	5.09			12.34

Enable Condition:	~~6"~~ 7"
Hysteresis:	1.00
Flow Pulse Interval:	4036 cf

On-Site

- ☒ Replace flowmeter battery, install sampler battery
- ☒ Perform decon. cycle
- ☒ Install 15L sample bottle, with ice
- ☒ Leave bottle lid at site, in a clean re-sealable plastic bag
- ☒ Set sampler program parameters
- ☒ Check date/time on sampler
- ☒ Verify all cable and tubing connections
- ☒ Verify sampler program is running

Flowlink (Refer to PG 411 or PG 412, if needed)

- ☒ Direct or Remote; Date/time laptop 5/16/25 1215
- ☒ Retrieve data and review recent flow history
- ☒ Change Wireless Power Control to Storm Event
- ☒ Change Data Storage Rates to 1 minute for Level, Velocity, Total Flow, and Flow Rate
- ☒ Enable Sampler: On Trigger, and set Sampler Enable equation
- ☒ Set Sampler Pacing to Flow Paced, and set trigger volume

Comments:

Date/Time Off-Site: 5/16/25 1240

SHUT DOWN

Personnel: ST

Date/Time On-Site: 5/19/25 1431

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
8:57	5.500	1.297	1.578	11.98
Downloaded to:		Stevens laptop		

On-Site

- ☒ Replace flowmeter battery
- ☒ Remove battery from sampler

Flowlink (Refer to Flowlink Instructions, if needed)

- ☒ Direct or Remote; Date/time 5/19/25 8:57
- ☒ Retrieve data
- ☒ Change Wireless Power Control to Dry Weather
- ☒ Change Data Storage Rates to 15 minutes for Level, Velocity, Total Flow, and Flow Rate
- ☒ Enable Sampler: Never

Comments:

Date/Time Off-Site: 5/19/25 1435

STATION: Americana **Bottle** 1 **of** 3

Personnel: ST, KJ **Date/Time On-Site:** 5/18/25 0055

☒ Halt sampler program		
☒ Put lid on sample bottle; label sample bottle		
Sample ID:	250517-14	-WC
Approx Sample Volume (mL):	14000ml	
Clarity (ex. Clear, Cloudy, Silty):	Cloudy	
Color (ex. Clear, Gray, Tan, Brown, Black):	Black	
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	5/17/25 1154	Success	13	5/17/25 2048	Success
2	1625		14	2116	
3	1654		15	2228	
4	1724		16	2243	
5	1755		17	2250	
6	1822		18	2256	
7	1849		19	2303	
8	1907		20	2310	
9	1922		21	2317	
10	1938		22	2326	
11	1957		23	2336	
12	2022		24	2349	

Comments:

Date/Time Off-Site: 5/18/25

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☐ Keep flowmeter running
☐ Keep flowmeter running	☐ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☐ Restart program from beginning
	Date/Time Restarted: 5/18/25 0059
	☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: Americana **Bottle** 2 **of** 3

Personnel: KJ, ST **Date/Time On-Site:** 5/18/25 0203

- [x] Halt sampler program
- [x] Put lid on sample bottle; label sample bottle

Sample ID:	250517-14	-WC
Approx Sample Volume (mL):	11750ml	
Clarity (ex. Clear, Cloudy, Silty):	Cloudy	
Color (ex. Clear, Gray, Tan, Brown, Black):	Black	
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	5/18/25 0058	Success	13	5/18/25 0206	Success
2	0102		14	0249	
3	0106		15	0234	
4	0111		16	0252	
5	0115		17	0308	
6	0120		18	0325	
7	0124		19	0344	
8	0129		20		
9	0135		21		
10	0141		22		
11	0148		23		
12	0156		24		

Comments:

Date/Time Off-Site: 5/18/25 0400

If sampling is complete:
- [ ] Power off sampler, if separate from flowmeter
- [ ] Keep flowmeter running
- [ ] Add ice to sample transport cooler

If continuing sampling (sample bottle change-out):
- [x] Keep flowmeter running
- [x] Install new 15L bottle; add ice
- [x] Restart program from beginning

Date/Time Restarted: 5/18/25 0356

- [x] Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: Americana **Bottle** 3 **of** 3

Personnel: KS, ST **Date/Time On-Site:** 5/18/25 1012

☒ Halt sampler program	
☒ Put lid on sample bottle; label sample bottle	
Sample ID:	250517-14 -WC
Approx Sample Volume (mL):	2750 mL
Clarity (ex. Clear, Cloudy, Silty):	Clear
Color (ex. Clear, Gray, Tan, Brown, Black):	Tan
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	5/18/25 0404	Success	13		
2	0429		14		
3	0458		15		
4	0528		16		
5	0556		17		
6	0630		18		
7			19		
8			20		
9			21		
10			22		
11			23		
12			24		

Comments:

Date/Time Off-Site: 5/18/25 1020

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☒ Power off sampler, if separate from flowmeter	☐ Keep flowmeter running
☒ Keep flowmeter running	☐ Install new 15L bottle; add ice
☒ Add ice to sample transport cooler	☐ Restart program from beginning
	Date/Time Restarted: _____
	☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Set Up/ Shut Down Form – HACH (Lucky, [redacted] AS_6)

TATION: AS-6

SET UP

Personnel: KJ, ST

Date/Time On-Site: 5/16/25 1255

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
1300	-0.04	0.00	0.00	12.7

Enable Condition or Velocity Cutoff:	1.0"
Deadband:	1.0
Trigger Volume:	2252 gal

- ☒ Install batteries on flowmeter and sampler
- ☒ Perform decon. cycle
- ☒ Install 15L sample bottle, with ice
- ☒ Leave bottle lid at site, in a clean re-sealable plastic bag
- ☒ Verify all cable and tubing connections
- ☒ Check date and time on flowmeter and sampler
- ☒ Set flowmeter program and sampler program parameters
- ☒ Set logging interval to 1 minute
- ☒ Start flowmeter program and sampler program
- ☒ Verify running

Comments:

offsite: 5/16/25 1308

SHUT DOWN

Personnel: ST

Date/Time On-Site: 5/19/25 15:13

Time	Level (in)	Flow ~~(cfs)~~ GPM	Velocity (fps)	Total (cf)	Battery (V)
15:13	-0.06	0.00	0.00	-	12.4
Downloaded to:		Stevens USB			

If flow monitoring is complete:	**If continuing to monitor flow:**
☒ Halt program on flowmeter	☐ Replace flowmeter battery
☒ Download flowmeter data	☐ Reset logging interval to 15 minutes
☐ Remove flowmeter battery	☐ Change velocity cutoff to 0.02 fps
	☐ Start program
	☐ Verify running

Comments:

Composite Sample Collection

STATION: AS-10 **Bottle** 1 **of** 2

Personnel: KS, ST **Date/Time On-Site:** 5/17/25 ~~20~~ 2234

☒ Halt sampler program		
☒ Put lid on sample bottle; label sample bottle		
Sample ID:	250517-206	-WC
Approx Sample Volume (mL):	13250 mL	
Clarity (ex. Clear, Cloudy, Silty):	Cloudy	
Color (ex. Clear, Gray, Tan, Brown, Black):	Black	
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	5/17/25 1844	Success	13	5/17/25 2352	Success
2	1904		14	2258	
3	1913		15	2303	
4	1920		16	2307	
5	1927		17	2311	
6	1935		18	2315	
7	1944		19	2320	
8	1955		20	2325	
9	2009		21	2330	
10	2033		22	2336	
11	2220		23	2343	
12	2345		24	2350	

Comments:

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle, add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: 5/18/25 0114
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: AS-6 **Bottle** 2 **of** 2

Personnel: KJ, SS **Date/Time On-Site:** 5/18/25 0219

- [x] Halt sampler program
- [x] Put lid on sample bottle; label sample bottle

Sample ID:	250517-206	-WC
Approx Sample Volume (mL):	11000 mL	
Clarity (ex. Clear, Gray, Tan, Brown, Black):	Cloudy	
Color (ex. Clear, Gray, Tan, Brown, Black):	Brown	
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	5/18/25 0122	Success	13	5/18/25 0228	Success
2	0125	↓	14	0241	↓
3	0128		15	0257	
4	0132		16	0315	
5	0136		17	0336	
6	0140		18	0404	
7	0144		19	0513	
8	0148		20		
9	0152		21		
10	0159		22		
11	0207		23		
12	0247		24		

Comments:

Date/Time Off-Site: ~~5/18/25~~ 5/18/25 1032

If sampling is complete:
- [x] Power off sampler, if separate from flowmeter
- [x] Keep flowmeter running
- [x] Add ice to sample transport cooler

If continuing sampling (sample bottle change-out):
- ☐ Keep flowmeter running
- ☐ Install new 15L bottle; add ice
- ☐ Restart program from beginning

Date/Time Restarted: _____

- ☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	~~**8.0"**~~	~~11000 mL~~	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Attachment D: Storm Event Analytical Reports

Report Date: 05/28/2025 09:35

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Samples in this Report

Lab ID	Sample	Sample Description	Matrix	Qualifiers	Sampled	Received
AC00401-01	ACST1B	250517-03-WG	Water		5/17/25 12:02	5/17/25 13:59
AC00401-02	ACST1B	250517-12-WG	Water		5/17/25 11:50	5/17/25 13:59
AC00401-03	ACST1B	250517-12-101	Water		5/17/25 12:00	5/17/25 13:59
AC00401-04	ACST1B	250517-12-001	Water		5/17/25 12:00	5/17/25 13:59
AC00401-05	ACST1B	250517-14-WG	Water		5/17/25 12:14	5/17/25 13:59

The contents of this report apply to the sample(s) analyzed in accordance with the Chain of Custody document.
No duplication of this report is allowed, except in its entirety

Report Date: 05/28/2025 09:35

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	250517-03-WG
Date/Time Collected:	05/17/2025 12:02		
Lab Number:	AC00401-01	Sample Collector:	S.T
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B251592	131.4	MPN/100 mL	1.0	1.0	IDEXX - Colilert	05/17/25 15:42	5/18/25 15:49	ASE	
Wet Chemistry										
Chlorine Screen	B251593	Absent	mg/L			SM 4500-CL G-2000 mod	05/17/25	5/17/25 14:28	MCB	

* The reported adjusted "MDL" is sample-specific. The analysis MDL as defined by 40 CFR pt 136 App.B. was corrected for dilution, dry weight, or method-defined ML.

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Report Date: 05/28/2025 09:35

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	250517-12-WG
Date/Time Collected:	05/17/2025 11:50		
Lab Number:	AC00401-02	Sample Collector:	K.J
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B251592	5210	MPN/100 mL	100	1.0	IDEXX - Colilert	05/17/25 15:42	5/18/25 15:49	ASE	D
Wet Chemistry										
Chlorine Screen	B251593	Absent	mg/L			SM 4500-CL G-2000 mod	05/17/25	5/17/25 14:28	MCB	

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Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	250517-12-101
Date/Time Collected:	05/17/2025 12:00		
Lab Number:	AC00401-03	Sample Collector:	K.J
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B251592	6090	MPN/100 mL	100	1.0	IDEXX - Colilert	05/17/25 15:42	5/18/25 15:49	ASE	D
Wet Chemistry										
Chlorine Screen	B251593	Absent	mg/L			SM 4500-CL G-2000 mod	05/17/25	5/17/25 14:28	MCB	

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Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	250517-12-001
Date/Time Collected:	05/17/2025 12:00		
Lab Number:	AC00401-04	Sample Collector:	K.J
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B251592	<1.0	MPN/100 mL	1.0	1.0	IDEXX - Colilert	05/17/25 15:42	5/18/25 15:49	ASE	U
Wet Chemistry										
Chlorine Screen	B251593	Absent	mg/L			SM 4500-CL G-2000 mod	05/17/25	5/17/25 14:28	MCB	

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Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	250517-14-WG
Date/Time Collected:	05/17/2025 12:14		
Lab Number:	AC00401-05	Sample Collector:	K.J
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B251592	248.9	MPN/100 mL	1.0	1.0	IDEXX - Colilert	05/17/25 15:42	5/18/25 15:49	ASE	
Wet Chemistry										
Chlorine Screen	B251593	Absent	mg/L			SM 4500-CL G-2000 mod	05/17/25	5/17/25 14:28	MCB	

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Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Quality Control Report

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Microbiology									
Batch: B251592									
Blank (B251592-BLK1)									
E. Coli	Absent						05/18/2025	ASE	
LCS (B251592-BS1)									
E. Coli				Present			05/18/2025	ASE	
Duplicate (B251592-DUP1)	Source ID: AC00401-05								
E. Coli					Pass	128	05/18/2025	ASE	

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Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Notes and Definitions

Item	Definition
D	Data reported from a dilution
U	Analyte included in the analysis, but not detected
NR	No result for this parameter.

Method Reference Acronyms

Colilert	Colilert, IDEXX Laboratories, Inc.
EPA	Manual of Methods for Chemical Analysis of Water and Wastes, USEPA
GS	USGS Techniques of Water-Resources Investigations
HH	Hach Spectrophotometer Procedures Manual
SM	Standard Methods for the Examination of Water and Wastewater
SW	Test methods for Evaluating Solid Waste, SW-846

Stephen Quintero or Azubike Emenari
QA/QC Coordinator

Leslea Basterrechea
Water Quality Laboratory Manager

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No duplication of this report is allowed, except in its entirety

Ada County Highway District

ACHD

Attn: Steven Turner
3775 Adams Street
Garden City, Idaho 83714–6418
Tel. (208) 407–4284

Purchase Order: 63069586

Project: Stormwater PI

Sampler(s): Kristen Jolliffe
Tim Anderson
Steven Turner Ryan Rowe

Lab#	Begin Date	End Date	Begin Time	End Time	Sample Identification	Sampler Initials	Matrix: Water	Type: Grab	Type: Composite	Analysis Methods: E. Coli - IDEXX Colilert	Total Containers
1C00401-01	5/17/25		1202		250517-03-WG	ST	X	X		X	1
-02			1150		250517-12-WG	KJ	X	X		X	1
-03		~~1200~~	1200		250517-12-101	KJ	X	X		X	1
-04		~~1200~~	1200		250517-12-001	KJ	X	X		X	1
-05			1214		250517-14-WG	KJ	X	X		X	1

Relinquished by (sign)	Date & Time Transferred	Received by (sign)	Comments/ Special Instructions
Kristen Jolliffe	5/17/25 1354	5.17.25 1359	

Report Date: 05/28/2025 09:35

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Samples in this Report

Lab ID	Sample	Sample Description	Matrix	Qualifiers	Sampled	Received
AC00402-01	ACST1B	250517-206-WG	Water		5/17/25 16:52	5/17/25 17:28

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Report Date: 05/28/2025 09:35

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	250517-206-WG
Date/Time Collected:	05/17/2025 16:52		
Lab Number:	AC00402-01	Sample Collector:	K.J
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B251592	7270	MPN/100 mL	100	1.0	IDEXX - Colilert	05/17/25 17:47	5/18/25 17:47	ASE	D
Wet Chemistry										
Chlorine Screen	B251593	Absent	mg/L			SM 4500-CL G-2000 mod	05/17/25	5/17/25 17:33	MCB	

* The reported adjusted "MDL" is sample-specific. The analysis MDL as defined by 40 CFR pt 136 App.B. was corrected for dilution, dry weight, or method-defined ML.

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Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Report Date: 05/28/2025 09:35

Quality Control Report

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Microbiology									
Batch: B251592									
Blank (B251592-BLK1)									
E. Coli	Absent						05/18/2025	ASE	
LCS (B251592-BS1)									
E. Coli				Present			05/18/2025	ASE	
Duplicate (B251592-DUP1)	Source ID: AC00401-05								
E. Coli					Pass	128	05/18/2025	ASE	

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Report Date: 05/28/2025 09:35

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Notes and Definitions

Item	Definition
D	Data reported from a dilution
NR	No result for this parameter.

Method Reference Acronyms

Colilert	Colilert, IDEXX Laboratories, Inc.
EPA	Manual of Methods for Chemical Analysis of Water and Wastes, USEPA
GS	USGS Techniques of Water-Resources Investigations
HH	Hach Spectrophotometer Procedures Manual
SM	Standard Methods for the Examination of Water and Wastewater
SW	Test methods for Evaluating Solid Waste, SW-846

Stephen Quintero or Azubike Emenari
QA/QC Coordinator

Leslea Basterrechea
Water Quality Laboratory Manager

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Ada County Highway District

ACHD

Attn: Steven Turner
3775 Adams Street
Garden City, Idaho 83714-6418
Tel. (208) 407-4284

Purchase Order: 63069586

Project: Stormwater PI

Sampler(s): Kristin Jolliffe
Steven Turner

Lab#	Begin Date	End Date	Begin Time	End Time	Sample Identification	Sampler Initials	Matrix: Water	Type: Grab	Type: Composite	BOD5 - SM 5210 B	COD - Hach 8000	TSS - SM 2540 D	TDS - SM 2540 C	TKN - EPA 351.2	TP - EPA 200.7	Orthophosphate - EPA 365.1	Total As, Cd, Pb - EPA 200.8	Diss. Cd Cu, Pb, Zn - EPA 200.8	Total Hg - EPA 245.1	E. Coli - IDEXX Colilert	Turbidity - EPA 180.1	Hardness - SM 2340 B-2011	NO3+NO2 - EPA 353.2	Timberline Ammonia-001	Chloride - EPA 300.0	Total Containers
AC00402-01	5/17/25		1652		250517-2D6-WG	KJ	X	X												X						1

Relinquished by (sign)	Date &Time Transferred	Received by (sign)	Comments/ Special Instructions
Kristin Jolliffe	~~5/17/25~~ 1727 5/17/25 MEC	05/17/25 1728	

AC00402

Report Date: 06/06/2025 10:52

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Samples in this Report

Lab ID	Sample	Sample Description	Matrix	Qualifiers	Sampled	Received
AC00403-01	ACST1C	250517-03-WC	Water		5/18/25 3:18	5/18/25 12:36
	Comments:	Temperature at receipt, 2 containers: 4.9 and 5.5 degrees C				
AC00403-02	ACST1C	250517-11-WC	Water		5/18/25 5:03	5/18/25 12:36
	Comments:	Temperature at receipt, 3 containers: 2.6. 4.9, and 1.3 degrees C				
AC00403-03	ACST1C	250517-14-WC	Water		5/18/25 6:30	5/18/25 12:36
	Comments:	Temperature at receipt, 3 containers: 3.8, 3.6, and 4.8 degrees C				

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Report Date: 06/06/2025 10:52

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1C	Location Description:	250517-03-WC
Date/Time Collected:	05/17/2025 19:56 - 05/18/2025 03:18		
Lab Number:	AC00403-01	Sample Collector:	K.J
Sample Type:	Composite	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
Ammonia, as N	B251700	0.500	mg/L	0.0450	0.0450	Timberline Ammonia-001	05/27/25	5/27/25 12:02	ALN	
BOD5	B251598	37.8	mg/L	2.00	2.00	SM 5210 B-2016	05/18/25	5/23/25 15:57	MCB	
Chloride	B251627	1.67	mg/L	0.0200	0.0200	EPA 300.0, Rev. 2.1 (1993)	05/20/25	5/20/25 16:44	RHC	
COD	B251605	188	mg/L	7.00	7.00	HH 8000, Standard Method 5220 D	05/19/25	5/19/25 9:44	RCJ	
Nitrate-Nitrite, as N	B251656	0.225	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	05/21/25	5/21/25 13:00	JAL	
TKN	B251621	3.80	mg/L	0.100	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	05/19/25	5/20/25 10:42	JAL	
Total Dissolved Solids	B251647	50.7	mg/L	25.0	25.0	SM 2540 C-2015	05/21/25	5/23/25 7:29	NTS	
Total Suspended Solids	B251612	149	mg/L	0.900	0.900	SM 2540 D-2015	05/19/25	5/19/25 9:55	NTS	
Turbidity	B251603	58.0	NTU	0.6	0.3	EPA 180.1, Rev. 2.0 (1993)	05/19/25	5/19/25 8:51	ASE	D
Dissolved Wet Chemistry										
Orthophosphate, as P	B251618	0.272	mg/L	3.00E-3	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	05/19/25	5/19/25 11:32	JAL	
Total Metals										
Mercury	B251763	0.0138	ug/L	0.0100	0.0100	EPA 245.1	06/03/25	6/3/25 12:45	SAS	
Arsenic	B251685	2.0	ug/L	0.050	0.050	EPA 200.8	05/24/25	5/30/25 17:17	DMW	
Cadmium	B251685	0.12	ug/L	0.010	0.010	EPA 200.8	05/24/25	5/30/25 17:17	DMW	
Calcium	B251722	6.47	mg/L	0.0400	0.0400	EPA 200.7	05/29/25	5/30/25 9:15	SMC	
Lead	B251685	3.1	ug/L	0.010	0.010	EPA 200.8	05/24/25	5/30/25 17:17	DMW	
Magnesium	B251722	1010	ug/L	40.0	40.0	EPA 200.7	05/29/25	5/30/25 9:15	SMC	
Phosphorus as P	B251722	0.558	mg/L	0.0120	0.0120	EPA 200.7	05/29/25	5/30/25 9:15	SMC	
Hardness	B251722	20.3	mg/L	0.100	0.100	SM 2340 B-2011	05/29/25	5/30/25 9:15	SMC	
Dissolved Metals										
Cadmium	B251682	<0.0100	ug/L	0.010	0.010	EPA 200.8	05/23/25	5/23/25 16:20	DMW	U
Copper	B251682	5.4	ug/L	0.14	0.14	EPA 200.8	05/23/25	5/23/25 16:20	DMW	
Lead	B251682	0.086	ug/L	5.00E-3	5.00E-3	EPA 200.8	05/23/25	5/23/25 16:20	DMW	
Zinc	B251682	32.9	ug/L	0.50	0.50	EPA 200.8	05/23/25	5/23/25 16:20	DMW	

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Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1C	Location Description:	250517-11-WC
Date/Time Collected:	05/17/2025 19:24 - 05/18/2025 05:03		
Lab Number:	AC00403-02	Sample Collector:	K.J
Sample Type:	Composite	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
Ammonia, as N	B251700	0.242	mg/L	0.0450	0.0450	Timberline Ammonia-001	05/27/25	5/27/25 11:59	ALN	
BOD5	B251598	31.6	mg/L	2.00	2.00	SM 5210 B-2016	05/18/25	5/23/25 15:52	MCB	
Chloride	B251627	8.01	mg/L	0.0200	0.0200	EPA 300.0, Rev. 2.1 (1993)	05/20/25	5/20/25 18:30	RHC	
COD	B251605	135	mg/L	7.00	7.00	HH 8000, Standard Method 5220 D	05/19/25	5/19/25 9:44	RCJ	
Nitrate-Nitrite, as N	B251656	0.237	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	05/21/25	5/21/25 13:01	JAL	
TKN	B251621	2.40	mg/L	0.100	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	05/19/25	5/20/25 10:43	JAL	
Total Dissolved Solids	B251647	80.8	mg/L	25.0	25.0	SM 2540 C-2015	05/21/25	5/23/25 7:30	NTS	
Total Suspended Solids	B251612	97.7	mg/L	0.900	0.900	SM 2540 D-2015	05/19/25	5/19/25 9:56	NTS	
Turbidity	B251603	48.5	NTU	0.6	0.3	EPA 180.1, Rev. 2.0 (1993)	05/19/25	5/19/25 9:08	ASE	D
Dissolved Wet Chemistry										
Orthophosphate, as P	B251618	0.225	mg/L	3.00E-3	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	05/19/25	5/19/25 11:33	JAL	
Total Metals										
Mercury	B251763	0.0146	ug/L	0.0100	0.0100	EPA 245.1	06/03/25	6/3/25 12:49	SAS	
Arsenic	B251685	2.0	ug/L	0.050	0.050	EPA 200.8	05/24/25	5/30/25 17:22	DMW	
Cadmium	B251685	0.078	ug/L	0.010	0.010	EPA 200.8	05/24/25	5/30/25 17:22	DMW	
Calcium	B251722	9.79	mg/L	0.0400	0.0400	EPA 200.7	05/29/25	5/30/25 9:18	SMC	
Lead	B251685	5.1	ug/L	0.010	0.010	EPA 200.8	05/24/25	5/30/25 17:22	DMW	
Magnesium	B251722	1800	ug/L	40.0	40.0	EPA 200.7	05/29/25	5/30/25 9:18	SMC	
Phosphorus as P	B251722	0.435	mg/L	0.0120	0.0120	EPA 200.7	05/29/25	5/30/25 9:18	SMC	
Hardness	B251722	31.9	mg/L	0.100	0.100	SM 2340 B-2011	05/29/25	5/30/25 9:18	SMC	
Dissolved Metals										
Cadmium	B251682	<0.0100	ug/L	0.010	0.010	EPA 200.8	05/23/25	5/23/25 16:25	DMW	U
Copper	B251682	4.3	ug/L	0.14	0.14	EPA 200.8	05/23/25	5/23/25 16:25	DMW	
Lead	B251682	0.19	ug/L	5.00E-3	5.00E-3	EPA 200.8	05/23/25	5/23/25 16:25	DMW	
Zinc	B251682	20.8	ug/L	0.50	0.50	EPA 200.8	05/23/25	5/23/25 16:25	DMW	

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Report Date: 06/06/2025 10:52

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1C	Location Description:	250517-14-WC
Date/Time Collected:	05/17/2025 11:54 - 05/18/2025 06:30		
Lab Number:	AC00403-03	Sample Collector:	K.J
Sample Type:	Composite	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
Ammonia, as N	B251700	0.323	mg/L	0.0450	0.0450	Timberline Ammonia-001	05/27/25	5/27/25 11:55	ALN	
BOD5	B251598	25.4	mg/L	2.00	2.00	SM 5210 B-2016	05/18/25	5/23/25 15:44	MCB	
Chloride	B251627	17.2	mg/L	0.0200	0.0200	EPA 300.0, Rev. 2.1 (1993)	05/20/25	5/20/25 18:57	RHC	
COD	B251605	132	mg/L	7.00	7.00	HH 8000, Standard Method 5220 D	05/19/25	5/19/25 9:56	RCJ	
Nitrate-Nitrite, as N	B251656	0.429	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	05/21/25	5/21/25 13:03	JAL	
TKN	B251621	1.64	mg/L	0.100	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	05/19/25	5/20/25 10:44	JAL	
Total Dissolved Solids	B251647	104	mg/L	25.0	25.0	SM 2540 C-2015	05/21/25	5/23/25 7:31	NTS	
Total Suspended Solids	B251612	74.8	mg/L	0.900	0.900	SM 2540 D-2015	05/19/25	5/19/25 9:56	NTS	
Turbidity	B251603	38.9	NTU	0.6	0.3	EPA 180.1, Rev. 2.0 (1993)	05/19/25	5/19/25 9:22	ASE	D
Dissolved Wet Chemistry										
Orthophosphate, as P	B251618	0.163	mg/L	3.00E-3	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	05/19/25	5/19/25 11:35	JAL	
Total Metals										
Mercury	B251763	<0.0100	ug/L	0.0100	0.0100	EPA 245.1	06/03/25	6/3/25 12:59	SAS	U
Arsenic	B251685	3.0	ug/L	0.050	0.050	EPA 200.8	05/24/25	5/30/25 17:40	DMW	
Cadmium	B251685	0.070	ug/L	0.010	0.010	EPA 200.8	05/24/25	5/30/25 17:40	DMW	
Calcium	B251722	16.6	mg/L	0.0400	0.0400	EPA 200.7	05/29/25	5/30/25 9:35	SMC	
Lead	B251685	4.1	ug/L	0.010	0.010	EPA 200.8	05/24/25	5/30/25 17:40	DMW	
Magnesium	B251722	3020	ug/L	40.0	40.0	EPA 200.7	05/29/25	5/30/25 9:35	SMC	
Phosphorus as P	B251722	0.320	mg/L	0.0120	0.0120	EPA 200.7	05/29/25	5/30/25 9:35	SMC	
Hardness	B251722	53.9	mg/L	0.100	0.100	SM 2340 B-2011	05/29/25	5/30/25 9:35	SMC	
Dissolved Metals										
Cadmium	B251682	0.012	ug/L	0.010	0.010	EPA 200.8	05/23/25	5/23/25 16:29	DMW	
Copper	B251682	5.0	ug/L	0.14	0.14	EPA 200.8	05/23/25	5/23/25 16:29	DMW	
Lead	B251682	0.10	ug/L	5.00E-3	5.00E-3	EPA 200.8	05/23/25	5/23/25 16:29	DMW	
Zinc	B251682	26.8	ug/L	0.50	0.50	EPA 200.8	05/23/25	5/23/25 16:29	DMW	

* The reported adjusted "MDL" is sample-specific. The analysis MDL as defined by 40 CFR pt 136 App.B. was corrected for dilution, dry weight, or method-defined ML.

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Quality Control Report

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry									
Batch: B251598									
Blank (B251598-BLK1)									
BOD5	<2	mg/L					05/23/2025	MCB	U
LCS (B251598-BS1)									
BOD5			102	84.6-115.4			05/23/2025	MCB	
LCS (B251598-BS2)									
BOD5			108	84.6-115.4			05/23/2025	MCB	
Duplicate (B251598-DUP1)	Source ID: BB04755-01								
BOD5					0.925	30	05/23/2025	MCB	D
Batch: B251603									
Blank (B251603-BLK1)									
Turbidity	<0.3	NTU					05/19/2025	ASE	U
LCS (B251603-BS1)									
Turbidity			100	90-110			05/19/2025	ASE	
Duplicate (B251603-DUP1)	Source ID: AC00403-03								
Turbidity					2.04	25	05/19/2025	ASE	D
Batch: B251605									
Blank (B251605-BLK1)									
COD	<7	mg/L					05/19/2025	RCJ	U
LCS (B251605-BS1)									
COD			99.7	90-110			05/19/2025	RCJ	
Duplicate (B251605-DUP1)	Source ID: AC00403-01								
COD					3.24	10	05/19/2025	RCJ	
Batch: B251612									
Blank (B251612-BLK1)									
Total Suspended Solids	<0.9	mg/L					05/19/2025	NTS	U
LCS (B251612-BS1)									
Total Suspended Solids			99.6	90-110			05/19/2025	NTS	
Duplicate (B251612-DUP1)	Source ID: LS02351-02								
Total Suspended Solids					2.02	20	05/19/2025	NTS	
Duplicate (B251612-DUP2)	Source ID: BB04762-01								
Total Suspended Solids					3.96	20	05/19/2025	NTS	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B251621									
Blank (B251621-BLK1)									
TKN	<0.1	mg/L					05/20/2025	JAL	U
Blank (B251621-BLK2)									
TKN	<0.1	mg/L					05/20/2025	JAL	U
LCS (B251621-BS1)									
TKN			101	80-120			05/20/2025	JAL	
LCS (B251621-BS2)									
TKN			103	80-120			05/20/2025	JAL	
Duplicate (B251621-DUP1) Source ID: AC00405-01									
TKN					1.97	20	05/20/2025	JAL	
Duplicate (B251621-DUP2) Source ID: BB04734-02									
TKN					1.33	20	05/20/2025	JAL	D
Duplicate (B251621-DUP3) Source ID: WB03768-03									
TKN					1.18	20	05/20/2025	JAL	D
Matrix Spike (B251621-MS1) Source ID: AC00405-01									
TKN			103	80-120			05/20/2025	JAL	
Matrix Spike (B251621-MS2) Source ID: BB04734-02									
TKN			105	80-120			05/20/2025	JAL	D
Matrix Spike (B251621-MS3) Source ID: WB03768-03									
TKN			113	80-120			05/20/2025	JAL	D
Matrix Spike Dup (B251621-MSD1) Source ID: AC00405-01									
TKN			103	80-120	0.165	20	05/20/2025	JAL	
Matrix Spike Dup (B251621-MSD2) Source ID: BB04734-02									
TKN			103	80-120	0.619	20	05/20/2025	JAL	D
Matrix Spike Dup (B251621-MSD3) Source ID: WB03768-03									
TKN			112	80-120	0.577	20	05/20/2025	JAL	D
Batch: B251627									
Blank (B251627-BLK1)									
Chloride	<0.02	mg/L					05/20/2025	RHC	U
Blank (B251627-BLK2)									
Chloride	<0.02	mg/L					05/21/2025	RHC	U
LCS (B251627-BS1)									
Chloride			102	90-110			05/20/2025	RHC	
LCS (B251627-BS2)									
Chloride			102	90-110			05/21/2025	RHC	
Duplicate (B251627-DUP1) Source ID: AC00403-01									
Chloride					0.174	10	05/20/2025	RHC	
Duplicate (B251627-DUP2) Source ID: ES00387-02									
Chloride					1.20	10	05/21/2025	RHC	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B251627 (Continued)									
Duplicate (B251627-DUP3) Source ID: TM00476-02									
Chloride					0.0909	10	05/21/2025	RHC	
Duplicate (B251627-DUP4) Source ID: TM00476-02RE1									
Chloride					0.757	10	05/21/2025	RHC	D
Matrix Spike (B251627-MS1) Source ID: AC00403-01									
Chloride			102	90-110			05/20/2025	RHC	
Matrix Spike (B251627-MS2) Source ID: ES00387-02									
Chloride			104	90-110			05/21/2025	RHC	
Matrix Spike (B251627-MS3) Source ID: TM00476-02									
Chloride			102	90-110			05/21/2025	RHC	
Matrix Spike (B251627-MS4) Source ID: TM00476-02									
Chloride			101	90-110			05/21/2025	RHC	D
Matrix Spike Dup (B251627-MSD1) Source ID: AC00403-01									
Chloride			101	90-110	0.504	10	05/20/2025	RHC	
Matrix Spike Dup (B251627-MSD2) Source ID: ES00387-02									
Chloride			101	90-110	2.35	10	05/21/2025	RHC	
Matrix Spike Dup (B251627-MSD3) Source ID: TM00476-02									
Chloride			104	90-110	1.12	10	05/21/2025	RHC	
Matrix Spike Dup (B251627-MSD4) Source ID: TM00476-02									
Chloride			102	90-110	0.400	10	05/21/2025	RHC	D
Batch: B251647									
Blank (B251647-BLK1)									
Total Dissolved Solids	<25	mg/L					05/22/2025	NTS	U
LCS (B251647-BS1)									
Total Dissolved Solids			97.0	90-110			05/22/2025	NTS	
Duplicate (B251647-DUP1) Source ID: EN00065-01									
Total Dissolved Solids					1.15	10	05/22/2025	NTS	
Duplicate (B251647-DUP2) Source ID: TM00474-01									
Total Dissolved Solids					3.73	10	05/22/2025	NTS	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B251656									
Blank (B251656-BLK1)									
Nitrate-Nitrite, as N	<0.025	mg/L					05/21/2025	JAL	U
Blank (B251656-BLK2)									
Nitrate-Nitrite, as N	<0.025	mg/L					05/21/2025	JAL	U
LCS (B251656-BS1)									
Nitrate-Nitrite, as N			98.2	90-110			05/21/2025	JAL	
LCS (B251656-BS2)									
Nitrate-Nitrite, as N			95.8	90-110			05/21/2025	JAL	
Duplicate (B251656-DUP1) Source ID: AC00405-01									
Nitrate-Nitrite, as N					0.227	10	05/21/2025	JAL	
Duplicate (B251656-DUP2) Source ID: BB04768-02									
Nitrate-Nitrite, as N					NR	10	05/21/2025	JAL	
Duplicate (B251656-DUP3) Source ID: TM00476-01									
Nitrate-Nitrite, as N					0.563	10	05/21/2025	JAL	
Duplicate (B251656-DUP4) Source ID: WB03778-03									
Nitrate-Nitrite, as N					3.58E-3	10	05/21/2025	JAL	
Duplicate (B251656-DUP5) Source ID: TM00476-01RE1									
Nitrate-Nitrite, as N					0.159	10	05/21/2025	JAL	D
Matrix Spike (B251656-MS1) Source ID: AC00405-01									
Nitrate-Nitrite, as N			94.9	90-110			05/21/2025	JAL	
Matrix Spike (B251656-MS2) Source ID: BB04768-02									
Nitrate-Nitrite, as N			95.6	90-110			05/21/2025	JAL	
Matrix Spike (B251656-MS3) Source ID: TM00476-01									
Nitrate-Nitrite, as N			91.2	90-110			05/21/2025	JAL	
Matrix Spike (B251656-MS4) Source ID: WB03778-03									
Nitrate-Nitrite, as N			94.9	90-110			05/21/2025	JAL	
Matrix Spike (B251656-MS5) Source ID: TM00476-01RE1									
Nitrate-Nitrite, as N			92.4	90-110			05/21/2025	JAL	D
Matrix Spike Dup (B251656-MSD1) Source ID: AC00405-01									
Nitrate-Nitrite, as N			95.0	90-110	0.0605	10	05/21/2025	JAL	
Matrix Spike Dup (B251656-MSD2) Source ID: BB04768-02									
Nitrate-Nitrite, as N			95.5	90-110	0.156	10	05/21/2025	JAL	
Matrix Spike Dup (B251656-MSD3) Source ID: TM00476-01									
Nitrate-Nitrite, as N			90.1	90-110	0.151	10	05/21/2025	JAL	
Matrix Spike Dup (B251656-MSD4) Source ID: WB03778-03									
Nitrate-Nitrite, as N			95.3	90-110	0.115	10	05/21/2025	JAL	
Matrix Spike Dup (B251656-MSD5) Source ID: TM00476-01RE1									
Nitrate-Nitrite, as N			93.0	90-110	0.276	10	05/21/2025	JAL	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B251700									
Blank (B251700-BLK1)									
Ammonia, as N	<0.045	mg/L					05/27/2025	ALN	U
LCS (B251700-BS1)									
Ammonia, as N			101	90-110			05/27/2025	ALN	
Duplicate (B251700-DUP2) Source ID: AC00405-01RE1									
Ammonia, as N					3.80	20	05/27/2025	ALN	D
Matrix Spike (B251700-MS2) Source ID: AC00405-01RE1									
Ammonia, as N			93.7	84-115			05/27/2025	ALN	D
Matrix Spike Dup (B251700-MSD2) Source ID: AC00405-01RE1									
Ammonia, as N			94.5	84-115	0.815	20	05/27/2025	ALN	D
Dissolved Wet Chemistry									
Batch: B251618									
Blank (B251618-BLK1)									
Orthophosphate, as P	<0.003	mg/L					05/19/2025	JAL	U
LCS (B251618-BS1)									
Orthophosphate, as P			99.8	90-110			05/19/2025	JAL	
Duplicate (B251618-DUP1) Source ID: AC00403-03									
Orthophosphate, as P					0.434	10	05/19/2025	JAL	
Duplicate (B251618-DUP2) Source ID: WB03774-07									
Orthophosphate, as P					0.0285	10	05/19/2025	JAL	D
Matrix Spike (B251618-MS1) Source ID: AC00403-03									
Orthophosphate, as P			105	90-110			05/19/2025	JAL	
Matrix Spike (B251618-MS2) Source ID: WB03774-07									
Orthophosphate, as P			102	90-110			05/19/2025	JAL	D
Matrix Spike Dup (B251618-MSD1) Source ID: AC00403-03									
Orthophosphate, as P			104	90-110	0.244	10	05/19/2025	JAL	
Matrix Spike Dup (B251618-MSD2) Source ID: WB03774-07									
Orthophosphate, as P			103	90-110	0.381	10	05/19/2025	JAL	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals									
Batch: B251685									
Blank (B251685-BLK1)									
Arsenic	<0.050	ug/L					05/30/2025	DMW	U
Cadmium	<0.010	ug/L					05/30/2025	DMW	U
Lead	<0.010	ug/L					05/30/2025	DMW	U
LCS (B251685-BS1)									
Arsenic			98.4	85-115			05/30/2025	DMW	
Cadmium			99.2	85-115			05/30/2025	DMW	
Lead			99.7	85-115			05/30/2025	DMW	
Duplicate (B251685-DUP1) Source ID: AC00403-02									
Arsenic					1.86	20	05/30/2025	DMW	
Cadmium					1.98	20	05/30/2025	DMW	
Lead					2.42	20	05/30/2025	DMW	
Matrix Spike (B251685-MS1) Source ID: AC00403-02									
Arsenic			97.8	70-130			05/30/2025	DMW	
Cadmium			98.7	70-130			05/30/2025	DMW	
Lead			98.7	70-130			05/30/2025	DMW	
Matrix Spike Dup (B251685-MSD1) Source ID: AC00403-02									
Arsenic			96.2	70-130	1.38	20	05/30/2025	DMW	
Cadmium			97.2	70-130	1.48	20	05/30/2025	DMW	
Lead			97.0	70-130	1.16	20	05/30/2025	DMW	
Batch: B251722									
Blank (B251722-BLK1)									
Calcium	<0.04	mg/L					05/30/2025	SMC	U
Magnesium	<40	ug/L					05/30/2025	SMC	U
Phosphorus as P	<0.012	mg/L					05/30/2025	SMC	U
LCS (B251722-BS1)									
Calcium			100	85-115			05/30/2025	SMC	
Magnesium			101	85-115			05/30/2025	SMC	
Phosphorus as P			102	85-115			05/30/2025	SMC	
Duplicate (B251722-DUP1) Source ID: AC00403-02									
Calcium					1.99	20	05/30/2025	SMC	
Magnesium					0.447	20	05/30/2025	SMC	
Phosphorus as P					3.02	20	05/30/2025	SMC	
Duplicate (B251722-DUP2) Source ID: AC00404-01									
Calcium					3.07	20	05/30/2025	SMC	
Magnesium					4.00	20	05/30/2025	SMC	
Phosphorus as P					14.2	20	05/30/2025	SMC	
Matrix Spike (B251722-MS1) Source ID: AC00403-02									
Calcium			101	70-130			05/30/2025	SMC	
Magnesium			101	70-130			05/30/2025	SMC	
Phosphorus as P			103	70-130			05/30/2025	SMC	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals (Continued)									
Batch: B251722 (Continued)									
Matrix Spike (B251722-MS2) Source ID: AC00404-01									
Calcium			97.6	70-130			05/30/2025	SMC	
Magnesium			98.6	70-130			05/30/2025	SMC	
Phosphorus as P			79.3	70-130			05/30/2025	SMC	
Matrix Spike Dup (B251722-MSD1) Source ID: AC00403-02									
Calcium			102	70-130	0.113	20	05/30/2025	SMC	
Magnesium			101	70-130	0.0632	20	05/30/2025	SMC	
Phosphorus as P			105	70-130	1.48	20	05/30/2025	SMC	
Matrix Spike Dup (B251722-MSD2) Source ID: AC00404-01									
Calcium			99.0	70-130	0.858	20	05/30/2025	SMC	
Magnesium			99.8	70-130	1.10	20	05/30/2025	SMC	
Phosphorus as P			75.7	70-130	1.24	20	05/30/2025	SMC	
Batch: B251763									
Blank (B251763-BLK1)									
Mercury	<0.01	ug/L					06/03/2025	SAS	U
LCS (B251763-BS1)									
Mercury			100	85-115			06/03/2025	SAS	
Duplicate (B251763-DUP1) Source ID: AC00405-01									
Mercury					NR	20	06/03/2025	SAS	U
Matrix Spike (B251763-MS1) Source ID: AC00405-01									
Mercury			92.8	70-130			06/03/2025	SAS	
Matrix Spike Dup (B251763-MSD1) Source ID: AC00405-01									
Mercury			95.9	70-130	2.91	20	06/03/2025	SAS	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Dissolved Metals									
Batch: B251682									
Blank (B251682-BLK1)									
Cadmium	<0.010	ug/L					05/23/2025	DMW	U
Copper	<0.14	ug/L					05/23/2025	DMW	U
Lead	<0.0050	ug/L					05/23/2025	DMW	U
Zinc	<0.50	ug/L					05/23/2025	DMW	U
LCS (B251682-BS1)									
Cadmium			98.3	85-115			05/23/2025	DMW	
Copper			93.9	85-115			05/23/2025	DMW	
Lead			97.1	85-115			05/23/2025	DMW	
Zinc			97.0	85-115			05/23/2025	DMW	
Duplicate (B251682-DUP1) Source ID: AC00405-01									
Cadmium					NR	10	05/23/2025	DMW	U
Copper					0.733	10	05/23/2025	DMW	
Lead					0.547	10	05/23/2025	DMW	
Zinc					0.620	10	05/23/2025	DMW	
Matrix Spike (B251682-MS1) Source ID: AC00405-01									
Cadmium			97.9	70-130			05/23/2025	DMW	
Copper			94.2	70-130			05/23/2025	DMW	
Lead			96.5	70-130			05/23/2025	DMW	
Zinc			100	70-130			05/23/2025	DMW	
Matrix Spike Dup (B251682-MSD1) Source ID: AC00405-01									
Cadmium			99.0	70-130	1.08	10	05/23/2025	DMW	
Copper			93.2	70-130	0.866	10	05/23/2025	DMW	
Lead			97.4	70-130	0.908	10	05/23/2025	DMW	
Zinc			98.1	70-130	1.67	10	05/23/2025	DMW	

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Notes and Definitions

Item	Definition
D	Data reported from a dilution
U	Analyte included in the analysis, but not detected
NR	No result for this parameter.

Method Reference Acronyms

Colilert	Colilert, IDEXX Laboratories, Inc.
EPA	Manual of Methods for Chemical Analysis of Water and Wastes, USEPA
GS	USGS Techniques of Water-Resources Investigations
HH	Hach Spectrophotometer Procedures Manual
SM	Standard Methods for the Examination of Water and Wastewater
SW	Test methods for Evaluating Solid Waste, SW-846

Stephen Quintero or Azubike Emenari
QA/QC Coordinator

Leslea Basterrechea
Water Quality Laboratory Manager

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Attn: Steven Turner
3775 Adams Street
Garden City, Idaho 83714–6418
Tel. (208) 407–4284
Purchase Order: 63069586
Project: Stormwater PI
Sampler(s): Kristen Jolliffe
Steven Turner

Lab#	Begin Date	End Date	Begin Time	End Time	Sample Identification	Sampler Initials	Water	Grab	Composite	BOD_5 - SM 5210 B	COD - Hach 8000	TSS - SM 2540 D	TDS - SM 2540 C	TKN - EPA 351.2	TP - EPA 200.7	Orthophosphate - EPA 365.1	Total As, Cd, Pb - EPA 200.8	Diss. Cd Cu, Pb, Zn - EPA 200.8	Total Hg – EPA 245.1	E. Coli - IDEXX Colilert	Turbidity - EPA 180.1	Hardness - SM 2340 B-2011	NO3+NO2 - EPA 353.2	Timberline Ammonia-001	Chloride – EPA 300.0	Total Containers
AC00403-01	5/17/25	5/18/25	1956	0318	250517-03-WC	KJ	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	2
-02	↓	↓	1924	0503	250517-11-WC	KJ	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	3
-03	↓	↓	1154	0630	250517-14-WC	KJ	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	3

Relinquished by (sign)	Date &Time Transferred	Received by (sign)	Comments/ Special Instructions
Kristen Jolliffe	~~5/18/25~~ 1230	5/18/25 1236	3.8°C 1of3 14-WC ~~7.6°C 2of2 200-WC~~ 3.6°C 3of3 14 WC ~~3.6°C 1of2 200-WC~~ 4.8°C 2of3 14WC 4.9°C 1of2 03-WC 2.6°C 1of3 11-WC 5.5°C 2of2 03-WC 4.9°C 2of3 11-WC 1.3°C 3of3 11-WC

COC_WQL-PI

241010 ST

AC00403

AC00403

Report Date: 06/06/2025 10:52

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Samples in this Report

Lab ID	Sample	Sample Description	Matrix	Qualifiers	Sampled	Received
AC00404-01	ACST1C	250517-206-WC	Water		5/18/25 5:13	5/18/25 12:36

Comments:

Temperature at receipt, 2 containers: 7.6 and 3.6 degrees C

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Analysis Report

Location:	ACST1C	Location Description:	250517-206-WC
Date/Time Collected:	05/17/2025 18:44 - 05/18/2025 05:13		
Lab Number:	AC00404-01	Sample Collector:	K.J
Sample Type:	Composite	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
Ammonia, as N	B251700	0.338	mg/L	0.0450	0.0450	Timberline Ammonia-001	05/27/25	5/27/25 11:52	ALN	
BOD5	B251598	67.6	mg/L	2.00	2.00	SM 5210 B-2016	05/18/25	5/23/25 15:36	MCB	
Chloride	B251627	4.36	mg/L	0.0200	0.0200	EPA 300.0, Rev. 2.1 (1993)	05/20/25	5/20/25 19:23	RHC	
COD	B251605	262	mg/L	7.00	7.00	HH 8000, Standard Method 5220 D	05/19/25	5/19/25 9:56	RCJ	
Nitrate-Nitrite, as N	B251656	0.213	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	05/21/25	5/21/25 13:04	JAL	
TKN	B251621	4.45	mg/L	0.100	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	05/19/25	5/20/25 10:46	JAL	
Total Dissolved Solids	B251647	106	mg/L	25.0	25.0	SM 2540 C-2015	05/21/25	5/23/25 7:33	NTS	
Total Suspended Solids	B251612	169	mg/L	0.900	0.900	SM 2540 D-2015	05/19/25	5/19/25 10:09	NTS	
Turbidity	B251603	67.3	NTU	0.6	0.3	EPA 180.1, Rev. 2.0 (1993)	05/19/25	5/19/25 9:40	ASE	D
Dissolved Wet Chemistry										
Orthophosphate, as P	B251618	0.543	mg/L	6.00E-3	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	05/19/25	5/19/25 11:50	JAL	D
Total Metals										
Mercury	B251763	0.0179	ug/L	0.0100	0.0100	EPA 245.1	06/03/25	6/3/25 13:03	SAS	
Arsenic	B251685	2.5	ug/L	0.050	0.050	EPA 200.8	05/24/25	5/30/25 17:45	DMW	
Cadmium	B251685	0.10	ug/L	0.010	0.010	EPA 200.8	05/24/25	5/30/25 17:45	DMW	
Calcium	B251722	7.72	mg/L	0.0400	0.0400	EPA 200.7	05/29/25	5/30/25 10:44	SMC	
Lead	B251685	7.7	ug/L	0.010	0.010	EPA 200.8	05/24/25	5/30/25 17:45	DMW	
Magnesium	B251722	2080	ug/L	40.0	40.0	EPA 200.7	05/29/25	5/30/25 10:44	SMC	
Phosphorus as P	B251722	1.09	mg/L	0.0120	0.0120	EPA 200.7	05/29/25	5/30/25 10:44	SMC	
Hardness	B251722	27.8	mg/L	0.100	0.100	SM 2340 B-2011	05/29/25	5/30/25 10:44	SMC	
Dissolved Metals										
Cadmium	B251682	0.015	ug/L	0.010	0.010	EPA 200.8	05/23/25	5/23/25 16:34	DMW	
Copper	B251682	9.4	ug/L	0.14	0.14	EPA 200.8	05/23/25	5/23/25 16:34	DMW	
Lead	B251682	0.41	ug/L	5.00E-3	5.00E-3	EPA 200.8	05/23/25	5/23/25 16:34	DMW	
Zinc	B251682	40.4	ug/L	0.50	0.50	EPA 200.8	05/23/25	5/23/25 16:34	DMW	

* The reported adjusted "MDL" is sample-specific. The analysis MDL as defined by 40 CFR pt 136 App.B. was corrected for dilution, dry weight, or method-defined ML.

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Report Date: 06/06/2025 10:52

Quality Control Report

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry									
Batch: B251598									
Blank (B251598-BLK1)									
BOD5	<2	mg/L					05/23/2025	MCB	U
LCS (B251598-BS1)									
BOD5			102	84.6-115.4			05/23/2025	MCB	
LCS (B251598-BS2)									
BOD5			108	84.6-115.4			05/23/2025	MCB	
Duplicate (B251598-DUP1)	Source ID: BB04755-01								
BOD5					0.925	30	05/23/2025	MCB	D
Batch: B251603									
Blank (B251603-BLK1)									
Turbidity	<0.3	NTU					05/19/2025	ASE	U
LCS (B251603-BS1)									
Turbidity			100	90-110			05/19/2025	ASE	
Duplicate (B251603-DUP1)	Source ID: AC00403-03								
Turbidity					2.04	25	05/19/2025	ASE	D
Batch: B251605									
Blank (B251605-BLK1)									
COD	<7	mg/L					05/19/2025	RCJ	U
LCS (B251605-BS1)									
COD			99.7	90-110			05/19/2025	RCJ	
Duplicate (B251605-DUP1)	Source ID: AC00403-01								
COD					3.24	10	05/19/2025	RCJ	
Batch: B251612									
Blank (B251612-BLK1)									
Total Suspended Solids	<0.9	mg/L					05/19/2025	NTS	U
LCS (B251612-BS1)									
Total Suspended Solids			99.6	90-110			05/19/2025	NTS	
Duplicate (B251612-DUP1)	Source ID: LS02351-02								
Total Suspended Solids					2.02	20	05/19/2025	NTS	
Duplicate (B251612-DUP2)	Source ID: BB04762-01								
Total Suspended Solids					3.96	20	05/19/2025	NTS	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B251621									
Blank (B251621-BLK1)									
TKN	<0.1	mg/L					05/20/2025	JAL	U
Blank (B251621-BLK2)									
TKN	<0.1	mg/L					05/20/2025	JAL	U
LCS (B251621-BS1)									
TKN			101	80-120			05/20/2025	JAL	
LCS (B251621-BS2)									
TKN			103	80-120			05/20/2025	JAL	
Duplicate (B251621-DUP1) Source ID: AC00405-01									
TKN					1.97	20	05/20/2025	JAL	
Duplicate (B251621-DUP2) Source ID: BB04734-02									
TKN					1.33	20	05/20/2025	JAL	D
Duplicate (B251621-DUP3) Source ID: WB03768-03									
TKN					1.18	20	05/20/2025	JAL	D
Matrix Spike (B251621-MS1) Source ID: AC00405-01									
TKN			103	80-120			05/20/2025	JAL	
Matrix Spike (B251621-MS2) Source ID: BB04734-02									
TKN			105	80-120			05/20/2025	JAL	D
Matrix Spike (B251621-MS3) Source ID: WB03768-03									
TKN			113	80-120			05/20/2025	JAL	D
Matrix Spike Dup (B251621-MSD1) Source ID: AC00405-01									
TKN			103	80-120	0.165	20	05/20/2025	JAL	
Matrix Spike Dup (B251621-MSD2) Source ID: BB04734-02									
TKN			103	80-120	0.619	20	05/20/2025	JAL	D
Matrix Spike Dup (B251621-MSD3) Source ID: WB03768-03									
TKN			112	80-120	0.577	20	05/20/2025	JAL	D
Batch: B251627									
Blank (B251627-BLK1)									
Chloride	<0.02	mg/L					05/20/2025	RHC	U
Blank (B251627-BLK2)									
Chloride	<0.02	mg/L					05/21/2025	RHC	U
LCS (B251627-BS1)									
Chloride			102	90-110			05/20/2025	RHC	
LCS (B251627-BS2)									
Chloride			102	90-110			05/21/2025	RHC	
Duplicate (B251627-DUP1) Source ID: AC00403-01									
Chloride					0.174	10	05/20/2025	RHC	
Duplicate (B251627-DUP2) Source ID: ES00387-02									
Chloride					1.20	10	05/21/2025	RHC	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B251627 (Continued)									
Duplicate (B251627-DUP3) Source ID: TM00476-02									
Chloride					0.0909	10	05/21/2025	RHC	
Duplicate (B251627-DUP4) Source ID: TM00476-02RE1									
Chloride					0.757	10	05/21/2025	RHC	D
Matrix Spike (B251627-MS1) Source ID: AC00403-01									
Chloride			102	90-110			05/20/2025	RHC	
Matrix Spike (B251627-MS2) Source ID: ES00387-02									
Chloride			104	90-110			05/21/2025	RHC	
Matrix Spike (B251627-MS3) Source ID: TM00476-02									
Chloride			102	90-110			05/21/2025	RHC	
Matrix Spike (B251627-MS4) Source ID: TM00476-02									
Chloride			101	90-110			05/21/2025	RHC	D
Matrix Spike Dup (B251627-MSD1) Source ID: AC00403-01									
Chloride			101	90-110	0.504	10	05/20/2025	RHC	
Matrix Spike Dup (B251627-MSD2) Source ID: ES00387-02									
Chloride			101	90-110	2.35	10	05/21/2025	RHC	
Matrix Spike Dup (B251627-MSD3) Source ID: TM00476-02									
Chloride			104	90-110	1.12	10	05/21/2025	RHC	
Matrix Spike Dup (B251627-MSD4) Source ID: TM00476-02									
Chloride			102	90-110	0.400	10	05/21/2025	RHC	D
Batch: B251647									
Blank (B251647-BLK1)									
Total Dissolved Solids	<25	mg/L					05/22/2025	NTS	U
LCS (B251647-BS1)									
Total Dissolved Solids			97.0	90-110			05/22/2025	NTS	
Duplicate (B251647-DUP1) Source ID: EN00065-01									
Total Dissolved Solids					1.15	10	05/22/2025	NTS	
Duplicate (B251647-DUP2) Source ID: TM00474-01									
Total Dissolved Solids					3.73	10	05/22/2025	NTS	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B251656									
Blank (B251656-BLK1)									
Nitrate-Nitrite, as N	<0.025	mg/L					05/21/2025	JAL	U
Blank (B251656-BLK2)									
Nitrate-Nitrite, as N	<0.025	mg/L					05/21/2025	JAL	U
LCS (B251656-BS1)									
Nitrate-Nitrite, as N			98.2	90-110			05/21/2025	JAL	
LCS (B251656-BS2)									
Nitrate-Nitrite, as N			95.8	90-110			05/21/2025	JAL	
Duplicate (B251656-DUP1) Source ID: AC00405-01									
Nitrate-Nitrite, as N					0.227	10	05/21/2025	JAL	
Duplicate (B251656-DUP2) Source ID: BB04768-02									
Nitrate-Nitrite, as N					NR	10	05/21/2025	JAL	
Duplicate (B251656-DUP3) Source ID: TM00476-01									
Nitrate-Nitrite, as N					0.563	10	05/21/2025	JAL	
Duplicate (B251656-DUP4) Source ID: WB03778-03									
Nitrate-Nitrite, as N					3.58E-3	10	05/21/2025	JAL	
Duplicate (B251656-DUP5) Source ID: TM00476-01RE1									
Nitrate-Nitrite, as N					0.159	10	05/21/2025	JAL	D
Matrix Spike (B251656-MS1) Source ID: AC00405-01									
Nitrate-Nitrite, as N			94.9	90-110			05/21/2025	JAL	
Matrix Spike (B251656-MS2) Source ID: BB04768-02									
Nitrate-Nitrite, as N			95.6	90-110			05/21/2025	JAL	
Matrix Spike (B251656-MS3) Source ID: TM00476-01									
Nitrate-Nitrite, as N			91.2	90-110			05/21/2025	JAL	
Matrix Spike (B251656-MS4) Source ID: WB03778-03									
Nitrate-Nitrite, as N			94.9	90-110			05/21/2025	JAL	
Matrix Spike (B251656-MS5) Source ID: TM00476-01RE1									
Nitrate-Nitrite, as N			92.4	90-110			05/21/2025	JAL	D
Matrix Spike Dup (B251656-MSD1) Source ID: AC00405-01									
Nitrate-Nitrite, as N			95.0	90-110	0.0605	10	05/21/2025	JAL	
Matrix Spike Dup (B251656-MSD2) Source ID: BB04768-02									
Nitrate-Nitrite, as N			95.5	90-110	0.156	10	05/21/2025	JAL	
Matrix Spike Dup (B251656-MSD3) Source ID: TM00476-01									
Nitrate-Nitrite, as N			90.1	90-110	0.151	10	05/21/2025	JAL	
Matrix Spike Dup (B251656-MSD4) Source ID: WB03778-03									
Nitrate-Nitrite, as N			95.3	90-110	0.115	10	05/21/2025	JAL	
Matrix Spike Dup (B251656-MSD5) Source ID: TM00476-01RE1									
Nitrate-Nitrite, as N			93.0	90-110	0.276	10	05/21/2025	JAL	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B251700									
Blank (B251700-BLK1)									
Ammonia, as N	<0.045	mg/L					05/27/2025	ALN	U
LCS (B251700-BS1)									
Ammonia, as N			101	90-110			05/27/2025	ALN	
Duplicate (B251700-DUP2) Source ID: AC00405-01RE1									
Ammonia, as N					3.80	20	05/27/2025	ALN	D
Matrix Spike (B251700-MS2) Source ID: AC00405-01RE1									
Ammonia, as N			93.7	84-115			05/27/2025	ALN	D
Matrix Spike Dup (B251700-MSD2) Source ID: AC00405-01RE1									
Ammonia, as N			94.5	84-115	0.815	20	05/27/2025	ALN	D
Dissolved Wet Chemistry									
Batch: B251618									
Blank (B251618-BLK1)									
Orthophosphate, as P	<0.003	mg/L					05/19/2025	JAL	U
LCS (B251618-BS1)									
Orthophosphate, as P			99.8	90-110			05/19/2025	JAL	
Duplicate (B251618-DUP1) Source ID: AC00403-03									
Orthophosphate, as P					0.434	10	05/19/2025	JAL	
Duplicate (B251618-DUP2) Source ID: WB03774-07									
Orthophosphate, as P					0.0285	10	05/19/2025	JAL	D
Matrix Spike (B251618-MS1) Source ID: AC00403-03									
Orthophosphate, as P			105	90-110			05/19/2025	JAL	
Matrix Spike (B251618-MS2) Source ID: WB03774-07									
Orthophosphate, as P			102	90-110			05/19/2025	JAL	D
Matrix Spike Dup (B251618-MSD1) Source ID: AC00403-03									
Orthophosphate, as P			104	90-110	0.244	10	05/19/2025	JAL	
Matrix Spike Dup (B251618-MSD2) Source ID: WB03774-07									
Orthophosphate, as P			103	90-110	0.381	10	05/19/2025	JAL	D

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Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals									
Batch: B251685									
Blank (B251685-BLK1)									
Arsenic	<0.050	ug/L					05/30/2025	DMW	U
Cadmium	<0.010	ug/L					05/30/2025	DMW	U
Lead	<0.010	ug/L					05/30/2025	DMW	U
LCS (B251685-BS1)									
Arsenic			98.4	85-115			05/30/2025	DMW	
Cadmium			99.2	85-115			05/30/2025	DMW	
Lead			99.7	85-115			05/30/2025	DMW	
Duplicate (B251685-DUP1) Source ID: AC00403-02									
Arsenic					1.86	20	05/30/2025	DMW	
Cadmium					1.98	20	05/30/2025	DMW	
Lead					2.42	20	05/30/2025	DMW	
Matrix Spike (B251685-MS1) Source ID: AC00403-02									
Arsenic			97.8	70-130			05/30/2025	DMW	
Cadmium			98.7	70-130			05/30/2025	DMW	
Lead			98.7	70-130			05/30/2025	DMW	
Matrix Spike Dup (B251685-MSD1) Source ID: AC00403-02									
Arsenic			96.2	70-130	1.38	20	05/30/2025	DMW	
Cadmium			97.2	70-130	1.48	20	05/30/2025	DMW	
Lead			97.0	70-130	1.16	20	05/30/2025	DMW	
Batch: B251722									
Blank (B251722-BLK1)									
Calcium	<0.04	mg/L					05/30/2025	SMC	U
Magnesium	<40	ug/L					05/30/2025	SMC	U
Phosphorus as P	<0.012	mg/L					05/30/2025	SMC	U
LCS (B251722-BS1)									
Calcium			100	85-115			05/30/2025	SMC	
Magnesium			101	85-115			05/30/2025	SMC	
Phosphorus as P			102	85-115			05/30/2025	SMC	
Duplicate (B251722-DUP1) Source ID: AC00403-02									
Calcium					1.99	20	05/30/2025	SMC	
Magnesium					0.447	20	05/30/2025	SMC	
Phosphorus as P					3.02	20	05/30/2025	SMC	
Duplicate (B251722-DUP2) Source ID: AC00404-01									
Calcium					3.07	20	05/30/2025	SMC	
Magnesium					4.00	20	05/30/2025	SMC	
Phosphorus as P					14.2	20	05/30/2025	SMC	
Matrix Spike (B251722-MS1) Source ID: AC00403-02									
Calcium			101	70-130			05/30/2025	SMC	
Magnesium			101	70-130			05/30/2025	SMC	
Phosphorus as P			103	70-130			05/30/2025	SMC	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals (Continued)									
Batch: B251722 (Continued)									
Matrix Spike (B251722-MS2) Source ID: AC00404-01									
Calcium			97.6	70-130			05/30/2025	SMC	
Magnesium			98.6	70-130			05/30/2025	SMC	
Phosphorus as P			79.3	70-130			05/30/2025	SMC	
Matrix Spike Dup (B251722-MSD1) Source ID: AC00403-02									
Calcium			102	70-130	0.113	20	05/30/2025	SMC	
Magnesium			101	70-130	0.0632	20	05/30/2025	SMC	
Phosphorus as P			105	70-130	1.48	20	05/30/2025	SMC	
Matrix Spike Dup (B251722-MSD2) Source ID: AC00404-01									
Calcium			99.0	70-130	0.858	20	05/30/2025	SMC	
Magnesium			99.8	70-130	1.10	20	05/30/2025	SMC	
Phosphorus as P			75.7	70-130	1.24	20	05/30/2025	SMC	
Batch: B251763									
Blank (B251763-BLK1)									
Mercury	<0.01	ug/L					06/03/2025	SAS	U
LCS (B251763-BS1)									
Mercury			100	85-115			06/03/2025	SAS	
Duplicate (B251763-DUP1) Source ID: AC00405-01									
Mercury					NR	20	06/03/2025	SAS	U
Matrix Spike (B251763-MS1) Source ID: AC00405-01									
Mercury			92.8	70-130			06/03/2025	SAS	
Matrix Spike Dup (B251763-MSD1) Source ID: AC00405-01									
Mercury			95.9	70-130	2.91	20	06/03/2025	SAS	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Dissolved Metals									
Batch: B251682									
Blank (B251682-BLK1)									
Cadmium	<0.010	ug/L					05/23/2025	DMW	U
Copper	<0.14	ug/L					05/23/2025	DMW	U
Lead	<0.0050	ug/L					05/23/2025	DMW	U
Zinc	<0.50	ug/L					05/23/2025	DMW	U
LCS (B251682-BS1)									
Cadmium			98.3	85-115			05/23/2025	DMW	
Copper			93.9	85-115			05/23/2025	DMW	
Lead			97.1	85-115			05/23/2025	DMW	
Zinc			97.0	85-115			05/23/2025	DMW	
Duplicate (B251682-DUP1) Source ID: AC00405-01									
Cadmium					NR	10	05/23/2025	DMW	U
Copper					0.733	10	05/23/2025	DMW	
Lead					0.547	10	05/23/2025	DMW	
Zinc					0.620	10	05/23/2025	DMW	
Matrix Spike (B251682-MS1) Source ID: AC00405-01									
Cadmium			97.9	70-130			05/23/2025	DMW	
Copper			94.2	70-130			05/23/2025	DMW	
Lead			96.5	70-130			05/23/2025	DMW	
Zinc			100	70-130			05/23/2025	DMW	
Matrix Spike Dup (B251682-MSD1) Source ID: AC00405-01									
Cadmium			99.0	70-130	1.08	10	05/23/2025	DMW	
Copper			93.2	70-130	0.866	10	05/23/2025	DMW	
Lead			97.4	70-130	0.908	10	05/23/2025	DMW	
Zinc			98.1	70-130	1.67	10	05/23/2025	DMW	

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Report Date: 06/06/2025 10:52

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Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
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Fax (208) 608-7319

Notes and Definitions

Item	Definition
D	Data reported from a dilution
U	Analyte included in the analysis, but not detected
NR	No result for this parameter.

Method Reference Acronyms

Colilert	Colilert, IDEXX Laboratories, Inc.
EPA	Manual of Methods for Chemical Analysis of Water and Wastes, USEPA
GS	USGS Techniques of Water-Resources Investigations
HH	Hach Spectrophotometer Procedures Manual
SM	Standard Methods for the Examination of Water and Wastewater
SW	Test methods for Evaluating Solid Waste, SW-846

Stephen Quintero or Azubike Emenari
QA/QC Coordinator

Leslea Basterrechea
Water Quality Laboratory Manager

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ACHD MAY 2025

Stephen Quintero

From: Monica Lowe <mlowe@achdidaho.org>
Sent: Tuesday, May 20, 2025 10:32 AM
To: Stephen Quintero; Kristen Jolliffe
Cc: Steven Turner
Subject: [External] RE: 250517-206-WC sample temperature

Caution: This email came from outside the city. Use caution before clicking on links, opening attachments, or responding.

Hi Stephen,

Thank you for letting us know. Please add a comment to the sample that it exceeded temperature. We will be qualifying the parameters that exceed holding temp requirements.

Monica Lowe
Environmental Supervisor | Environmental Department

Ada County Highway District (ACHD)
3775 Adams Street, Garden City, Idaho 83714
Phone: (208)387-6255
www.achdidaho.org
Connect with us on social! ***@achdidaho***



From: Stephen Quintero <SQuintero@cityofboise.org>
Sent: Tuesday, May 20, 2025 9:24 AM
To: Monica Lowe <mlowe@achdidaho.org>; Kristen Jolliffe <kjolliffe@achdidaho.org>
Subject: 250517-206-WC sample temperature

Caution: This is an external email and has a suspicious subject or content. Please take care when clicking links or opening attachments. When in doubt, contact your IT Department

Good morning,

In reviewing the COC for 250517-206-WC from 5/18/25, I see that one of the two sample bottles was received at a temperature of 7.6 C. (It was checked twice.) The other bottle was at 3.6 C. These samples were composited to create one sample.

How would you like us to proceed? We can cancel, qualify, or add a comment to the sample.

Let me know if you have any questions,
Stephen

Stephen Quintero
QA/QC Coordinator, Water Quality Laboratory
Public Works Department
Office: 208-608-7262
squintero@cityofboise.org

Creating a city for everyone.

AQUA

Attn: Steven Turner
3775 Adams Street
Garden City, Idaho 83714–6418
Tel. (208) 407–4284

Purchase Order: 63069586

Project: Stormwater PI

Sampler(s): Steven Turner
Kristen Jolliffe

Lab#	Begin Date	End Date	Begin Time	End Time	Sample Identification	Sampler Initials	Matrix: Water	Type: Grab	Type: Composite	BOD_5 - SM 5210 B	COD - Hach 8000	TSS - SM 2540 D	TDS - SM 2540 C	TKN - EPA 351.2	TP - EPA 200.7	Orthophosphate - EPA 365.1	Total As, Cd, Pb - EPA 200.8	Diss. Cd Cu, Pb, Zn - EPA 200.8	Total Hg - EPA 245.1	E. Coli - IDEXX Colilert	Turbidity - EPA 180.1	Hardness - SM 2340 B-2011	NO_3+NO_2 - EPA 353.2	Timberline Ammonia-001	Chloride - EPA 300.0	Total Containers
AC00404-01	5/17/25	5/18/25	1844	0513	250517-2D6-WC	KJ	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	2

Relinquished by (sign)	Date &Time Transferred	Received by (sign)	Comments/ Special Instructions
Kristen Jolliffe	5/18/25 1230	5/16/25 1236	7.6°C 2of2 2D6-WC 3.6°C 1of2 2D6-WC

:OC_WQL-PI

241010 ST

AC00404

AC00404

NPDES Phase I Storm Event Report
August 26, 2025

Prepared by
Ada County Highway District
October 13, 2025

Section 1: Introduction

The Environmental Protection Agency Region 10 reissued a Municipal Separate Storm Sewer System Phase I National Pollutant Discharge Elimination System Permit (NPDES Permit), effective October 1, 2021, to Ada County Highway District (ACHD), Boise City, Ada County Drainage District No. 3, Idaho Transportation Department District 3, Boise State University, and Garden City. Under the NPDES Permit, Permittees are required to continue to conduct wet weather stormwater outfall monitoring and subwatershed monitoring. Four outfall monitoring sites (Lucky, Whitewater, Main, and Americana) and one subwatershed monitoring site (AS_6) have been established. The AS_6 site represents a subwatershed located within the Americana watershed. The Main Alternate (Main Alt) monitoring site may be used when high river flows surcharge the Main storm drainpipes. At each site, a minimum of three composite and three grab samples will be collected during Water Year (WY) 2025 (October 1, 2024, through September 30, 2025). The following storm event report summarizes stormwater sampling results from the August 26, 2025, storm event.

Section 2: Project Status

Table 2-1 is a summary of the sample types collected to date for WY 2025 Phase I Stormwater Outfall Monitoring. When samples are qualified, additional samples will be attempted from subsequent storms to collect unqualified samples.

Table 2-1. WY 2025 Samples Collected

Date	Lucky	Whitewater	Main	Main Alt	Americana	AS_6
December 14, 2024	G, C[1]	G, C	G, C	--	G, C	G, C
January 31, 2025	--, C	--, C[2]	--. C	--	--, C[2]	--, C[3]
February 23, 2025	G, C[4]	G, --	G, C	--	G, C[2]	G, C
May 17, 2025	G, C	--, C	--	G, --	G, C	G, C[4]
August 26, 2025	--, C[4]	G[5], --	--, --	--, --	--, --	--, C[4]
Unqualified Samples:	3G, 2C	2G, 2C	3G, 3C		3G, 2C	3G, 2C
Samples Remaining:	0G, 1C	1G, 1C	0G, 0C		0G, 1C	0G, 1C

Notes:

-- = no samples taken.

C = composite sample.

G = grab sample.

[1] Equipment installation error resulted in negative flow and velocity; therefore, no composite subsamples were taken.

[2] Composite sample qualified due to lack of representativeness (50%–75%).

[3] Sample rejected due to lack of representativeness (<50%).

[4] Composite sample qualified due to exceedance of 6.0°C.

[5] E. coli sample qualified due to exceeded holding time.

Section 3: Storm Event Summary

The August 26, 2025, storm event and the subsequent preparation and sampling efforts are detailed in the following sections.

3.1 Storm Detail

A summary of the forecast on which monitoring decisions were based is detailed below. The sampling event communication form that describes the forecast and summarizes the decision-making process from August 26, 2025, is included in Attachment A for reference.

Tuesday, August 26, 2025 (Sampling Event Communication & Set up)

- On the morning of August 26, the National Weather Service issued a forecast for a convective system beginning on August 27 at 0000 until 1800. There was a 70% chance of precipitation, with a 50-60% probability of rain totals to be greater than 0.1 inches over a 12-hour period. The forecasted precipitation for this event was 0.50 inches of rain.
- Setup was accomplished on the morning of August 26. An expected precipitation depth of 0.15 inches was used to set trigger volumes at monitoring stations. A runoff calculations worksheet showing how the trigger volumes were calculated is included in Attachment A.

Tuesday, August 26, 2025 (Storm Event)

- The runoff started on August 26 at approximately 1739 and ended on August 27 at approximately 1439.
- Precipitation totals ranged between 0.41 and 0.91 inches at local rain gauges.

Flow measurements and precipitation data are listed in Table 1 along with a sampling summary. Hydrographs for the Lucky, Whitewater, and AS_6 sites showing flow, rain, and sample collection data are included in Attachment B.

3.2 Sampling Summary

Lucky, Whitewater, Americana and AS_6 monitoring stations were set up on August 26, 2025, to collect flow-proportional composite samples during the storm. Sampler enable conditions were programmed into the Lucky, Whitewater, Americana and AS_6 flowmeters. Setup and sampling information are included in Table 1. The field forms completed during setup/shutdown and sampling are included in Attachment C.

Grab Samples

A two-member team mobilized to collect stormwater runoff grab samples and verify operation of the automatic sampling equipment on August 26 around 1925. Grab samples for Whitewater were submitted to the Boise City Public Works Water Quality Laboratory (WQL) at 2223 on August 26. Results for grab samples, including field parameter and analytical data, are included in Table 2. Laboratory analytical reports are included in Attachment D.

Composite Samples

Composite samples were collected at the Lucky and AS_6 monitoring stations and submitted to the WQL at 1003 on August 27. Analytical results are shown in Table 2 and pollutant loading estimates for the event are detailed in Table 3. Laboratory analytical reports are included in Attachment D.

Section 4: Quality Assurance/Quality Control

A summary of quality control samples collected during the August 26, 2025, storm event is presented below in Table 4-1. A field blank and a field duplicate were collected from the Whitewater monitoring station. The analytical results are included in Table 4.

Table 4-1. Quality Control Samples

Sample ID	Sample Type	Parent Sample	Conclusions
250826-11-001	Field blank	Whitewater grab	No *E. coli* detected in the field blank.
250826-11-101	Field duplicate	Whitewater grab	Relative percent difference was within the acceptable range.

Data quality objectives for this storm were evaluated and tracked using the data validation review checklist included in Attachment A.

An acceptable composite sample represents at least 75 percent of the total discharge or at least 6 hours of the storm duration. The Lucky and AS_6 composite samples met the representativeness criteria. However, the composite samples collected at Lucky and AS_6 exceeded the preservation maximum of 6°C. Therefore, all constituents analyzed are considered estimates with the exception of total metals, hardness, and chloride, in accordance with 40CFR136.

A grab sample is accepted if the sample is prepared within 8 hours of sample collection and qualified if the sample is prepared between 8 and 16 hours after sample collection. The Whitewater grab sample, including the field blank and field duplicate, were prepared approximately 11 hours after sample collection and are therefore qualified.

Section 5: Notes and Recommendations

Whitewater

During the storm event, the sampler at Whitewater displayed several “No more liquid” and “No liquid detected” messages, comprising of more than half of the total subsample attempts between both composite bottles one and two. ACHD attempted to troubleshoot the sampler on site by checking the tubing alignment on the liquid sensor of the sampler. Attempts to troubleshoot were not successful, and the composite sample was discarded due to lack of representativeness.

After the storm event, ACHD inspected the sampling equipment and discovered kinks in the intake tubing and loose connections between the intake tubing and the strainer. New intake tubing and connections were installed at the site and tested to ensure no air was entering the tubing. To reduce the potential of tubing kinks during future storm events, the intake tubing and strainer were installed on a scissor-jack ring in the storm drain pipe.

Americana

The sampler at Americana collected approximately nine non-stormwater subsamples prior to the start of the storm event attributed to increased dry weather flow after the completion of station setup. Due to the irregularity of flow in the Americana subwatershed, these types of occurrences are not easily predicted or remedied. The composite sample was discarded due to the large volume of non-stormwater subsamples.

Data Tables

Table 1. Sampling and Flow Summary					
	Lucky	Whitewater	Main	Americana	AS_6
Grab samples collected and submitted?	NO	YES	NO	NO	NO
Composite samples collected and submitted?	YES	NO	NO	NO	YES
Trigger volume	3,950 gal	1,093 cf	--	4,036 cf	2,252 gal
Sampler enable condition (in) or Velocity cutoff (fps)	Level > 2.29	Level > 6.3	--	Level > 6.8	Level > 1.0
Deadband/ Hysteresis (in)	1.0"	1.0"	--	1.0"	1.0"
Runoff start time	2129[1]	1749[1]	--	--	1739[1]
Grab sample collection time	--	2033	--	--	--
Composite sample stop time	0811	--	--	--	0850
Runoff stop time	1044[2]	0828[2]	--	--	1439[2]
Volume of discharge sampled (ft^3)	25,109	--	--	--	30,691
Total runoff volume (ft^3)	28,093	177,783	--	--	41,138
Percent of storm flow sampled (%)	89%	--	--	--	75%
Composite sample duration (hrs)	4.5	--	--	--	8
Storm Precipitation (in)	0.41	0.69	0.80	0.80/0.91	0.80/0.91
Referenced Rain Gauge	Cynthia Mann	Whitewater	Front	Front/East	Front/East
Sampler messages (counts): Success	44	22	--	--	91
: Rinse Error	--	--	--	--	1
: No More Liquid	--	14	--	--	--
: No Liquid Detected	--	12	--	--	--
Number of composite bottles filled	2	--	--	--	4
Composite sample volume (Approx.; ml)	25,750 mL	--	--	--	53,750 mL

Notes:

– = No data.

[1] *Storm runoff started on 8/26/25.*

[2] *Storm runoff ended on 8/27/25.*

Table 2. Field and Analytical Data Summary

Monitoring Station	Sample Date	Sample ID Grab	Field Parameters				Analytical Parameters																				
			Dissolved Oxygen	pH	Conductivity	Temperature	E. coli	Sample ID Composite	BOD_5	COD	Chloride	Hardness as $CaCO_3$	Turbidity	TSS	TDS	Total Phosphorus	Orthophosphate as P	Ammonia as N	Nitrate + Nitrite as	TKN	Arsenic, total	Cadmium, dissolved	Cadmium, total	Copper, dissolved	Lead, dissolved	Lead, total	Mercury, total	Zinc, dissolved
			mg/L	S.U.	uS/cm	C	MPN/100 mL		mg/L	mg/L	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Lucky	8/26/2025	--	--	--	--	--	--	250826-03-WC	56.6[J]	244[J]	2.58	33.9	61.3[J]	131[J]	120[J]	0.992[J]	0.519[J]	2.11[J]	0.902[J]	4.78[J]	3.7	0.019[J]	0.12	7.3[J]	0.15[J]	3.8	0.0203	95.8[J]
Whitewater	8/26/2025	250826-11-WG	6.537	6.513	112.4	23.67	4710[#]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
AS_6	8/26/2025	--	--	--	--	--	--	250826-206-WC	311[J]	773[J]	6.92	64.3	285[J]	496[J]	391[J]	2.60[J]	1.33[J]	2.26[J]	0.922[J]	11.5[J]	9.8	0.037[J]	0.31	16.7[J]	0.64[J]	20.8	0.0641	108[J]

Notes:

-- = No data.

[J] Composite sample qualified due to exceedance of 6.0° C.

[#] E. coli sample qualified due to exceeded hold time.

Table 3. Event Pollutant Loading Estimates in Pounds						
Monitoring Station	Event Date	TSS	Total Phosphorus	Ammonia as N	Nitrate + Nitrite as N	TKN
Lucky	8/26/2025	230[2J]	1.739[2J]	3.70[2J]	1.581[2J]	8.38[2J]
Whitewater	8/26/2025	--	--	--	--	--
AS_6	8/26/2025	1273[2J]	6.68[2J]	5.80[2J]	2.367[2J]	29.5[2J]

Notes:

-- = No data

[2J] *Composite sample qualified due to exceedance of 6.0°C*

Table 4. QC Sample Summary				
Date	Parent Sample	Sample ID	Type	E. coli
				mpn/100 mL
8/26/2025	250826-11-WG	250826-11-001	Field Blank	<1.0[3J]
8/26/2025	250826-11-WG	250826-11-101	Field Duplicate	4710[3J]
Calculated parent/duplicate RPD				0%
Allowable RPD				40%

Notes:

[3J] E. coli sample qualified due to exceeded hold time.

Attachment A: Supplemental Documents

Sampling Event Communication Form

Data Validation Checklist

Runoff Calculation Worksheet

SAMPLING EVENT COMMUNICATION FORM

Date: 8/26/2025	Time: 8:05 AM	Initials: ST
Is there a targeted sampling event during the next 36 hours? (Or, if it is Friday, is a targeted event expected before 5:00 PM Monday?)		Yes

Past 72 hr Precip	0.01"at Airport
Date and time of expected event	2:00 am – 5:00 pm Wednesday
Expected amount of precipitation	0.5"
Percent chance of precipitation	70%
Percent chance of >0.10" over 12 hours	50-60%

NWS Update

Spoke to Troy at the NWS. A convective rainstorm will arrive from the south on Tuesday evening and deposit ~0.5" of rain until Wednesday evening. There is a 50-60% chance of 0.1" from 12:00 am – 6:00 pm with a chance of seeing a downpour (0.75"-1.25"/ hr). There may be some light rain (0.05") from 6:00 pm – 12:00 am tonight prior to the event.

Targeted Station & Samples

Lucky	Whitewater	Main	Americana	AS_6	State (Phase II)
☐ Grab	☒ Grab	☐ Grab	☐ Grab	☐ Grab	☒ Grab
☒ Composite	☒ Composite	☐ Composite	☒ Composite	☒ Composite	☒ Composite

Type of Forecasted Precipitation

☐ Light Rain	☒ Rain	☐ Rain on Snow
☒ Scattered Showers	☒ Thunder Showers	☐ Snowmelt
☐ Other:		

Reasons for Not Targeting a Forecasted Storm and/or Stations

☐ Holiday
☐ Waiting on Antecedent Dry Period –
☐ Equipment Concerns:
☐ Other:

Text Forecast

NWS Forecast for: 2 Miles NNW Garden City ID
Issued by: National Weather Service Boise, ID
Last Update: 3:04 am MDT Aug 26, 2025

Today: Isolated showers and thunderstorms after noon. Patchy smoke. Partly sunny, with a high near 88. Calm wind becoming south southwest around 5 mph in the afternoon. Chance of precipitation is 20%.
Tonight: A chance of showers and thunderstorms, then showers likely and possibly a thunderstorm after midnight. Patchy smoke after 3am. Mostly cloudy, with a low around 65. West northwest wind around 5 mph becoming calm in the evening. **Chance of precipitation is 70%.**
Wednesday: Showers likely and possibly a thunderstorm. Cloudy, with a high near 77. Calm wind becoming west northwest around 6 mph in the afternoon. **Chance of precipitation is 70%. New rainfall amounts between a quarter and half of an inch possible.**
Wednesday Night: A chance of showers and thunderstorms. Mostly cloudy, with a low around 62. North wind around 6 mph becoming calm in the evening. Chance of precipitation is 30%.

Thursday: A 30 percent chance of showers, mainly before noon. Mostly sunny, with a high near 84. Calm wind becoming west northwest around 6 mph in the afternoon.
Thursday Night: Partly cloudy, with a low around 61.
Friday: Sunny, with a high near 88.
Friday Night: Mostly clear, with a low around 60.
Saturday: Sunny and hot, with a high near 90.
Saturday Night: Mostly clear, with a low around 61.
Sunday: Sunny and hot, with a high near 90.
Sunday Night: Mostly clear, with a low around 61.
Labor Day: Sunny and hot, with a high near 90.

Forecast Discussion

Area Forecast Discussion
National Weather Service Boise ID
415 AM MDT Tue Aug 26 2025

.SHORT TERM...Today through Thursday night...Deep monsoon moisture will remain over the region through Wednesday. **Monday evening`s KBOI wx balloon measured a record amount of precipitable water for the date (1.28 inches),** and the moisture content of the air mass is expected to increase this afternoon into Wednesday with forecast **PW values reaching 1.35-1.5 inches.** Showers and thunderstorms will initiate over higher terrain through this morning. Models are picking up on a subtle upper wave that lifts out of NV late this afternoon, the extra lift from this feature increasing coverage across higher terrain. Southerly flow aloft will guide showers/storms into the Snake Plain, especially from Mountain Home to Twin/Jerome where the HREF shows a 50-70% chance of thunderstorms through this evening. **The main shower/storm attribute will be heavy rain, with most CAM guidance showing potential for 0.75-1.25 in/hr rainfall rates from stronger storms that develop.** While higher terrain will be quick to cloud up today, lower elevations have a chance to see a bit of sun, especially areas across e-central Oregon and the lower Snake Plain. Have stayed below NBM guidance which has been running too hot the last couple of days.

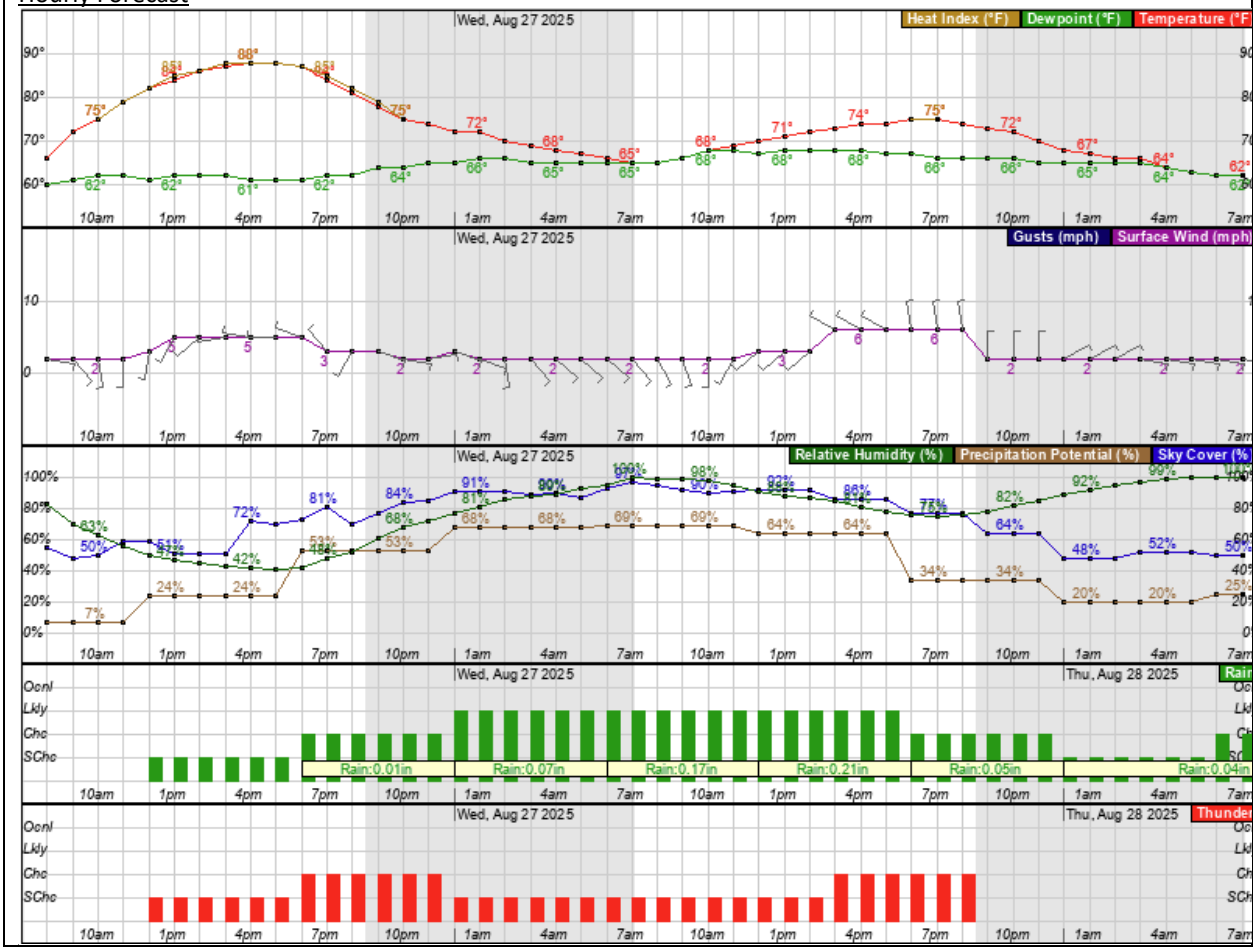
An upper low is expected to wrap up over s-central Idaho Wednesday which will keep cloudy and wet weather over the region. The 00Z model solutions keep the focus of heavier precipitation east of the ID/OR border, with the w-central ID and Boise mtns seeing the best chance for an additional 0.5-1.0" through Wed night. Given the convective nature there will be high variability in precipitation amounts both today and Wednesday. **On the higher end it`s not out of the question that storm totals (Today through Wednesday night) could reach the 2-3" range.** This type of rainfall will certainly increase the potential for rock slides and flash flooding/debris flows, especially across burn scars and steep terrain. Though likely more localized, areas of e-central Oregon and the Snake Plain will see the potential for moderate to heavy rain on Wednesday as well. Amounts in these areas will likely total less than 0.5". Wednesday will be the coolest day with highs around 10 degrees below normal.

The upper low lifts NE`ward on Thursday, leaving a chance of

showers and a slight chance of thunderstorms across higher terrain of SW Idaho while SE Oregon and the lower Snake Plain in Idaho trend drier. Temperatures will rebound some from Wednesday but remain several degrees below normal.

.LONG TERM...Friday through Tuesday...A broad upper ridge will build into the region on Friday, returning a warming and drying trend. Peak daily valley temperatures are expected to return and mostly linger in the upper 80s and lower 90s Friday to Tuesday. There is strong guidance agreement on an upper low steering NE`ward along the Pacific NW coast and the N`rn Idaho mountains through Monday. There is currently a strong guidance disagreement on whether the aforementioned upper low will either split off or remain quasi- stationary over the NW coast on Tuesday. For now, the potential for showers/thunderstorms early next week remain concentrated across higher elevations.

Hourly Forecast



Storm Event QA/QC Checklist – Phase I

STORM DATE: 8/26/2025				
A. Event and Data Completeness	**Yes**	**No**	**N/A**	**Notes**
1. Field data sheets filled out completely and clearly	X			
2. Field parameters reviewed, and any problems/issues addressed	X			
3. All samples collected as specified	X			
4. All samples delivered to lab promptly (review chain of custody rpts)	X			See analytical reports for noted sample container temperatures.
5. Inconsistencies/clarifications discussed with sampling team member			X	
6. All analytical reports from lab received	X			
B. Validation and Verification Methods	**Yes**	**No**	**N/A**	**Notes**
1. Outliers and unexpected values discussed with lab			X	
2. Appropriate analytical methods used	X			
3. All lab QA samples were within method acceptance criteria	X			
4. All samples reviewed and data qualifiers assigned if needed	KJ			
5. Data quality objective achieved	X			

C. Specific Storm and Sample QA/QC Criteria	**Lucky**	**Whitewater**	**Main**	**Americana**	**AS_6**	**Program Criteria**	**Met**	**Qualify**	**Reject**
1. Antecedent dry period (inches in previous 72-hours)	0.00"	0.00"	0.00"	0.00"	0.00"	< 0.11" in 72 hrs	X		
2. Precipitation (inches)	0.41"	0.69"	0.80"	0.80"/ 0.91"	0.80"/ 0.91"	> 0.10"	X		
3. Sampled amount (% of total run-off)	89%	-	-	-	75%	>= 75% or >= 6 hrs: no qualifier >= 50% and <75%: qualify < 50%: reject	X		
4. Composite sample duration (hours)	4.5	-	-	-	8				
4. E. coli sample holding time (hours)	-	11	-	-	-	<=8 hrs: no qualifier >8 and <=16 hrs.: qualify >16 hrs.: reject		X	
5. Filtering of samples for dissolved parameter analysis (hours)	2	-	-	-	2	<= 24 hrs: no qualifier > 24 hrs.: reject	X		

D. Notes

Americana – Composite not submitted to WQ Lab due to non-stormwater flow comprising > 10% of subsamples.
Whitewater – E. coli sample qualified due to exceeded holding time. Composite not submitted to WQ Lab because 'no more liquid' and 'no liquid detected' sampler messages comprised of more than half of the subsamples.
Lucky & AS_6 – Composites exceeded preservation temperature maximum, qualifying the sample. Therefore, all constituents are considered estimates with the exception of total metals, hardness and chloride.

Reviewed by Steven Turner Digitally signed by Steven Turner Date: 2025.10.14 09:24:32 -06'00' **Date: 10/14/2025**

Approved by Monica I. Lowe Digitally signed by Monica I. Lowe Date: 2025.10.14 11:10:53 -06'00' **Date:**

Storm Runoff Estimates and Trigger Volumes

Step 1. Enter runoff coefficients in yellow cells.
Step 2. Enter expected precipitation depth (in) in blue cell.
Step 3. Read trigger volumes (**bold**) in green cells.

Expected Precipitation Depth = 0.15
Aliquots per Sample = 17

Site	Area (ac)	Using RC calculated from flow data		
		RC	Expected Vol (ft^3)	Trigger Vol (ft^3)
Lucky	105	0.157	8976.1	**528**
Whitewater	498	0.069	18574.5	**1093**
Main	79	0.246	10581.8	**622**
Main Alt	60	0.200	6534.0	**384**
Americana	875	0.144	68607.0	**4036**
Americana Alt	869	0.144	68136.6	**4008**
AS_6	204	0.046	5109.6	**301**
State	34	0.127	2351.2	**138**

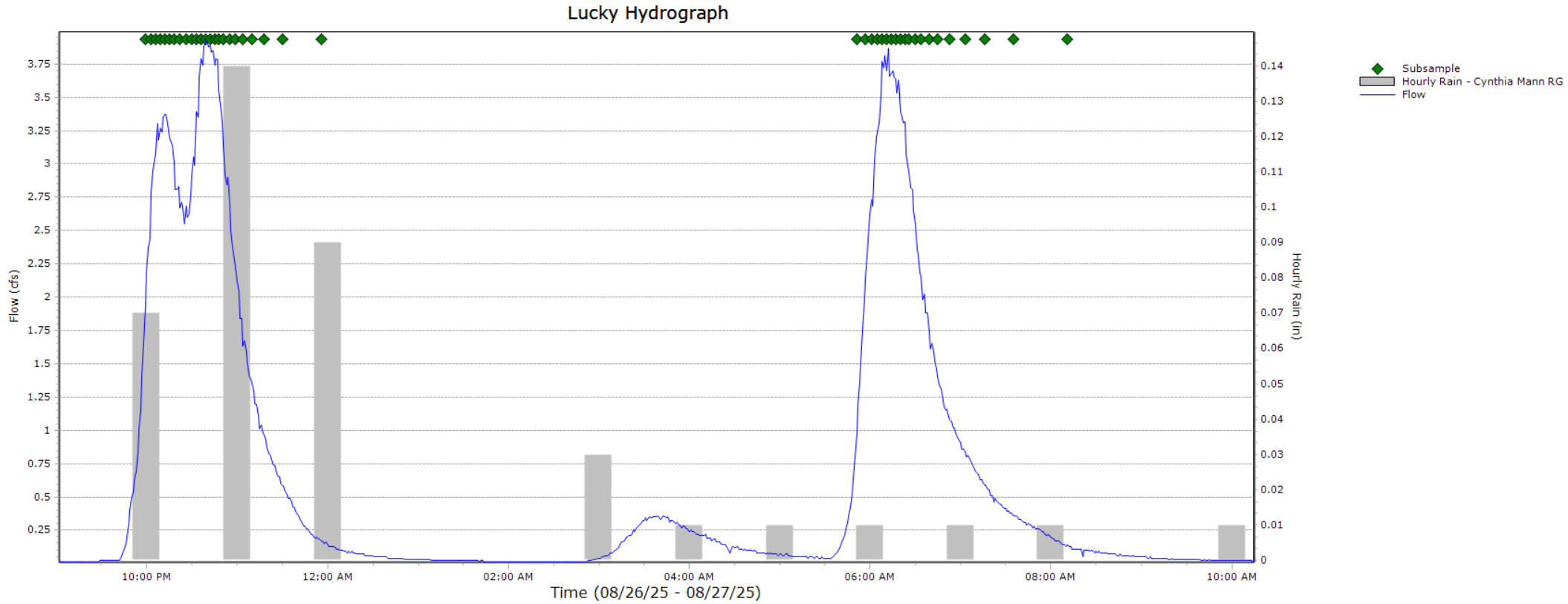
Notes:

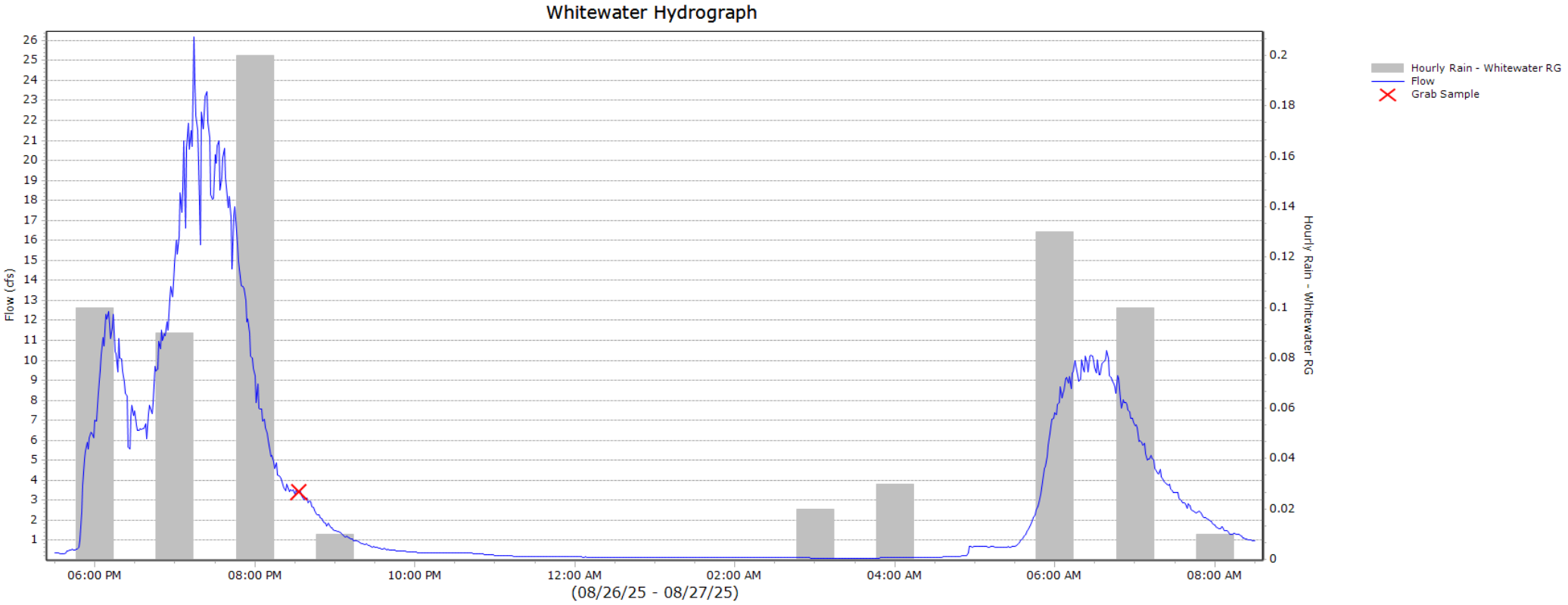
Calculated RC = runoff volume (ft^3) / [precip (ft) x area (ft^2)]

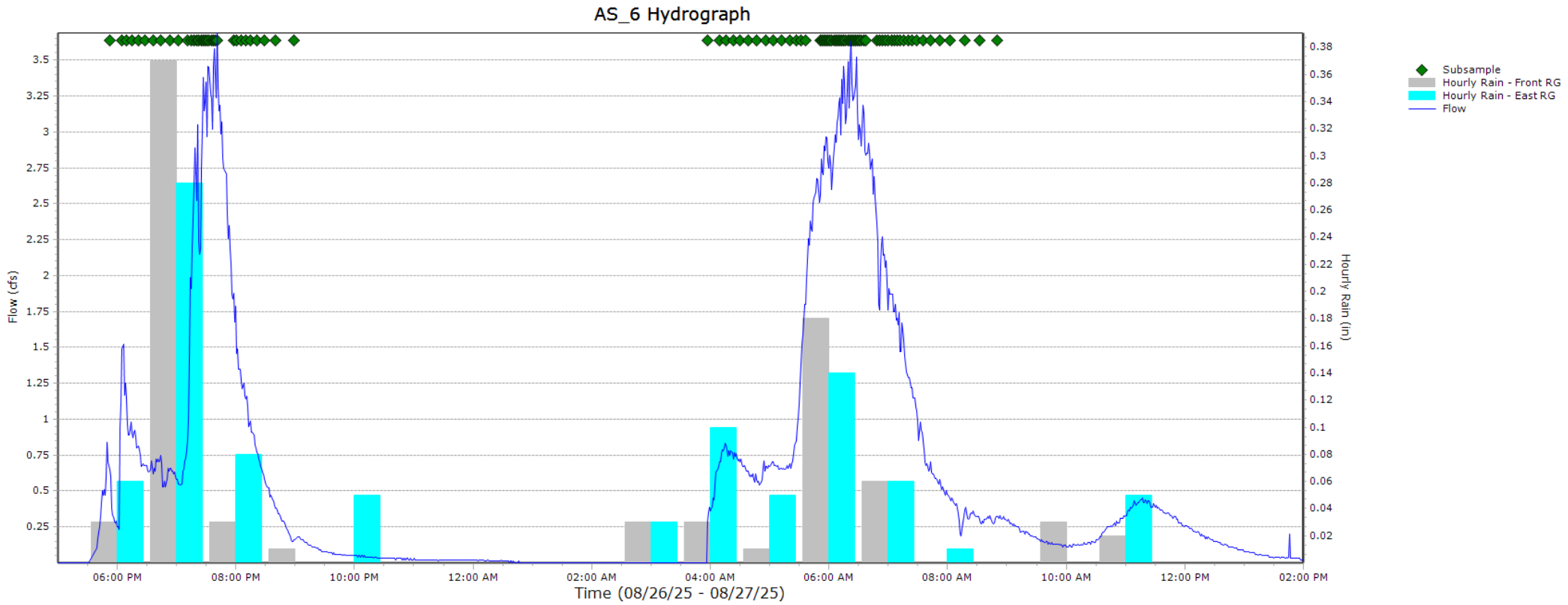
Where volume (ft^3) is the measured discharge, precip (ft) is the measured amount from local rain guage, and area (ft^2) is the watershed area.

Expected volume (ft^3) = RC x expected precip (ft) x area (ft^2)

Attachment B: Storm Event Hydrographs


Lucky Hydrograph
Flow (cfs)
Hourly Rain (in)
Time (08/26/25 - 08/27/25)
10:00 PM
12:00 AM
02:00 AM
04:00 AM
06:00 AM
08:00 AM
10:00 AM
Subsample
Hourly Rain - Cynthia Mann RG
Flow


Whitewater Hydrograph
Flow (cfs)
Hourly Rain - Whitewater RG
Hourly Rain - Whitewater RG
Flow
Grab Sample
06:00 PM
08:00 PM
10:00 PM
12:00 AM
02:00 AM
04:00 AM
06:00 AM
08:00 AM
(08/26/25 - 08/27/25)


AS_6 Hydrograph
Flow (cfs)
Hourly Rain (in)
Time (08/26/25 - 08/27/25)
Subsample
Hourly Rain - Front RG
Hourly Rain - East RG
Flow
06:00 PM
08:00 PM
10:00 PM
12:00 AM
02:00 AM
04:00 AM
06:00 AM
08:00 AM
10:00 AM
12:00 PM
02:00 PM

Attachment C: Field Forms

Grab Sample Data Form

STATION: Whitewater

Personnel: ST, KS **Date/Time On-Site:** 8/26/25 2030

Flow Meter Current Status					
Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)	Rainfall (in) (Whitewater Only)
2033	10.54	3.46	1.36	-	

Grab Information				
	Sample ID	Date	Time	Labeled?
Site *E.Coli*	250826-11 -WG	8/26/25	2033	☒
Field Duplicate *E.Coli*	250826-11 -101	8/26/25	2037	☒
Field Blank *E.Coli*	250826-11 -001	8/26/25	2041	☒

*Note: time on bottle for QC samples is 1200

Field Parameters					
Meter number	Time	Temp (C)	D.O. (mg/L)	pH (S.U.)	SpCond (uS/cm)
MP14	2043	23.67	6.537	6.513	112.4

Sampler Current Status	
First Subsample Date/Time	
Last Subsample Date/Time	
# of Subsamples taken	

Comments:

Date/Time Off-Site: 8/26/25 20:47

ST Set Up/ Shut Down Form – HACH (Lucky, [redacted] AS_6)

STATION: ~~Stevens~~ Lucky

SET UP

Personnel: ST, KJ

Date/Time On-Site: 8/26/25 11:55

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
12:01	1.29	2.78 gpm	0.08	13.4

Enable Condition or Velocity Cutoff:	2.29"
Deadband:	1
Trigger Volume:	3950 gpm

- [x] Install batteries on flowmeter and sampler
- [x] Perform decon. cycle
- [x] Install 15L sample bottle, with ice
- [x] Leave bottle lid at site, in a clean re-sealable plastic bag
- [x] Verify all cable and tubing connections
- [x] Check date and time on flowmeter and sampler
- [x] Set flowmeter program and sampler program parameters
- [x] Set logging interval to 1 minute
- [x] Start flowmeter program and sampler program
- [x] Verify running

Comments: Changed sampler desiccant.

Date/Time Off-Site: 8/26/25 12:15

SHUT DOWN

Personnel: ST

Date/Time On-Site: 8/28/25 15:42

Time	Level (in)	Flow (cfs)	Velocity (fps)	Total (cf)	Battery (V)
1600	1.40	3.64 gpm	0.10	–	12.5
Downloaded to:		Stevens USB			

If flow monitoring is complete:	**If continuing to monitor flow:**
[x] Halt program on flowmeter	☐ Replace flowmeter battery
[x] Download flowmeter data	☐ Reset logging interval to 15 minutes
[x] Remove flowmeter battery	☐ Change velocity cutoff to 0.02 fps
	☐ Start program
	☐ Verify running

Comments:

Date/Time Off-Site: 8/28/25 16:05

Composite Sample Collection

STATION: Lucky
Personnel: KJ, ST
Date/Time On-Site: 8/27/25 0423 **Bottle** 1 **of** 2

☒ Halt sampler program	
☒ Put lid on sample bottle; label sample bottle	
Sample ID:	250826-03 -WC
Approx Sample Volume (mL):	14000mL
Clarity (ex. Clear, Cloudy, Silty):	Silty
Color (ex. Clear, Gray, Tan, Brown, Black):	Black
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	8/26 2159	Success	13	2239	Success
2	2203		14	2242	
3	2206		15	2245	
4	2209		16	2248	
5	2212		17	2251	
6	2215		18	2255	
7	2218		19	2259	
8	2222		20	2304	
9	2226		21	2310	
10	2230		22	2318	
11	2233		23	2330	
12	2236		24	2356	

Comments:

Date/Time Off-Site: 8/27/25 0435

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle, add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: 8/27/25 0430
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: Lucky
Personnel: KJ, ST

Bottle 2 **of** 2
Date/Time On-Site: 8/27/25 0926

☒ Halt sampler program			
☒ Put lid on sample bottle; label sample bottle			
Sample ID:	250826-03	-WC	
Approx Sample Volume (mL):	11750ml		
Clarity (ex. Clear, Cloudy, Silty):	Cloudy		
Color (ex. Clear, Gray, Tan, Brown, Black):	Black		
QA/QC Sample ID:		-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	8/27/250551	Success	13	8/27/25 0634	Success
2	0557		14	0639	
3	0601		15	0645	
4	0605		16	0653	
5	0608		17	0703	
6	0611		18	0716	
7	0614		19	0735	
8	0617		20	0811	
9	0620		21		
10	0623		22		
11	0626		23		
12	0630		24		

Comments:

Date/Time Off-Site: 8/27/25

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☒ Power off sampler, if separate from flowmeter	☐ Keep flowmeter running
☒ Keep flowmeter running	☐ Install new 15L bottle; add ice
☒ Add ice to sample transport cooler	☐ Restart program from beginning
	Date/Time Restarted: _____
	☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**,7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Set Up/ Shut Down Form – ISCO (Whitewater, Americana, Main, State)

STATION: Whitewater

SET UP

Personnel: ST, KJ

Date/Time On-Site: 8/26/25 12:35

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
12:48	5.21	1.63	1.65	—
Enable Condition:	6.3"			
Hysteresis:	1.0			
Flow Pulse Interval:	1093			

On-Site
- [x] Replace flowmeter battery, install sampler battery
- [x] Perform decon. cycle
- [x] Install 15L sample bottle, with ice
- [x] Leave bottle lid at site, in a clean re-sealable plastic bag
- [x] Set sampler program parameters
- [x] Check date/time on sampler
- [x] Verify all cable and tubing connections
- [x] Verify sampler program is running

Flowlink (Refer to PG 411 or PG 412, if needed)
- [x] Direct or Remote; Date/time 8/26 12:49
- [x] Retrieve data and review recent flow history
- [x] Change Wireless Power Control to Storm Event
- [x] Change Data Storage Rates to 1 minute for Level, Velocity, Total Flow, and Flow Rate
- [x] Enable Sampler: On Trigger, and set Sampler Enable equation
- [x] Set Sampler Pacing to Flow Paced, and set trigger volume

Comments:

Date/Time Off-Site: 8/26/25 12:57.

SHUT DOWN

Personnel: ST

Date/Time On-Site: 8/28/25 15.20

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
1326	1.54	0.14	0.83	—
Downloaded to:	Stevens Laptop			

On-Site
- [x] Replace flowmeter battery
- [ ] Remove battery from sampler

Flowlink (Refer to Flowlink Instructions, if needed)
- [x] Direct or Remote; Date/time 8/28/25 10:25
- [x] Retrieve data
- [x] Change Wireless Power Control to Dry Weather
- [x] Change Data Storage Rates to 15 minutes for Level, Velocity, Total Flow, and Flow Rate
- [x] Enable Sampler: Never

Comments: No composite bottles submitted to the lab.

Date/Time Off-Site: 8/28/25 15:29

Revised 240821 ST

STATION: Whitewater
Personnel: ST, LS

Bottle 1 **of** —
Date/Time On-Site: 8/26/25 2004

☒ Halt sampler program			
☒ Put lid on sample bottle; label sample bottle			
Sample ID:	250826-11	-WC	
Approx Sample Volume (mL):			
Clarity (ex. Clear, Cloudy, Silty):	Cloudy		
Color (ex. Clear, Gray, Tan, Brown, Black):	Black		
QA/QC Sample ID:	~~17,750~~ ST	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	8/26/25 1752	Success	13	8/26/25 1816	1
2	1755	Success	14	1818	Success
3	1758		15	1820	
4	1801		16	1822	
5	1803		17	1824	
6	1805		18	1827	
7	1807		19	1829	
8	1809		20	1832	
9	1810		21	1835	
10	1819		22	1837	
11	1813		23	1840	No more liquid
12	1814	No more liquid	24	1842	1

Comments:

Date/Time Off-Site: _____

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: _____
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

12.5in

Composite Sample Collection

STATION: Whitewater **Bottle** 2 **of** –

Personnel: ST, KJ **Date/Time On-Site:** _____

☐ Halt sampler program	
☐ Put lid on sample bottle; label sample bottle	
Sample ID:	-WC
Approx Sample Volume (mL):	
Clarity (ex. Clear, Cloudy, Silty):	
Color (ex. Clear, Gray, Tan, Brown, Black):	
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	8/26 2014	No liq detected	13	8/27 556	No more liquid
2	2018	↓	14	559	↓
3	2023	No more liquid	15	601	No liquid detec
4	2028	↓	16	603	↓
5	2033	↓	17	605	No more liquid
6	2039	No liquid detected	18	608	No liquid detected
7	2045	No more liquid	19	610	↓
8	2054	↓	20	612	↓
9	2107	↓	21	614	↓
10	8/27 0541	Success	22	615	↓
11	0548	↓	23	617	↓
12	0553	No more liquid	24	619	↓

Comments: No more liquid + no liquid detected sampler messages comprised of more than half of this composite bottle. Attempted to troubleshoot liquid detect sensor, with no success. Composite samples were not submitted to the lab.

Date/Time Off-Site: _____

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☐ Keep flowmeter running
☐ Keep flowmeter running	☐ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☐ Restart program from beginning
	Date/Time Restarted: _____
	☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
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2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Set Up/ Shut Down Form – ISCO (Whitewater, Americana, Main, State)

STATION: Americana

SET UP

Personnel: ST, KT

Date/Time On-Site: 8/26/25 1310

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
1314	6.65	1.46	1.773	12.31

Enable Condition:	6.8"
Hysteresis:	1.0
Flow Pulse Interval:	1036 cf

On-Site

- ☒ Replace flowmeter battery, install sampler battery
- ☒ Perform decon. cycle
- ☒ Install 15L sample bottle, with ice
- ☒ Leave bottle lid at site, in a clean re-sealable plastic bag
- ☒ Set sampler program parameters
- ☒ Check date/time on sampler
- ☒ Verify all cable and tubing connections
- ☐ Verify sampler program is running

Flowlink (Refer to PG 411 or PG 412, if needed)

- ☒ Direct or Remote; Date/time 8/26 1320
- ☒ Retrieve data and review recent flow history
- ☒ Change Wireless Power Control to Storm Event
- ☒ Change Data Storage Rates to 1 minute for Level, Velocity, Total Flow, and Flow Rate
- ☒ Enable Sampler: On Trigger, and set Sampler Enable equation
- ☒ Set Sampler Pacing to Flow Paced, and set trigger volume

Comments:

Date/Time Off-Site: 8/26/25 1330

SHUT DOWN

Personnel: ST

Date/Time On-Site: 8/28/25 14:15

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
1421	9.13	1.43	0.670	12.17
	Downloaded to:	Laptop		

On-Site

- ☒ Replace flowmeter battery
- ☒ Remove battery from sampler

Flowlink (Refer to Flowlink Instructions, if needed)

- ☒ Direct or Remote; Date/time 8/28/25 10:03
- ☒ Retrieve data
- ☒ Change Wireless Power Control to Dry Weather
- ☒ Change Data Storage Rates to 15 minutes for Level, Velocity, Total Flow, and Flow Rate
- ☒ Enable Sampler: Never

Comments:

Date/Time Off-Site: 14:29 8/28/25

STATION: Americana
Personnel: ST. KS

Bottle 1 **of** —
Date/Time On-Site: 8/26 19:25

☐ Halt sampler program	
☐ Put lid on sample bottle; label sample bottle	
Sample ID:	-WC
Approx Sample Volume (mL):	
Clarity (ex. Clear, Cloudy, Silty):	
Color (ex. Clear, Gray, Tan, Brown, Black):	
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	8/26 1354	Success	13	8/26 1803	Success
2	1417		14	1809	
3	1440		15	1818	
4	1503		16	1828	
5	1526		17	1835	
6	1551		18	1840	
7	1616		19	1846	
8	1642		20	1851	
9	1708		21	1856	
10	1736		22	1859	
11	1752		23	1902	
12	1757		24	1904	

Comments: 9+ Subsamples comprised of pre-Storm dry weather ~~Samples~~ flow. 1ST Composite bottle not submitted to the lab

Date/Time Off-Site: _____

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☐ Keep flowmeter running
☐ Keep flowmeter running	☐ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☐ Restart program from beginning
	Date/Time Restarted: _____
	☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Set Up/ Shut Down Form – HACH (Lucky, [redacted] AS_6)

STATION: AS_6

SET UP

Personnel: ST, KJ

Date/Time On-Site: 8/26/25 13:45

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
13:48	0.00	0.00	0.00	12.8

Enable Condition or Velocity Cutoff:	1.00
Deadband:	1.0
Trigger Volume:	2252 gpm

- [x] Install batteries on flowmeter and sampler
- [x] Perform decon. cycle
- [x] Install 15L sample bottle, with ice
- [x] Leave bottle lid at site, in a clean re-sealable plastic bag
- [x] Verify all cable and tubing connections
- [x] Check date and time on flowmeter and sampler
- [x] Set flowmeter program and sampler program parameters
- [x] Set logging interval to 1 minute
- [x] Start flowmeter program and sampler program
- [x] Verify running

Comments:

Date/Time Off-Site: 8/26/25 13:59

SHUT DOWN

Personnel: ST

Date/Time On-Site: 8/28/25 15:00

Time	Level (in)	Flow (cfs)	Velocity (fps)	Total (cf)	Battery (V)
15:05	-0.02	0.00	0.00	-	12.3
		Downloaded to:	Stevens USB		

If flow monitoring is complete:	**If continuing to monitor flow:**
[x] Halt program on flowmeter	☐ Replace flowmeter battery
[x] Download flowmeter data	☐ Reset logging interval to 15 minutes
[x] Remove flowmeter battery	☐ Change velocity cutoff to 0.02 fps
	☐ Start program
	☐ Verify running

Comments:

Date/Time Off-Site: 8/28/25 15:10

Composite Sample Collection

STATION: AS-6 **Bottle** 1 **of** 4

Personnel: KJ, ST **Date/Time On-Site:** 8/26/25 1946

☑ Halt sampler program	
☒ Put lid on sample bottle; label sample bottle	
Sample ID:	250826-206 -WC
Approx Sample Volume (mL):	1400ml
Clarity (ex. Clear, Cloudy, Silty):	Cloudy
Color (ex. Clear, Gray, Tan, Brown, Black):	Black
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	8/26/25 1752	Success	13	8/26/25 1918	Success
2	1805		14	1920	
3	1809		15	1922	
4	1815		16	1925	
5	1821		17	1927	
6	1828		18	1929	
7	1836		19	1931	
8	1844		20	1933	
9	1853		21	1935	
10	1902		22	1937	
11	1911		23	1939	
12	1915		24	1941	

Comments:

Date/Time Off-Site: 8/26/25 1955

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle, add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: 8/26/25 19:55
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: AS-6 **Bottle** 2 **of** 4

Personnel: KJ, ST **Date/Time On-Site:** 8/27/25 0513

☒ Halt sampler program			
☒ Put lid on sample bottle; label sample bottle			
Sample ID:	250826-206	-WC	
Approx Sample Volume (mL):	13250 mL		
Clarity (ex. Clear, Cloudy, Silty):	Cloudy		
Color (ex. Clear, Gray, Tan, Brown, Black):	Brown		
QA/QC Sample ID:		-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	8/26/25 1958	Success	13	8/27/25 0416	Success
2	2001		14	0423	
3	2005		15	0430	
4	2010		16	0438	
5	2015		17	0447	
6	2021		18	0456	
7	2029		19	0504	
8	2040		20	0512	
9	2059		21	0520	
10	2147	Rinse Error	22	0527	
11	8/27/25 0357	Success	23	0532	
12	0409		24	0536	

Comments:

Date/Time Off-Site: 8/27/25 0549

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: 8/27/25 0545
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	3.0"	3500 mL	5.5"	7250 mL	8.0"	11000 mL	10.5"	14750 mL
1.0"	800 mL	3.5"	4250 mL	6.0"	8000 mL	8.5"	11750 mL	11.0"	15500 mL
1.5"	1400 mL	4.0"	5000 mL	6.5"	8750 mL	9.0"	12500 mL	11.5"	16250 mL
2.0"	2000 mL	4.5"	5750 mL	7.0"	9500 mL	9.5"	13250 mL	After 12"	1" = 1500 mL
2.5"	2750 mL	5.0"	6500 mL	7.5"	10250 mL	10.0"	14000 mL	Lab min	8,000 mL

Composite Sample Collection

STATION: ~~Lucky~~ AS-6 **Bottle** 3 **of** 4

Personnel: KS, ST **Date/Time On-Site:** 8/27/25 0635

☒ Halt sampler program	
☒ Put lid on sample bottle; label sample bottle	
Sample ID:	250826-206 -WC
Approx Sample Volume (mL):	14750 mL
Clarity (ex. Clear, Cloudy, Silty):	Cloudy
Color (ex. Clear, Gray, Tan, Brown, Black):	Brown
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	8/27/25 0551	Success	13	8/27/25 0615	Success
2	0553		14	0617	
3	0555		15	0619	
4	0557		16	0621	
5	0559		17	0623	
6	0601		18	0625	
7	0603		19	0627	
8	0605		20	0629	
9	0607		21	0631	
10	0609		22	0633	
11	0611		23	0635	
12	0613		24	0637	

Comments:

Date/Time Off-Site: 8/27/25 0646

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: 8/27/25 0641
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: AS-6 **Bottle** 4 **of** 4

Personnel: KJ, ST **Date/Time On-Site:** 8/27/25 0840

☒ Halt sampler program	
☒ Put lid on sample bottle; label sample bottle	
Sample ID:	250827-206 -WC
Approx Sample Volume (mL):	11750 mL
Clarity (ex. Clear, Cloudy, Silty):	Cloudy
Color (ex. Clear, Gray, Tan, Brown, Black):	Brown
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	8/27/25 0648	Success	13	8/27/25 0729	Success
2	0651		14	0735	
3	0654		15	0743	
4	0657		16	0752	
5	0700		17	0802	
6	0703		18	0817	
7	0706		19	0832	
8	0709		20	0850	
9	0712		21		
10	0716		22		
11	0720		23		
12	0724		24		

Comments:

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☒ Power off sampler, if separate from flowmeter	☐ Keep flowmeter running
☒ Keep flowmeter running	☐ Install new 15L bottle; add ice
☒ Add ice to sample transport cooler	☐ Restart program from beginning
	Date/Time Restarted: _____
	☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Attachment D: Storm Event Analytical Reports

Report Date: 09/02/2025 13:13

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Samples in this Report

Lab ID	Sample	Sample Description	Matrix	Qualifiers	Sampled	Received
AC00431-01	ACST1B	250826-11-WG	Water		8/26/25 20:33	8/27/25 6:40
AC00431-02	ACST1B	250826-11-101	Water		8/26/25 12:00	8/27/25 6:40
AC00431-03	ACST1B	250826-11-001	Water		8/26/25 12:00	8/27/25 6:40

The contents of this report apply to the sample(s) analyzed in accordance with the Chain of Custody document.
No duplication of this report is allowed, except in its entirety

Report Date: 09/02/2025 13:13

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	250826-11-WG
Date/Time Collected:	08/26/2025 20:33		
Lab Number:	AC00431-01	Sample Collector:	S.T
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B252752	4710	MPN/100 mL	100	1.0	IDEXX - Colilert	08/27/25 07:25	8/28/25 8:14	A.T	H D
Wet Chemistry										
Chlorine Screen	B252754	Absent	mg/L			SM 4500-CL G-2000 mod	08/27/25	8/27/25 7:08	ASE	

* The reported adjusted "MDL" is sample-specific. The analysis MDL as defined by 40 CFR pt 136 App.B. was corrected for dilution, dry weight, or method-defined ML.

The contents of this report apply to the sample(s) analyzed in accordance with the Chain of Custody document.
No duplication of this report is allowed, except in its entirety

Report Date: 09/02/2025 13:13

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	250826-11-101
Date/Time Collected:	08/26/2025 12:00		
Lab Number:	AC00431-02	Sample Collector:	S.T
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B252752	4710	MPN/100 mL	100	1.0	IDEXX - Colilert	08/27/25 07:25	8/28/25 8:14	A.T	H D
Wet Chemistry										
Chlorine Screen	B252754	Absent	mg/L			SM 4500-CL G-2000 mod	08/27/25	8/27/25 7:08	ASE	

* The reported adjusted "MDL" is sample-specific. The analysis MDL as defined by 40 CFR pt 136 App.B. was corrected for dilution, dry weight, or method-defined ML.

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Report Date: 09/02/2025 13:13

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1B	Location Description:	250826-11-001
Date/Time Collected:	08/26/2025 12:00		
Lab Number:	AC00431-03	Sample Collector:	S.T
Sample Type:	Grab	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Microbiology										
E. Coli	B252752	<1.0	MPN/100 mL	1.0	1.0	IDEXX - Colilert	08/27/25 07:25	8/28/25 8:14	A.T	H U
Wet Chemistry										
Chlorine Screen	B252754	Absent	mg/L			SM 4500-CL G-2000 mod	08/27/25	8/27/25 7:08	ASE	

* The reported adjusted "MDL" is sample-specific. The analysis MDL as defined by 40 CFR pt 136 App.B. was corrected for dilution, dry weight, or method-defined ML.

The contents of this report apply to the sample(s) analyzed in accordance with the Chain of Custody document.
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Report Date: 09/02/2025 13:13

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Quality Control Report

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Microbiology									
Batch: B252752									
Blank (B252752-BLK1)									
E. Coli	Absent						08/28/2025	A.T	
LCS (B252752-BS1)									
E. Coli				Present			08/28/2025	A.T	
Duplicate (B252752-DUP1)	Source ID: WB03946-10								
E. Coli					Pass	128	08/28/2025	A.T	

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Report Date: 09/02/2025 13:13

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Notes and Definitions

Item	Definition
D	Data reported from a dilution
H	Hold time Exceeded.
U	Analyte included in the analysis, but not detected
NR	No result for this parameter.

Method Reference Acronyms

Colilert	Colilert, IDEXX Laboratories, Inc.
EPA	Manual of Methods for Chemical Analysis of Water and Wastes, USEPA
GS	USGS Techniques of Water-Resources Investigations
HH	Hach Spectrophotometer Procedures Manual
SM	Standard Methods for the Examination of Water and Wastewater
SW	Test methods for Evaluating Solid Waste, SW-846

Stephen Quintero or Azubike Emenari
QA/QC Coordinator

Leslea Basterrechea
Water Quality Laboratory Manager

The contents of this report apply to the sample(s) analyzed in accordance with the Chain of Custody document.
No duplication of this report is allowed, except in its entirety

Ada County Highway District

ACHD

Attn: Steven Turner
5775 Adams Street
Garden City, Idaho 83714-6418
Tel. (208) 407-4284

Purchase Order: 63069586
Project: Stormwater PI
Sampler(s): Steven Turner
Kristin Jolliffe

Lab#	Begin Date	End Date	Begin Time	End Time	Sample Identification	Sampler Initials	Matrix: Water	Type: Grab	Type: Composite	Analysis Methods	Total Containers
C00431-01	8/26/25		2033		250826-11-WG	~~KJ~~ ST	X	X		E. Coli - IDEXX Colilert	1
-02			1200		250826-11-101	ST ~~KJ~~	X	X		E. Coli - IDEXX Colilert	1
-03			1200		250826-11-001	ST	X	X		E. Coli - IDEXX Colilert	1

Analysis Methods: BOD_5 - SM 5210 B; COD - Hach 8000; TSS - SM 2540 D; TDS - SM 2540 C; TKN - EPA 351.2; TP - EPA 200.7; Orthophosphate - EPA 365.1; Total As, Cd, Pb - EPA 200.8; Diss. Cd Cu, Pb, Zn - EPA 200.8; Total Hg - EPA 245.1; E. Coli - IDEXX Colilert; Turbidity - EPA 180.1; Hardness - SM 2340 B-2011; NO_3+NO_2 - EPA 353.2; Timberline Ammonia-001; Chloride - EPA 300.0

Relinquished by (sign)	Date &Time Transferred	Received by (sign)	Comments/ Special Instructions
Kristin Jolliffe	8/26/25 ~~10~~ 2223	NTS 8/27/25 0640	

AC00431

Report Date: 09/29/2025 09:23

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Samples in this Report

Lab ID	Sample	Sample Description	Matrix	Qualifiers	Sampled	Received
AC00433-01	ACST1C	250826-03-WC	Water		8/27/25 8:11	8/27/25 10:05

Comments:

Temperature at receipt, 2 containers: 8.9 and 10.1 degrees C

The contents of this report apply to the sample(s) analyzed in accordance with the Chain of Custody document.
No duplication of this report is allowed, except in its entirety

Report Date: 09/29/2025 09:23

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1C	Location Description:	250826-03-WC
Date/Time Collected:	08/26/2025 21:59 - 08/27/2025 08:11		
Lab Number:	AC00433-01	Sample Collector:	S.T
Sample Type:	Composite	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
Ammonia, as N	B252793	2.11	mg/L	0.0450	0.0450	Timberline Ammonia-001	09/02/25	9/2/25 14:29	RCJ	
BOD5	B252768	56.6	mg/L	2.00	2.00	SM 5210 B-2016	08/28/25	9/2/25 9:22	A.T	
Chloride	B252993	2.58	mg/L	0.500	0.500	EPA 300.0, Rev. 2.1 (1993)	09/17/25	9/17/25 14:11	RHC	
COD	B252760	244	mg/L	7.00	7.00	*** DEFAULT SPECIFIC METHOD ***	08/27/25	8/27/25 13:17	ALN	
Nitrate-Nitrite, as N	B252757	0.902	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	08/27/25	8/27/25 11:56	JAL	
TKN	B252765	4.78	mg/L	0.250	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	08/28/25	8/28/25 16:24	JAL	D
Total Dissolved Solids	B252794	120	mg/L	25.0	25.0	SM 2540 C-2015	08/28/25	9/4/25 7:27	NTS	
Total Suspended Solids	B252750	131	mg/L	0.900	0.900	SM 2540 D-2015	08/27/25	8/27/25 12:48	RCJ	
Turbidity	B252758	61.3	NTU	0.6	0.3	EPA 180.1, Rev. 2.0 (1993)	08/27/25	8/27/25 11:29	ASE	D
Dissolved Wet Chemistry										
Orthophosphate, as P	B252764	0.519	mg/L	0.0150	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	08/27/25	8/27/25 14:05	ALM	D
Total Metals										
Mercury	B252828	0.0203	ug/L	0.0100	0.0100	EPA 245.1	09/04/25	9/4/25 12:42	SAS	
Arsenic	B252857	3.7	ug/L	0.050	0.050	EPA 200.8	09/05/25	9/6/25 14:14	DMW	
Cadmium	B252857	0.12	ug/L	0.010	0.010	EPA 200.8	09/05/25	9/6/25 14:14	DMW	
Calcium	B252796	10.4	mg/L	0.0500	0.0500	EPA 200.7	09/02/25	9/3/25 13:38	SMC	
Lead	B252857	3.8	ug/L	0.010	0.010	EPA 200.8	09/05/25	9/6/25 14:14	DMW	
Magnesium	B252796	1930	ug/L	40.0	40.0	EPA 200.7	09/02/25	9/3/25 13:38	SMC	
Phosphorus as P	B252796	0.992	mg/L	0.0110	0.0110	EPA 200.7	09/02/25	9/3/25 13:38	SMC	
Hardness	B252796	33.9	mg/L	0.125	0.125	SM 2340 B-2011	09/02/25	9/3/25 13:38	SMC	
Dissolved Metals										
Cadmium	B252844	0.019	ug/L	0.010	0.010	EPA 200.8	09/04/25	9/4/25 14:25	DMW	
Copper	B252844	7.3	ug/L	0.14	0.14	EPA 200.8	09/04/25	9/4/25 14:25	DMW	
Lead	B252844	0.15	ug/L	5.00E-3	5.00E-3	EPA 200.8	09/04/25	9/4/25 14:25	DMW	
Zinc	B252844	95.8	ug/L	0.50	0.50	EPA 200.8	09/04/25	9/4/25 14:25	DMW	

* The reported adjusted "MDL" is sample-specific. The analysis MDL as defined by 40 CFR pt 136 App.B. was corrected for dilution, dry weight, or method-defined ML.

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Quality Control Report

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry									
Batch: B252750									
Blank (B252750-BLK1)									
Total Suspended Solids	<0.9	mg/L					08/27/2025	RCJ	U
LCS (B252750-BS1)									
Total Suspended Solids			101	90-110			08/27/2025	RCJ	
Duplicate (B252750-DUP1) Source ID: WB03946-06									
Total Suspended Solids					5.98	20	08/27/2025	RCJ	
Batch: B252757									
Blank (B252757-BLK1)									
Nitrate-Nitrite, as N	<0.025	mg/L					08/27/2025	JAL	U
LCS (B252757-BS1)									
Nitrate-Nitrite, as N			102	90-110			08/27/2025	JAL	
Duplicate (B252757-DUP1) Source ID: BB05003-02									
Nitrate-Nitrite, as N					NR	10	08/27/2025	JAL	U
Duplicate (B252757-DUP2) Source ID: WB03946-06									
Nitrate-Nitrite, as N					0.393	10	08/27/2025	JAL	
Matrix Spike (B252757-MS1) Source ID: BB05003-02									
Nitrate-Nitrite, as N			102	90-110			08/27/2025	JAL	
Matrix Spike (B252757-MS2) Source ID: WB03946-06									
Nitrate-Nitrite, as N			97.0	90-110			08/27/2025	JAL	
Matrix Spike Dup (B252757-MSD1) Source ID: BB05003-02									
Nitrate-Nitrite, as N			101	90-110	1.03	10	08/27/2025	JAL	
Matrix Spike Dup (B252757-MSD2) Source ID: WB03946-06									
Nitrate-Nitrite, as N			97.7	90-110	0.247	10	08/27/2025	JAL	
Batch: B252758									
Blank (B252758-BLK1)									
Turbidity	<0.3	NTU					08/27/2025	ASE	U
LCS (B252758-BS1)									
Turbidity			100	90-110			08/27/2025	ASE	
Duplicate (B252758-DUP1) Source ID: AC00433-01									
Turbidity					0.217	25	08/27/2025	ASE	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B252760									
Blank (B252760-BLK1)									
COD	<7	mg/L					08/27/2025	ALN	U
LCS (B252760-BS1)									
COD			99.7	90-110			08/27/2025	ALN	
Duplicate (B252760-DUP1) Source ID: AC00433-01									
COD					2.07	10	08/27/2025	ALN	
Batch: B252765									
Blank (B252765-BLK1)									
TKN	<0.1	mg/L					08/28/2025	JAL	U
LCS (B252765-BS1)									
TKN			98.7	80-120			08/28/2025	JAL	
Duplicate (B252765-DUP1) Source ID: BB04993-01									
TKN					4.19	20	08/28/2025	JAL	D
Duplicate (B252765-DUP2) Source ID: LS02460-07									
TKN					5.78	20	08/28/2025	JAL	D
Matrix Spike (B252765-MS1) Source ID: BB04993-01									
TKN			109	80-120			08/28/2025	JAL	D
Matrix Spike (B252765-MS2) Source ID: LS02460-07									
TKN			100	80-120			08/28/2025	JAL	D
Matrix Spike (B252765-MS3) Source ID: EP00494-01									
TKN			96.0	80-120			08/28/2025	JAL	D
Matrix Spike (B252765-MS4) Source ID: EP00494-02									
TKN			106	80-120			08/28/2025	JAL	D
Matrix Spike Dup (B252765-MSD1) Source ID: BB04993-01									
TKN			95.7	80-120	5.68	20	08/28/2025	JAL	D
Matrix Spike Dup (B252765-MSD2) Source ID: LS02460-07									
TKN			85.3	80-120	6.11	20	08/28/2025	JAL	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B252768									
Blank (B252768-BLK1)									
BOD5	<2	mg/L					09/02/2025	A.T	Seed-01, U
LCS (B252768-BS2)									
BOD5			93.6	84.6-115.4			09/02/2025	A.T	
Duplicate (B252768-DUP1) Source ID: BB05004-02									
BOD5					1.74	30	09/02/2025	A.T	D
Batch: B252793									
Blank (B252793-BLK1)									
Ammonia, as N	<0.045	mg/L					09/02/2025	RCJ	U
Blank (B252793-BLK2)									
Ammonia, as N	<0.045	mg/L					09/02/2025	RCJ	U
LCS (B252793-BS1)									
Ammonia, as N			102	90-110			09/02/2025	RCJ	
LCS (B252793-BS2)									
Ammonia, as N			105	90-110			09/02/2025	RCJ	
Duplicate (B252793-DUP1) Source ID: BB04988-01									
Ammonia, as N					2.32	20	09/02/2025	RCJ	D
Duplicate (B252793-DUP2) Source ID: BB05004-02									
Ammonia, as N					0.894	20	09/02/2025	RCJ	D
Matrix Spike (B252793-MS1) Source ID: BB04988-01									
Ammonia, as N			103	84-115			09/02/2025	RCJ	D
Matrix Spike (B252793-MS2) Source ID: BB05004-02									
Ammonia, as N			108	84-115			09/02/2025	RCJ	D
Matrix Spike (B252793-MS3) Source ID: EP00495-02									
Ammonia, as N			94.9	84-115			09/02/2025	RCJ	D
Matrix Spike (B252793-MS4) Source ID: EP00495-01									
Ammonia, as N			108	84-115			09/02/2025	RCJ	
Matrix Spike (B252793-MS5) Source ID: EP00494-01									
Ammonia, as N			108	84-115			09/02/2025	RCJ	
Matrix Spike (B252793-MS6) Source ID: EP00494-02									
Ammonia, as N			110	84-115			09/02/2025	RCJ	
Matrix Spike Dup (B252793-MSD1) Source ID: BB04988-01									
Ammonia, as N			102	84-115	0.768	20	09/02/2025	RCJ	D
Matrix Spike Dup (B252793-MSD2) Source ID: BB05004-02									
Ammonia, as N			105	84-115	1.99	20	09/02/2025	RCJ	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B252794									
Blank (B252794-BLK1)									
Total Dissolved Solids	<25	mg/L					09/04/2025	NTS	U
LCS (B252794-BS1)									
Total Dissolved Solids			94.0	90-110			09/04/2025	NTS	
Duplicate (B252794-DUP1) Source ID: AC00433-01									
Total Dissolved Solids					0.278	10	09/04/2025	NTS	
Batch: B252993									
Blank (B252993-BLK1)									
Chloride	<0.5	mg/L					09/17/2025	RHC	U
LCS (B252993-BS1)									
Chloride			95.6	90-110			09/17/2025	RHC	
Duplicate (B252993-DUP1) Source ID: AC00433-01									
Chloride					0.889	10	09/17/2025	RHC	
Duplicate (B252993-DUP2) Source ID: BB05013-05									
Chloride					1.22	10	09/17/2025	RHC	D
Duplicate (B252993-DUP3) Source ID: BB05013-05RE1									
Chloride					0.794	10	09/18/2025	RHC	D
Matrix Spike (B252993-MS1) Source ID: AC00433-01									
Chloride			94.3	90-110			09/17/2025	RHC	
Matrix Spike (B252993-MS2) Source ID: BB05013-05									
Chloride			98.9	90-110			09/18/2025	RHC	D
Matrix Spike (B252993-MS3) Source ID: BB05013-05RE1									
Chloride			95.7	90-110			09/18/2025	RHC	D
Matrix Spike Dup (B252993-MSD1) Source ID: AC00433-01									
Chloride			94.7	90-110	0.359	10	09/17/2025	RHC	
Matrix Spike Dup (B252993-MSD2) Source ID: BB05013-05									
Chloride			96.7	90-110	1.82	10	09/17/2025	RHC	D
Matrix Spike Dup (B252993-MSD3) Source ID: BB05013-05RE1									
Chloride			96.6	90-110	0.831	10	09/18/2025	RHC	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Dissolved Wet Chemistry									
Batch: B252764									
Blank (B252764-BLK1)									
Orthophosphate, as P	<0.003	mg/L					08/27/2025	ALM	U
LCS (B252764-BS1)									
Orthophosphate, as P			97.5	90-110			08/27/2025	ALM	
Duplicate (B252764-DUP2) Source ID: WB03946-06									
Orthophosphate, as P					0.0624	10	08/27/2025	ALM	D
Duplicate (B252764-DUP3) Source ID: AC00433-01RE1									
Orthophosphate, as P					0.335	10	08/27/2025	ALM	D
Matrix Spike (B252764-MS2) Source ID: WB03946-06									
Orthophosphate, as P			99.1	90-110			08/27/2025	ALM	D
Matrix Spike (B252764-MS3) Source ID: AC00433-01RE1									
Orthophosphate, as P			102	90-110			08/27/2025	ALM	D
Matrix Spike Dup (B252764-MSD2) Source ID: WB03946-06									
Orthophosphate, as P			101	90-110	0.771	10	08/27/2025	ALM	D
Matrix Spike Dup (B252764-MSD3) Source ID: AC00433-01RE1									
Orthophosphate, as P			103	90-110	0.279	10	08/27/2025	ALM	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals									
Batch: B252796									
Blank (B252796-BLK1)									
Calcium	<0.05	mg/L					09/03/2025	SMC	U
Magnesium	<40	ug/L					09/03/2025	SMC	U
Phosphorus as P	<0.011	mg/L					09/03/2025	SMC	U
LCS (B252796-BS1)									
Calcium			99.7	85-115			09/03/2025	SMC	
Magnesium			98.7	85-115			09/03/2025	SMC	
Phosphorus as P			104	85-115			09/03/2025	SMC	
Duplicate (B252796-DUP1) Source ID: AC00433-01									
Calcium					0.611	20	09/03/2025	SMC	
Magnesium					2.62	20	09/03/2025	SMC	
Phosphorus as P					0.974	20	09/03/2025	SMC	
Duplicate (B252796-DUP2) Source ID: ME00397-03									
Calcium					0.507	20	09/03/2025	SMC	
Magnesium					0.674	20	09/03/2025	SMC	
Phosphorus as P					2.74	20	09/03/2025	SMC	
Matrix Spike (B252796-MS1) Source ID: AC00433-01									
Calcium			100	70-130			09/03/2025	SMC	
Magnesium			99.1	70-130			09/03/2025	SMC	
Phosphorus as P			107	70-130			09/03/2025	SMC	
Matrix Spike (B252796-MS2) Source ID: ME00397-03									
Calcium			100	70-130			09/03/2025	SMC	
Magnesium			99.2	70-130			09/03/2025	SMC	
Phosphorus as P			106	70-130			09/03/2025	SMC	
Matrix Spike Dup (B252796-MSD1) Source ID: AC00433-01									
Calcium			99.1	70-130	0.702	20	09/03/2025	SMC	
Magnesium			98.0	70-130	1.03	20	09/03/2025	SMC	
Phosphorus as P			105	70-130	0.996	20	09/03/2025	SMC	
Matrix Spike Dup (B252796-MSD2) Source ID: ME00397-03									
Calcium			102	70-130	0.764	20	09/03/2025	SMC	
Magnesium			101	70-130	1.31	20	09/03/2025	SMC	
Phosphorus as P			108	70-130	0.932	20	09/03/2025	SMC	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals (Continued)									
Batch: B252828									
Blank (B252828-BLK1)									
Mercury	<0.01	ug/L					09/04/2025	SAS	U
Blank (B252828-BLK2)									
Mercury	<0.01	ug/L					09/04/2025	SAS	U
LCS (B252828-BS1)									
Mercury			98.2	85-115			09/04/2025	SAS	
Duplicate (B252828-DUP1) Source ID: AC00433-01									
Mercury					3.21	20	09/04/2025	SAS	
Duplicate (B252828-DUP2) Source ID: BB05008-01									
Mercury					NR	20	09/04/2025	SAS	
Matrix Spike (B252828-MS1) Source ID: AC00433-01									
Mercury			98.4	70-130			09/04/2025	SAS	
Matrix Spike (B252828-MS2) Source ID: BB05008-01									
Mercury			114	70-130			09/04/2025	SAS	
Matrix Spike Dup (B252828-MSD1) Source ID: AC00433-01									
Mercury			98.9	70-130	0.370	20	09/04/2025	SAS	
Matrix Spike Dup (B252828-MSD2) Source ID: BB05008-01									
Mercury			108	70-130	5.40	20	09/04/2025	SAS	
Batch: B252857									
Blank (B252857-BLK1)									
Arsenic	<0.050	ug/L					09/06/2025	DMW	U
Cadmium	<0.010	ug/L					09/06/2025	DMW	U
Lead	<0.010	ug/L					09/06/2025	DMW	U
LCS (B252857-BS1)									
Arsenic			99.2	85-115			09/06/2025	DMW	
Cadmium			98.7	85-115			09/06/2025	DMW	
Lead			101	85-115			09/06/2025	DMW	
Duplicate (B252857-DUP1) Source ID: ES00408-06									
Arsenic					4.03	20	09/06/2025	DMW	
Cadmium					NR	20	09/06/2025	DMW	U
Lead					4.79	20	09/06/2025	DMW	
Matrix Spike (B252857-MS1) Source ID: ES00408-06									
Arsenic			99.1	70-130			09/06/2025	DMW	
Cadmium			97.9	70-130			09/06/2025	DMW	
Lead			99.6	70-130			09/06/2025	DMW	
Matrix Spike Dup (B252857-MSD1) Source ID: ES00408-06									
Arsenic			99.3	70-130	0.193	20	09/06/2025	DMW	
Cadmium			98.1	70-130	0.216	20	09/06/2025	DMW	
Lead			99.7	70-130	0.0854	20	09/06/2025	DMW	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Dissolved Metals									
Batch: B252844									
Blank (B252844-BLK1)									
Cadmium	<0.010	ug/L					09/04/2025	DMW	U
Copper	<0.14	ug/L					09/04/2025	DMW	U
Lead	<0.0050	ug/L					09/04/2025	DMW	U
Zinc	<0.50	ug/L					09/04/2025	DMW	U
LCS (B252844-BS1)									
Cadmium			96.2	85-115			09/04/2025	DMW	
Copper			97.2	85-115			09/04/2025	DMW	
Lead			93.6	85-115			09/04/2025	DMW	
Zinc			98.0	85-115			09/04/2025	DMW	
Duplicate (B252844-DUP1) Source ID: ES00408-06									
Cadmium					NR	10	09/04/2025	DMW	U
Copper					6.41	10	09/04/2025	DMW	
Lead					6.47	10	09/04/2025	DMW	
Zinc					NR	10	09/04/2025	DMW	U
Matrix Spike (B252844-MS1) Source ID: ES00408-06									
Cadmium			93.4	70-130			09/04/2025	DMW	
Copper			94.0	70-130			09/04/2025	DMW	
Lead			89.9	70-130			09/04/2025	DMW	
Zinc			97.7	70-130			09/04/2025	DMW	
Matrix Spike Dup (B252844-MSD1) Source ID: ES00408-06									
Cadmium			92.4	70-130	1.13	10	09/04/2025	DMW	
Copper			92.0	70-130	2.13	10	09/04/2025	DMW	
Lead			88.5	70-130	1.54	10	09/04/2025	DMW	
Zinc			95.1	70-130	2.66	10	09/04/2025	DMW	

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Notes and Definitions

Item	Definition
D	Data reported from a dilution
Seed-01	The seed depletion is greater than that recommended by the method. The LCS is acceptable showing the seed supports the method.
U	Analyte included in the analysis, but not detected
NR	No result for this parameter.

Method Reference Acronyms

Colilert	Colilert, IDEXX Laboratories, Inc.
EPA	Manual of Methods for Chemical Analysis of Water and Wastes, USEPA
GS	USGS Techniques of Water-Resources Investigations
HH	Hach Spectrophotometer Procedures Manual
SM	Standard Methods for the Examination of Water and Wastewater
SW	Test methods for Evaluating Solid Waste, SW-846

Stephen Quintero or Azubike Emenari
QA/QC Coordinator

Leslea Basterrechea
Water Quality Laboratory Manager

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Attn: Steven Turner
3775 Adams Street
Garden City, Idaho 83714-6418
Tel. (208) 407-4284
Purchase Order: 63069586
Project: Stormwater PI
Sampler(s): Kristin Jolliffe
Steven Turner

Lab#	Begin Date	End Date	Begin Time	End Time	Sample Identification	Sampler Initials	Water	Grab	Composite	BOD_5 - SM 5210 B	COD - Hach 8000	TSS - SM 2540 D	TDS - SM 2540 C	TKN - EPA 351.2	TP - EPA 200.7	Orthophosphate - EPA 365.1	Total As, Cd, Pb - EPA 200.8	Diss. Cd Cu, Pb, Zn - EPA 200.8	Total Hg - EPA 245.1	E. Coli - IDEXX Colilert	Turbidity - EPA 180.1	Hardness - SM 2340 B-2011	NO_3+NO_2 - EPA 353.2	Timberline Ammonia-001	Chloride - EPA 300.0	Total Containers
AC00433-01	8/26/25	8/27/25	~~2159~~ 2112	0811	250826-03-WC	SJ	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	2

Relinquished by (sign)	Date &Time Transferred	Received by (sign)	Comments/ Special Instructions
Kristin Jolliffe	8/27/25 1003	[signature] 8/27/25	1005

COC_WQL-PI

AC00433

241010 ST

AC00433

Report Date: 09/29/2025 09:22

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Samples in this Report

Lab ID	Sample	Sample Description	Matrix	Qualifiers	Sampled	Received
AC00434-01	ACST1C	250826-206-WC	Water		8/27/25 8:50	8/27/25 10:05

Comments:

Temperature at receipt, 4 containers: 7.0, 8.7, 12.3, and 15.3 degrees C

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Analysis Report

Location:	ACST1C	Location Description:	250826-206-WC
Date/Time Collected:	08/26/2025 17:52 - 08/27/2025 08:50		
Lab Number:	AC00434-01	Sample Collector:	S.T
Sample Type:	Composite	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
Ammonia, as N	B252793	2.26	mg/L	0.0450	0.0450	Timberline Ammonia-001	09/02/25	9/2/25 14:32	RCJ	
BOD5	B252768	311	mg/L	2.00	2.00	SM 5210 B-2016	08/28/25	9/2/25 9:02	A.T	
Chloride	B252993	6.92	mg/L	0.500	0.500	EPA 300.0, Rev. 2.1 (1993)	09/17/25	9/17/25 15:51	RHC	
COD	B252760	773	mg/L	7.00	7.00	*** DEFAULT SPECIFIC METHOD ***	08/27/25	8/27/25 13:17	ALN	
Nitrate-Nitrite, as N	B252757	0.922	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	08/27/25	8/27/25 11:57	JAL	
TKN	B252765	11.5	mg/L	0.250	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	08/28/25	8/28/25 16:26	JAL	D
Total Dissolved Solids	B252794	391	mg/L	25.0	25.0	SM 2540 C-2015	08/28/25	9/4/25 7:31	NTS	
Total Suspended Solids	B252750	496	mg/L	0.900	0.900	SM 2540 D-2015	08/27/25	8/27/25 12:49	RCJ	
Turbidity	B252758	285	NTU	3.0	0.3	EPA 180.1, Rev. 2.0 (1993)	08/27/25	8/27/25 11:51	ASE	D
Dissolved Wet Chemistry										
Orthophosphate, as P	B252764	1.33	mg/L	0.0300	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	08/27/25	8/27/25 14:10	ALM	D
Total Metals										
Mercury	B252828	0.0641	ug/L	0.0100	0.0100	EPA 245.1	09/04/25	9/4/25 13:03	SAS	
Arsenic	B252857	9.8	ug/L	0.050	0.050	EPA 200.8	09/05/25	9/6/25 14:16	DMW	
Cadmium	B252857	0.31	ug/L	0.010	0.010	EPA 200.8	09/05/25	9/6/25 14:16	DMW	
Calcium	B252796	16.4	mg/L	0.0500	0.0500	EPA 200.7	09/02/25	9/3/25 13:54	SMC	
Lead	B252857	20.8	ug/L	0.010	0.010	EPA 200.8	09/05/25	9/6/25 14:16	DMW	
Magnesium	B252796	5680	ug/L	40.0	40.0	EPA 200.7	09/02/25	9/3/25 13:54	SMC	
Phosphorus as P	B252796	2.60	mg/L	0.0110	0.0110	EPA 200.7	09/02/25	9/3/25 13:54	SMC	
Hardness	B252796	64.3	mg/L	0.125	0.125	SM 2340 B-2011	09/02/25	9/3/25 13:54	SMC	
Dissolved Metals										
Cadmium	B252844	0.037	ug/L	0.010	0.010	EPA 200.8	09/04/25	9/4/25 14:28	DMW	
Copper	B252844	16.7	ug/L	0.14	0.14	EPA 200.8	09/04/25	9/4/25 14:28	DMW	
Lead	B252844	0.64	ug/L	5.00E-3	5.00E-3	EPA 200.8	09/04/25	9/4/25 14:28	DMW	
Zinc	B252844	108	ug/L	0.50	0.50	EPA 200.8	09/04/25	9/4/25 14:28	DMW	

* The reported adjusted "MDL" is sample-specific. The analysis MDL as defined by 40 CFR pt 136 App.B. was corrected for dilution, dry weight, or method-defined ML.

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Report Date: 09/29/2025 09:22

Quality Control Report

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry									
Batch: B252750									
Blank (B252750-BLK1)									
Total Suspended Solids	<0.9	mg/L					08/27/2025	RCJ	U
LCS (B252750-BS1)									
Total Suspended Solids			101	90-110			08/27/2025	RCJ	
Duplicate (B252750-DUP1) Source ID: WB03946-06									
Total Suspended Solids					5.98	20	08/27/2025	RCJ	
Batch: B252757									
Blank (B252757-BLK1)									
Nitrate-Nitrite, as N	<0.025	mg/L					08/27/2025	JAL	U
LCS (B252757-BS1)									
Nitrate-Nitrite, as N			102	90-110			08/27/2025	JAL	
Duplicate (B252757-DUP1) Source ID: BB05003-02									
Nitrate-Nitrite, as N					NR	10	08/27/2025	JAL	U
Duplicate (B252757-DUP2) Source ID: WB03946-06									
Nitrate-Nitrite, as N					0.393	10	08/27/2025	JAL	
Matrix Spike (B252757-MS1) Source ID: BB05003-02									
Nitrate-Nitrite, as N			102	90-110			08/27/2025	JAL	
Matrix Spike (B252757-MS2) Source ID: WB03946-06									
Nitrate-Nitrite, as N			97.0	90-110			08/27/2025	JAL	
Matrix Spike Dup (B252757-MSD1) Source ID: BB05003-02									
Nitrate-Nitrite, as N			101	90-110	1.03	10	08/27/2025	JAL	
Matrix Spike Dup (B252757-MSD2) Source ID: WB03946-06									
Nitrate-Nitrite, as N			97.7	90-110	0.247	10	08/27/2025	JAL	
Batch: B252758									
Blank (B252758-BLK1)									
Turbidity	<0.3	NTU					08/27/2025	ASE	U
LCS (B252758-BS1)									
Turbidity			100	90-110			08/27/2025	ASE	
Duplicate (B252758-DUP1) Source ID: AC00433-01									
Turbidity					0.217	25	08/27/2025	ASE	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B252760									
Blank (B252760-BLK1)									
COD	<7	mg/L					08/27/2025	ALN	U
LCS (B252760-BS1)									
COD			99.7	90-110			08/27/2025	ALN	
Duplicate (B252760-DUP1) Source ID: AC00433-01									
COD					2.07	10	08/27/2025	ALN	
Batch: B252765									
Blank (B252765-BLK1)									
TKN	<0.1	mg/L					08/28/2025	JAL	U
LCS (B252765-BS1)									
TKN			98.7	80-120			08/28/2025	JAL	
Duplicate (B252765-DUP1) Source ID: BB04993-01									
TKN					4.19	20	08/28/2025	JAL	D
Duplicate (B252765-DUP2) Source ID: LS02460-07									
TKN					5.78	20	08/28/2025	JAL	D
Matrix Spike (B252765-MS1) Source ID: BB04993-01									
TKN			109	80-120			08/28/2025	JAL	D
Matrix Spike (B252765-MS2) Source ID: LS02460-07									
TKN			100	80-120			08/28/2025	JAL	D
Matrix Spike (B252765-MS3) Source ID: EP00494-01									
TKN			96.0	80-120			08/28/2025	JAL	D
Matrix Spike (B252765-MS4) Source ID: EP00494-02									
TKN			106	80-120			08/28/2025	JAL	D
Matrix Spike Dup (B252765-MSD1) Source ID: BB04993-01									
TKN			95.7	80-120	5.68	20	08/28/2025	JAL	D
Matrix Spike Dup (B252765-MSD2) Source ID: LS02460-07									
TKN			85.3	80-120	6.11	20	08/28/2025	JAL	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B252768									
Blank (B252768-BLK1)									
BOD5	<2	mg/L					09/02/2025	A.T	Seed-01, U
LCS (B252768-BS2)									
BOD5			93.6	84.6-115.4			09/02/2025	A.T	
Duplicate (B252768-DUP1) Source ID: BB05004-02									
BOD5					1.74	30	09/02/2025	A.T	D
Batch: B252793									
Blank (B252793-BLK1)									
Ammonia, as N	<0.045	mg/L					09/02/2025	RCJ	U
Blank (B252793-BLK2)									
Ammonia, as N	<0.045	mg/L					09/02/2025	RCJ	U
LCS (B252793-BS1)									
Ammonia, as N			102	90-110			09/02/2025	RCJ	
LCS (B252793-BS2)									
Ammonia, as N			105	90-110			09/02/2025	RCJ	
Duplicate (B252793-DUP1) Source ID: BB04988-01									
Ammonia, as N					2.32	20	09/02/2025	RCJ	D
Duplicate (B252793-DUP2) Source ID: BB05004-02									
Ammonia, as N					0.894	20	09/02/2025	RCJ	D
Matrix Spike (B252793-MS1) Source ID: BB04988-01									
Ammonia, as N			103	84-115			09/02/2025	RCJ	D
Matrix Spike (B252793-MS2) Source ID: BB05004-02									
Ammonia, as N			108	84-115			09/02/2025	RCJ	D
Matrix Spike (B252793-MS3) Source ID: EP00495-02									
Ammonia, as N			94.9	84-115			09/02/2025	RCJ	D
Matrix Spike (B252793-MS4) Source ID: EP00495-01									
Ammonia, as N			108	84-115			09/02/2025	RCJ	
Matrix Spike (B252793-MS5) Source ID: EP00494-01									
Ammonia, as N			108	84-115			09/02/2025	RCJ	
Matrix Spike (B252793-MS6) Source ID: EP00494-02									
Ammonia, as N			110	84-115			09/02/2025	RCJ	
Matrix Spike Dup (B252793-MSD1) Source ID: BB04988-01									
Ammonia, as N			102	84-115	0.768	20	09/02/2025	RCJ	D
Matrix Spike Dup (B252793-MSD2) Source ID: BB05004-02									
Ammonia, as N			105	84-115	1.99	20	09/02/2025	RCJ	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B252794									
Blank (B252794-BLK1)									
Total Dissolved Solids	<25	mg/L					09/04/2025	NTS	U
LCS (B252794-BS1)									
Total Dissolved Solids			94.0	90-110			09/04/2025	NTS	
Duplicate (B252794-DUP1) Source ID: AC00433-01									
Total Dissolved Solids					0.278	10	09/04/2025	NTS	
Batch: B252993									
Blank (B252993-BLK1)									
Chloride	<0.5	mg/L					09/17/2025	RHC	U
LCS (B252993-BS1)									
Chloride			95.6	90-110			09/17/2025	RHC	
Duplicate (B252993-DUP1) Source ID: AC00433-01									
Chloride					0.889	10	09/17/2025	RHC	
Duplicate (B252993-DUP2) Source ID: BB05013-05									
Chloride					1.22	10	09/17/2025	RHC	D
Duplicate (B252993-DUP3) Source ID: BB05013-05RE1									
Chloride					0.794	10	09/18/2025	RHC	D
Matrix Spike (B252993-MS1) Source ID: AC00433-01									
Chloride			94.3	90-110			09/17/2025	RHC	
Matrix Spike (B252993-MS2) Source ID: BB05013-05									
Chloride			98.9	90-110			09/18/2025	RHC	D
Matrix Spike (B252993-MS3) Source ID: BB05013-05RE1									
Chloride			95.7	90-110			09/18/2025	RHC	D
Matrix Spike Dup (B252993-MSD1) Source ID: AC00433-01									
Chloride			94.7	90-110	0.359	10	09/17/2025	RHC	
Matrix Spike Dup (B252993-MSD2) Source ID: BB05013-05									
Chloride			96.7	90-110	1.82	10	09/17/2025	RHC	D
Matrix Spike Dup (B252993-MSD3) Source ID: BB05013-05RE1									
Chloride			96.6	90-110	0.831	10	09/18/2025	RHC	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Dissolved Wet Chemistry									
Batch: B252764									
Blank (B252764-BLK1)									
Orthophosphate, as P	<0.003	mg/L					08/27/2025	ALM	U
LCS (B252764-BS1)									
Orthophosphate, as P			97.5	90-110			08/27/2025	ALM	
Duplicate (B252764-DUP2) Source ID: WB03946-06									
Orthophosphate, as P					0.0624	10	08/27/2025	ALM	D
Duplicate (B252764-DUP3) Source ID: AC00433-01RE1									
Orthophosphate, as P					0.335	10	08/27/2025	ALM	D
Matrix Spike (B252764-MS2) Source ID: WB03946-06									
Orthophosphate, as P			99.1	90-110			08/27/2025	ALM	D
Matrix Spike (B252764-MS3) Source ID: AC00433-01RE1									
Orthophosphate, as P			102	90-110			08/27/2025	ALM	D
Matrix Spike Dup (B252764-MSD2) Source ID: WB03946-06									
Orthophosphate, as P			101	90-110	0.771	10	08/27/2025	ALM	D
Matrix Spike Dup (B252764-MSD3) Source ID: AC00433-01RE1									
Orthophosphate, as P			103	90-110	0.279	10	08/27/2025	ALM	D

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals									
Batch: B252796									
Blank (B252796-BLK1)									
Calcium	<0.05	mg/L					09/03/2025	SMC	U
Magnesium	<40	ug/L					09/03/2025	SMC	U
Phosphorus as P	<0.011	mg/L					09/03/2025	SMC	U
LCS (B252796-BS1)									
Calcium			99.7	85-115			09/03/2025	SMC	
Magnesium			98.7	85-115			09/03/2025	SMC	
Phosphorus as P			104	85-115			09/03/2025	SMC	
Duplicate (B252796-DUP1) Source ID: AC00433-01									
Calcium					0.611	20	09/03/2025	SMC	
Magnesium					2.62	20	09/03/2025	SMC	
Phosphorus as P					0.974	20	09/03/2025	SMC	
Duplicate (B252796-DUP2) Source ID: ME00397-03									
Calcium					0.507	20	09/03/2025	SMC	
Magnesium					0.674	20	09/03/2025	SMC	
Phosphorus as P					2.74	20	09/03/2025	SMC	
Matrix Spike (B252796-MS1) Source ID: AC00433-01									
Calcium			100	70-130			09/03/2025	SMC	
Magnesium			99.1	70-130			09/03/2025	SMC	
Phosphorus as P			107	70-130			09/03/2025	SMC	
Matrix Spike (B252796-MS2) Source ID: ME00397-03									
Calcium			100	70-130			09/03/2025	SMC	
Magnesium			99.2	70-130			09/03/2025	SMC	
Phosphorus as P			106	70-130			09/03/2025	SMC	
Matrix Spike Dup (B252796-MSD1) Source ID: AC00433-01									
Calcium			99.1	70-130	0.702	20	09/03/2025	SMC	
Magnesium			98.0	70-130	1.03	20	09/03/2025	SMC	
Phosphorus as P			105	70-130	0.996	20	09/03/2025	SMC	
Matrix Spike Dup (B252796-MSD2) Source ID: ME00397-03									
Calcium			102	70-130	0.764	20	09/03/2025	SMC	
Magnesium			101	70-130	1.31	20	09/03/2025	SMC	
Phosphorus as P			108	70-130	0.932	20	09/03/2025	SMC	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals (Continued)									
Batch: B252828									
Blank (B252828-BLK1)									
Mercury	<0.01	ug/L					09/04/2025	SAS	U
Blank (B252828-BLK2)									
Mercury	<0.01	ug/L					09/04/2025	SAS	U
LCS (B252828-BS1)									
Mercury			98.2	85-115			09/04/2025	SAS	
Duplicate (B252828-DUP1) Source ID: AC00433-01									
Mercury					3.21	20	09/04/2025	SAS	
Duplicate (B252828-DUP2) Source ID: BB05008-01									
Mercury					NR	20	09/04/2025	SAS	
Matrix Spike (B252828-MS1) Source ID: AC00433-01									
Mercury			98.4	70-130			09/04/2025	SAS	
Matrix Spike (B252828-MS2) Source ID: BB05008-01									
Mercury			114	70-130			09/04/2025	SAS	
Matrix Spike Dup (B252828-MSD1) Source ID: AC00433-01									
Mercury			98.9	70-130	0.370	20	09/04/2025	SAS	
Matrix Spike Dup (B252828-MSD2) Source ID: BB05008-01									
Mercury			108	70-130	5.40	20	09/04/2025	SAS	
Batch: B252857									
Blank (B252857-BLK1)									
Arsenic	<0.050	ug/L					09/06/2025	DMW	U
Cadmium	<0.010	ug/L					09/06/2025	DMW	U
Lead	<0.010	ug/L					09/06/2025	DMW	U
LCS (B252857-BS1)									
Arsenic			99.2	85-115			09/06/2025	DMW	
Cadmium			98.7	85-115			09/06/2025	DMW	
Lead			101	85-115			09/06/2025	DMW	
Duplicate (B252857-DUP1) Source ID: ES00408-06									
Arsenic					4.03	20	09/06/2025	DMW	
Cadmium					NR	20	09/06/2025	DMW	U
Lead					4.79	20	09/06/2025	DMW	
Matrix Spike (B252857-MS1) Source ID: ES00408-06									
Arsenic			99.1	70-130			09/06/2025	DMW	
Cadmium			97.9	70-130			09/06/2025	DMW	
Lead			99.6	70-130			09/06/2025	DMW	
Matrix Spike Dup (B252857-MSD1) Source ID: ES00408-06									
Arsenic			99.3	70-130	0.193	20	09/06/2025	DMW	
Cadmium			98.1	70-130	0.216	20	09/06/2025	DMW	
Lead			99.7	70-130	0.0854	20	09/06/2025	DMW	

The contents of this report apply to the sample(s) analyzed in accordance with the Chain of Custody document.
No duplication of this report is allowed, except in its entirety

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Dissolved Metals									
Batch: B252844									
Blank (B252844-BLK1)									
Cadmium	<0.010	ug/L					09/04/2025	DMW	U
Copper	<0.14	ug/L					09/04/2025	DMW	U
Lead	<0.0050	ug/L					09/04/2025	DMW	U
Zinc	<0.50	ug/L					09/04/2025	DMW	U
LCS (B252844-BS1)									
Cadmium			96.2	85-115			09/04/2025	DMW	
Copper			97.2	85-115			09/04/2025	DMW	
Lead			93.6	85-115			09/04/2025	DMW	
Zinc			98.0	85-115			09/04/2025	DMW	
Duplicate (B252844-DUP1) Source ID: ES00408-06									
Cadmium					NR	10	09/04/2025	DMW	U
Copper					6.41	10	09/04/2025	DMW	
Lead					6.47	10	09/04/2025	DMW	
Zinc					NR	10	09/04/2025	DMW	U
Matrix Spike (B252844-MS1) Source ID: ES00408-06									
Cadmium			93.4	70-130			09/04/2025	DMW	
Copper			94.0	70-130			09/04/2025	DMW	
Lead			89.9	70-130			09/04/2025	DMW	
Zinc			97.7	70-130			09/04/2025	DMW	
Matrix Spike Dup (B252844-MSD1) Source ID: ES00408-06									
Cadmium			92.4	70-130	1.13	10	09/04/2025	DMW	
Copper			92.0	70-130	2.13	10	09/04/2025	DMW	
Lead			88.5	70-130	1.54	10	09/04/2025	DMW	
Zinc			95.1	70-130	2.66	10	09/04/2025	DMW	

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Report Date: 09/29/2025 09:22

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Notes and Definitions

Item	Definition
D	Data reported from a dilution
Seed-01	The seed depletion is greater than that recommended by the method. The LCS is acceptable showing the seed supports the method.
U	Analyte included in the analysis, but not detected
NR	No result for this parameter.

Method Reference Acronyms

Colilert	Colilert, IDEXX Laboratories, Inc.
EPA	Manual of Methods for Chemical Analysis of Water and Wastes, USEPA
GS	USGS Techniques of Water-Resources Investigations
HH	Hach Spectrophotometer Procedures Manual
SM	Standard Methods for the Examination of Water and Wastewater
SW	Test methods for Evaluating Solid Waste, SW-846

Stephen Quintero or Azubike Emenari
QA/QC Coordinator

Leslea Basterrechea
Water Quality Laboratory Manager

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No duplication of this report is allowed, except in its entirety

Attn: Steven Turner
3775 Adams Street
Garden City, Idaho 83714-6418
Tel. (208) 407-4284
Purchase Order: 63069586
Project: Stormwater PI
Sampler(s): Kristen Jolliffe
Steven Turner

Lab#	Begin Date	End Date	Begin Time	End Time	Sample Identification	Sampler Initials	Water	Grab	Composite	BOD_5 - SM 5210 B	COD - Hach 8000	TSS - SM 2540 D	TDS - SM 2540 C	TKN - EPA 351.2	TP - EPA 200.7	Orthophosphate - EPA 365.1	Total As, Cd, Pb - EPA 200.8	Diss. Cd Cu, Pb, Zn - EPA 200.8	Total Hg - EPA 245.1	E. Coli - IDEXX Colilert	Turbidity - EPA 180.1	Hardness - SM 2340 B-2011	NO3+NO2 - EPA 353.2	Timberline Ammonia-001	Chloride - EPA 300.0	Total Containers
AC00434-01	8/26/25	8/27/25	1752	0850	250826-206-WC	ST	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	4

Relinquished by (sign)	Date &Time Transferred	Received by (sign)	Comments/ Special Instructions
Kristen Jolliffe	8/27/25 1003	[signature] 8/27/25 1005	

COC_WQL-PI

241010 ST

AC00434

AC00434

NPDES Phase I Storm Event Report
September 29, 2025

Prepared by

Ada County Highway District

October 30, 2025

Section 1: Introduction

The Environmental Protection Agency Region 10 reissued a Municipal Separate Storm Sewer System Phase I National Pollutant Discharge Elimination System Permit (NPDES Permit), effective October 1, 2021, to Ada County Highway District (ACHD), Boise City, Ada County Drainage District No. 3, Idaho Transportation Department District 3, Boise State University, and Garden City. Under the NPDES Permit, Permittees are required to continue to conduct wet weather stormwater outfall monitoring and subwatershed monitoring. Four outfall monitoring sites (Lucky, Whitewater, Main, and Americana) and one subwatershed monitoring site (AS_6) have been established. The AS_6 site represents a subwatershed located within the Americana watershed. The Main Alternate (Main Alt) monitoring site may be used when high river flows surcharge the Main storm drain pipes. At each site, a minimum of three composite and three grab samples will be collected during Water Year (WY) 2025 (October 1, 2024, through September 30, 2025). The following storm event report summarizes stormwater sampling results from the September 29, 2025, storm event.

Section 2: Project Status

Table 2-1 is a summary of the sample types collected to date for WY 2025 Phase I Stormwater Outfall Monitoring. When samples are qualified, additional samples will be attempted from subsequent storms to collect unqualified samples.

Table 2-1. WY 2025 Samples Collected

Date	Lucky	Whitewater	Main	Main Alt	Americana	AS_6
December 14, 2024	G, C[1]	G, C	G, C	--	G, C	G, C
January 31, 2025	--, C	--, C[2]	--. C	--	--, C[2]	--, C[3]
February 23, 2025	G, C[4]	G, --	G, C	--	G, C[2]	G, C
May 17, 2025	G, C	--, C	--	G, --	G, C	G, C[4]
August 26, 2025	--, C[4]	G[5], --	--, --	--, --	--, --	--, C[4]
September 29, 2025	--, --	--, C[2,4]	--, --	--, --	--, C[4]	--, --
Unqualified Samples:	3G, 2C	2G, 2C	3G, 3C		3G, 2C	3G, 2C
Samples Remaining:	0G, 1C	1G, 1C	0G, 0C		0G, 1C	0G, 1C

Notes:

-- = no samples taken.

C = composite sample.

G = grab sample.

[1] Equipment installation error resulted in negative flow and velocity; therefore, no composite subsamples were taken.

[2] Composite sample qualified due to lack of representativeness (50%–75%).

[3] Sample rejected due to lack of representativeness (<50%).

[4] Composite sample qualified due to exceedance of 6.0°C.

[5] E. coli sample qualified due to exceeded holding time.

Section 3: Storm Event Summary

The September 29, 2025, storm event and the subsequent preparation and sampling efforts are detailed in the following sections.

3.1 Storm Detail

A summary of the forecast on which monitoring decisions were based is detailed below. The sampling event communication form that describes the forecast and summarizes the decision-making process from September 29, 2025, is included in Attachment A for reference.

Monday, September 29, 2025 (Sampling Event Communication & Set up)

- On the morning of September 29, the National Weather Service issued a forecast for a weather system beginning on September 29 at 2000 until 0300 on September 30. The system was forecasted to begin as thunderstorms and transition to widespread rain at 2100. The chance of precipitation was 90% with an 80% chance of rain totals exceeding 0.10" over a 12-hour period. The forecasted precipitation for this event was 0.20 to 0.30 inches of rain.
- Setup was accomplished on the morning of September 29. An expected precipitation depth of 0.11 inches was used to set trigger volumes at monitoring stations. A runoff calculations worksheet showing how the trigger volumes were calculated is included in Attachment A.

Monday, September 29, 2025 (Storm Event)

- The runoff started on September 29 at approximately 2140 and ended on September 30 at approximately 0619.
- Precipitation totals ranged between 0.62 and 0.73 inches at local rain gauges.

Flow measurements and precipitation data are listed in Table 1 along with a sampling summary. Hydrographs for the Whitewater and Americana sites showing flow, rain, and sample collection data are included in Attachment B.

3.2 Sampling Summary

The Whitewater and Americana monitoring stations were set up on September 29, 2025, to collect flow-proportional composite samples during the storm. Sampler enable conditions were programmed into the Whitewater and Americana flowmeters. Setup and sampling information are included in Table 1. The field forms completed during setup/shutdown and sampling are included in Attachment C.

Composite Samples

Composite samples were collected at the Whitewater and Americana monitoring stations and submitted to the Boise City Public Works Water Quality Laboratory (WQL) at 0607 on September 30. Analytical results are shown in Table 2 and pollutant loading estimates for the event are detailed in Table 3. Laboratory analytical reports are included in Attachment D.

Section 4: Quality Assurance/Quality Control

No quality control samples were collected during the September 29, 2025, storm event.

Data quality objectives for this storm were evaluated and tracked using the data validation review checklist included in Attachment A.

An acceptable composite sample represents at least 75 percent of the total discharge or at least 6 hours of the storm duration. The Americana composite sample met the representativeness criteria. However, the composite sample collected at Whitewater represented 52 percent of the total storm discharge and 3.5 hours of the storm duration, qualifying the composite sample for lack of representativeness. Additionally, the composites collected at Whitewater and Americana exceeded the preservation temperature maximum of 6°C. Therefore, all constituents analyzed are considered estimates with the exception of total metals, hardness, and chloride, in accordance with 40 CFR 136.

The Americana monitoring station has two associated rain gauges, Front and East, that are used to verify that storm criteria were met. In the September 29 storm, only the Front rain gauge was used to verify precipitation amounts. Further discussion is included in Section 5.

Section 5: Notes and Recommendations

Whitewater

The sampling team discovered that the sampling program was complete upon arriving on site at 2229 on September 29. After further review, it was determined that the first composite bottle was comprised of non-stormwater subsamples caused by the increase in dry weather background flow prior to the start of the storm event. The bottle was discarded and not submitted to the WQL. The completion of the initial sampler program prevented subsample collection at the beginning of the storm, which contributed to the low storm representativeness of the composite sample. Additionally, the seventh composite bottle was determined to be comprised of irrigation subsamples. This bottle was discarded and not submitted to the WQL. Due to the variability of irrigation influence to the Whitewater storm drain system, these occurrences are difficult to predict or mitigate.

Americana

After the end of the September 29 storm, it was discovered that the East rain gauge had not recorded precipitation data. The power to the loggers had been reset during routine maintenance. However, the power had been reset after relaunching the loggers, which voided the launch, resulting in no data collection. The logger was relaunched after the storm and verified to be logging.

Data Tables

Table 1. Sampling and Flow Summary					
	Lucky	Whitewater	Main	Americana	AS_6
Grab samples collected and submitted?	NO	NO	NO	NO	NO
Composite samples collected and submitted?	NO	YES	NO	YES	NO
Trigger volume	--	801 cf	--	2960 cf	--
Sampler enable condition (in) or Velocity cutoff (fps)	--	Level > 7.0"	--	Level >5.75"	--
Deadband/ Hysteresis (in)	--	1.0"	--	1.0"	--
Runoff start time	--	2151[1]	--	2140[1]	--
Grab sample collection time	--	--	--	--	--
Composite sample stop time	--	0317	--	0524	--
Runoff stop time	--	0320[2]	--	0619[2]	--
Volume of discharge sampled (ft^3)	--	133,103	--	260,313	--
Total runoff volume (ft^3)	--	255,852	--	288,387	--
Percent of storm flow sampled (%)	--	52%	--	90%	--
Composite sample duration (hrs)	--	3.5	--	7	--
Storm Precipitation (in)	--	0.73	0.62	0.62/--	0.62/--
Referenced Rain Gauge	Cynthia Mann	Whitewater	Front	Front/East	Front/East
Sampler messages (counts): Success	--	144	--	90	--
Number of composite bottles filled	--	6	--	4	--
Composite sample volume (Approx.; ml)	--	79,500	--	55,250	--

Notes:

– = No data.

[1] *Storm runoff started on 9/29/25.*

[2] *Storm runoff ended on 9/30/25.*

Table 2. Field and Analytical Data Summary

Monitoring Station	Sample Date	Sample ID Grab	Field Parameters				Analytical Parameters																					
			Dissolved Oxygen	pH	Conductivity	Temperature	E. coli	Sample ID Composite	BOD_5	COD	Chloride	Hardness as $CaCO_3$	Turbidity	TSS	TDS	Total Phosphorus	Orthophosphate as P	Ammonia as N	Nitrate + Nitrite as	TKN	Arsenic, total	Cadmium, dissolved	Cadmium, total	Copper, dissolved	Lead, dissolved	Lead, total	Mercury, total	Zinc, dissolved
			mg/L	S.U.	uS/cm	C	MPN/100 mL		mg/L	mg/L	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Whitewater	9/29/2025	--	--	--	--	--	--	250929-11-WC	39.6[1,2J]	146[1,2J]	5.11[1J]	29.3[1J]	22.0[1,2J]	159[1,2J]	80.7[1,2J]	0.541[1,2J]	0.268[1,2J]	0.409[1,2J]	0.380[1,2J]	2.95[1,2J]	3.0[1J]	<0.0100[1,2J]	0.093[1J]	3.9[1,2J]	0.21[1,2J]	8.4[1J]	0.0229[1J]	15.5[1,2J]
Americana	9/29/2025	--	--	--	--	--	--	250929-14-WC	46.4[2J]	215[2J]	6.64	35.1	32.3[2J]	171[2J]	87.5[2J]	0.637[2J]	0.277[2J]	0.695[2J]	0.470[2J]	3.38[2J]	3.9	<0.0100[2J]	0.18	5.3[2J]	0.18[2J]	11.7	0.0249	31.0[2J]

Notes:

-- = No data.

[1J] Composite sample qualified due to lack of representativeness.

[2J] Composite sample qualified due to exceedance of 6.0° C.

Table 3. Event Pollutant Loading Estimates in Pounds						
Monitoring Station	Event Date	TSS	Total Phosphorus	Ammonia as N	Nitrate + Nitrite as N	TKN
Whitewater	9/29/2025	2538.9[1J,2J]	8.639[1J,2J]	6.531[1J,2J]	6.069[1J,2J]	47.105[1J,2J]
Americana	9/29/2025	3078[2J]	11.46[2J]	12.51[2J]	8.459[2J]	60.8[2J]

Notes:

-- = No data

[1J] Composite sample qualified due to lack of representativeness.

[2J] Composite sample qualified due to exceedance of 6.0°C

Attachment A: Supplemental Documents

Sampling Event Communication Form

Data Validation Checklist

Runoff Calculation Worksheet

SAMPLING EVENT COMMUNICATION FORM

Date: 9/29/2025	Time: 9:01 AM	Initials: ST
Is there a targeted sampling event during the next 36 hours? (Or, if it is Friday, is a targeted event expected before 5:00 PM Monday?) Or, if it is Friday,		Yes

Past 72 hr Precip	
Date and time of expected event	Monday 8:00 pm – Tuesday 3:00 am
Expected amount of precipitation	0.20" – 0.30"
Percent chance of precipitation	90%
Percent chance of >0.10" over 12 hours	80%

NWS Update

Spoke with Les with NWS. The front will start as thunderstorms (convective) around 8:00pm and transition to light/ moderate rain (stratiform) from 9:00pm – 12:00am. There may be some light showers from 12:00am – 6:00am. This start time could be influenced by minor rain shadowing. We can expect between 0.2" – 0.3" throughout Monday – Tuesday morning.

Targeted Station & Samples

Lucky	Whitewater	Main	Americana	AS_6	State (Phase II)
☐ Grab	☐ Grab	☐ Grab	☐ Grab	☐ Grab	☒ Grab
☐ Composite	☒ Composite	☐ Composite	☒ Composite	☐ Composite	☒ Composite

Type of Forecasted Precipitation

☐ Light Rain	☒ Rain	☐ Rain on Snow
☒ Scattered Showers	☒ Thunder Showers	☐ Snowmelt
☐ Other:		

Reasons for Not Targeting a Forecasted Storm and/or Stations

☐ Holiday
☐ Waiting on Antecedent Dry Period
☐ Equipment Concerns:
☐ Other:

Text Forecast

NWS Forecast for: 2 Miles NNW Garden City ID
Issued by: National Weather Service Boise, ID
Last Update: 3:04 am MDT Sep 29, 2025

Today: A chance of showers, with thunderstorms also possible after noon. Mostly cloudy, with a high near 80. Southeast wind 5 to 10 mph becoming light and variable. Chance of precipitation is 40%.
Tonight: Showers and possibly a thunderstorm before midnight, then showers likely. Low around 55. East southeast wind 5 to 7 mph becoming light and variable after midnight. **Chance of precipitation is 90%. New precipitation amounts between a tenth and quarter of an inch, except higher amounts possible in thunderstorms.**
Tuesday: A chance of showers, with thunderstorms also possible after 3pm. Partly sunny, with a high near 74. South southeast wind 3 to 8 mph. Chance of precipitation is 30%.
Tuesday Night: Mostly cloudy, with a low around 54. South southeast wind around 6 mph becoming calm after midnight.

Wednesday: Partly sunny, with a high near 71. Calm wind becoming south southwest around 6 mph in the afternoon.
Wednesday Night: A 20 percent chance of showers before midnight. Mostly cloudy, with a low around 50.
Thursday: A 20 percent chance of showers before noon. Partly sunny, with a high near 67.
Thursday Night: Partly cloudy, with a low around 45.
Friday: Sunny, with a high near 67.
Friday Night: Mostly clear, with a low around 44.
Saturday: Sunny, with a high near 66.
Saturday Night: Mostly clear, with a low around 40.
Sunday: Sunny, with a high near 64.

Forecast Discussion

Area Forecast Discussion
National Weather Service Boise ID
304 AM MDT Mon Sep 29 2025

.SHORT TERM...Today through Wednesday night...The leading edge of a broad upper trough will push a cold front through the region this afternoon/evening. **Showers and thunderstorms will develop ahead of the front by early afternoon, with the threat continuing through late evening as the front tracks across SW Idaho.** Wind gusts to 40 mph are possible from showers and storms with locally heavy rain amounts from stronger storms. The larger rain totals through tonight continue to line up over SW Idaho, generally east of a line from the ID/OR/NV triple point, through Idaho City and Warm Lake. Areas east of this line are looking at 0.25-0.50" totals in the Snake Plain with 0.50-1.0" amounts in the mountains. **Otherwise 0.10-0.25" with local** 0.50" amounts are expected across SE Oregon and the lower Snake Plain through tonight.

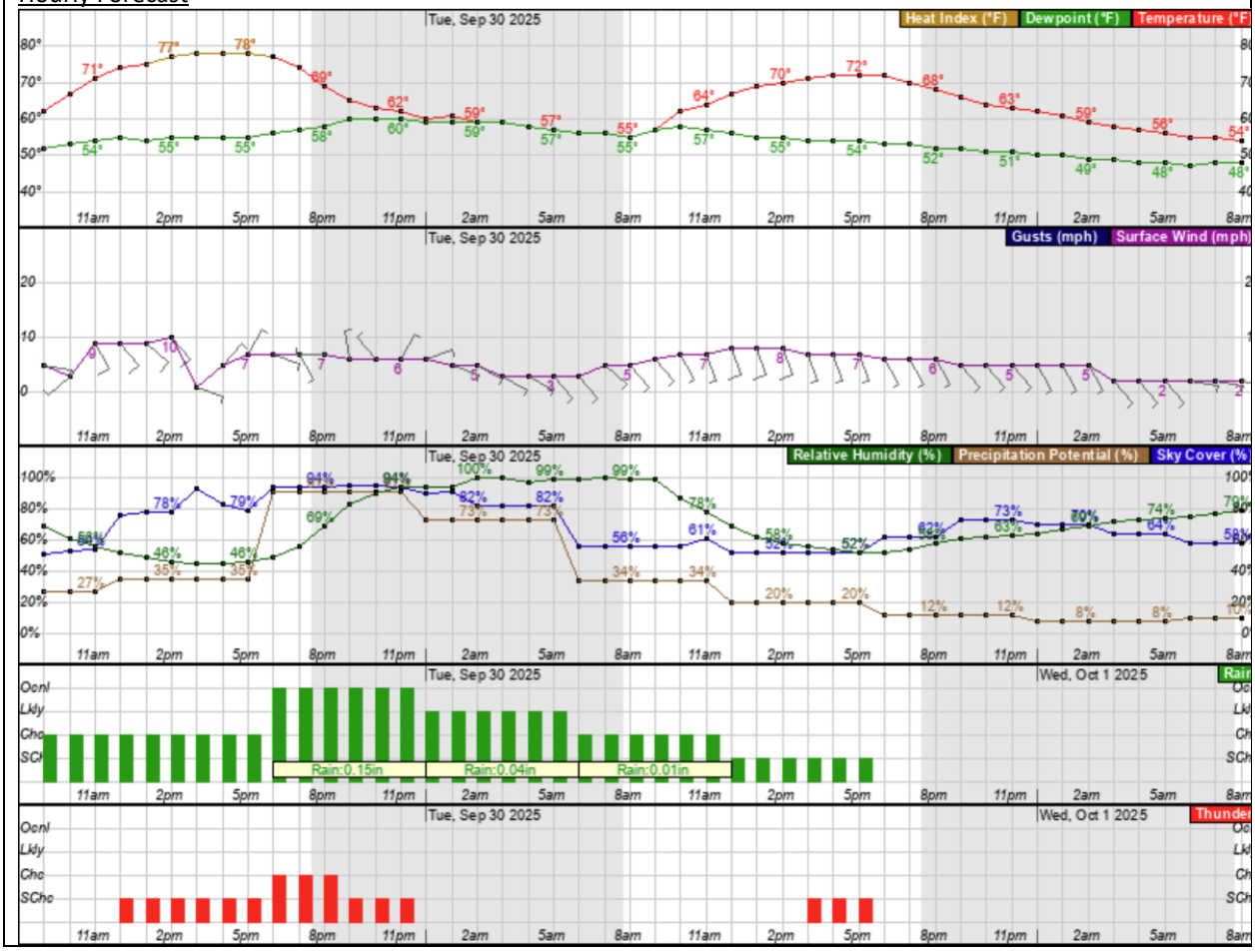
The trough axis remains offshore, keeping the region under southwest flow aloft through Wednesday. Mountains will hold onto a 30-60% chance of precipitation during this time while southeast Oregon and lower elevations of SW Idaho trend drier with probabilities in the 10-25% range. The atmosphere will hold enough instability to support thunderstorm potential on Tuesday, with cloudy and more stable conditions diminishing the threat on Wednesday. Precipitation amounts during this period will be lighter with less than 0.10" across lower elevations and up to 0.25" in the mtns. Temperatures step down 3-6 degrees each day with highs around normal on Wednesday (valleys low 70s, mtns upper 50s). Snow levels remain above 8kft MSL through Wednesday night.

.LONG TERM...Thursday through Monday...The unsettled pattern continues through Friday as the core of a Pacific low finally swings through the area. It moves quickly once making landfall, so only the short timeframe Thursday through Friday morning is affected. Thursday afternoon, higher elevations and s-central Idaho will see precipitation chances around 20 to 40%, correlated strongly with elevation. Right before the core of the low moves overhead, strong moisture flow Thursday evening and night is centered over the Magic Valley and s-central Idaho. While this will bring 0.1-0.2" of rainfall, the band of rain is narrow, and could easily shift in coming model runs. As the

core of the low moves overhead Friday afternoon, precip chances drop drastically.

Skies remain cloudy behind the strong trough, and while another wave begins to develop for Sunday, unfavorable moisture flow among ensemble means hints at a low chance for further precip outside of virga and very light rainfall amounts in the mountains. This secondary wave will however stall and amplify directly over the region Monday, increasing chances of precipitation in the eastern portions of our area, but also continuing the cooling trend. Temps about 5 degrees below normal Thursday through Saturday drop slightly to 5-10 degrees below normal Sunday and Monday. Given model agreement on the amplification of the Sun/Mon low, it seems likely that temps could continue the downward trend after Monday.

Hourly Forecast



Storm Event QA/QC Checklist – Phase I

STORM DATE: 9/29/25				
A. Event and Data Completeness	**Yes**	**No**	**N/A**	**Notes**
1. Field data sheets filled out completely and clearly	X			
2. Field parameters reviewed, and any problems/issues addressed	X			
3. All samples collected as specified	X			
4. All samples delivered to lab promptly (review chain of custody rpts)	X			See analytical reports for noted composite sample container temperatures
5. Inconsistencies/clarifications discussed with sampling team member			X	
6. All analytical reports from lab received	X			
B. Validation and Verification Methods	**Yes**	**No**	**N/A**	**Notes**
1. Outliers and unexpected values discussed with lab			X	
2. Appropriate analytical methods used	X			
3. All lab QA samples were within method acceptance criteria	X			
4. All samples reviewed and data qualifiers assigned if needed	KJ			
5. Data quality objective achieved	X			

C. Specific Storm and Sample QA/QC Criteria	**Lucky**	**Whitewater**	**Main**	**Americana**	**AS_6**	**Program Criteria**	**Met**	**Qualify**	**Reject**
1. Antecedent dry period (inches in previous 72-hours)	-	0.00”	-	0.00”	-	< 0.11” in 72 hrs	X		
2. Precipitation (inches)	-	0.73”	-	0.62”	-	> 0.10”	X		
3. Sampled amount (% of total run-off)	-	52%	-	90%	-	>= 75% or >= 6 hrs: no qualifier >= 50% and <75%: qualify < 50%: reject		X Whitewater	
4. Composite sample duration (hours)	-	3.5	-	7	-		X		
4. E.coli sample holding time (hours)	-	-	-	-	-	<=8 hrs: no qualifier >8 and <=16 hrs.: qualify >16 hrs.: reject	-		
5. Filtering of samples for dissolved parameter analysis (hours)	-	4.5	-	1.5	-	<= 24 hrs: no qualifier > 24 hrs.: reject	X		

D. Notes

- Whitewater and Americana composites exceeded preservation temperature maximum, qualifying the sample. Therefore, all constituents are considered estimates with the exception of total metals, hardness, and chloride.
- Whitewater composite was also qualified due to lack of representativeness (50-75%).
- Composite samples for Lucky and AS_6 weren’t targeted because we didn’t learn the previous storm’s samples were qualified until after the event.

Reviewed by: Steven Turner Digitally signed by Steven Turner Date: 2025.11.07 11:45:28 -07'00'

Approved by: Monica I. Lowe Digitally signed by Monica I. Lowe Date: 2025.11.07 12:49:04 -07'00'

Storm Runoff Estimates and Trigger Volumes

Step 1. Enter runoff coefficients in yellow cells.
Step 2. Enter expected precipitation depth (in) in blue cell.
Step 3. Read trigger volumes (**bold**) in green cells.

Expected Precipitation Depth = 0.11
Aliquots per Sample = 17

Site	Area (ac)	Using RC calculated from flow data		
		RC	Expected Vol (ft^3)	Trigger Vol (ft^3)
Lucky	105	0.157	6582.5	**387**
Whitewater	498	0.069	13621.3	**801**
Main	79	0.246	7760.0	**456**
Main Alt	60	0.200	4791.6	**282**
Americana	875	0.144	50311.8	**2960**
Americana Alt	869	0.144	49966.8	**2939**
AS_6	204	0.046	3747.0	**220**
State	34	0.127	1724.2	**101**

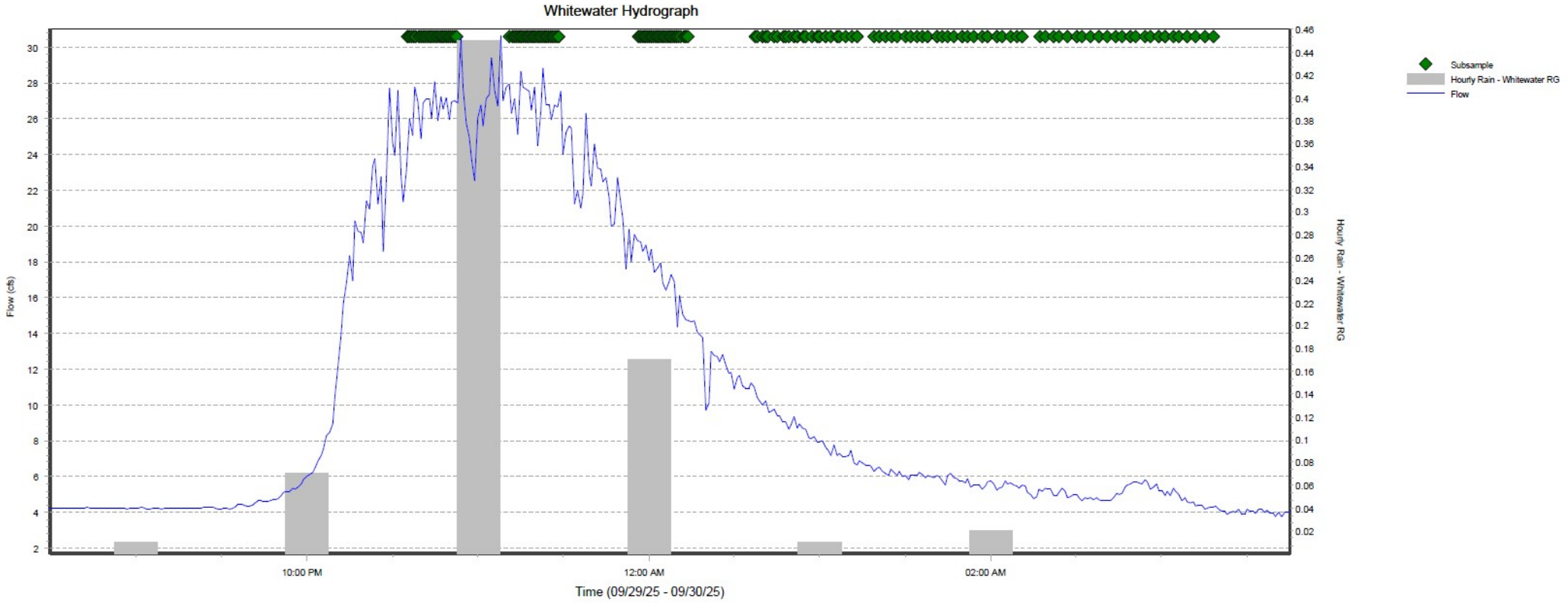
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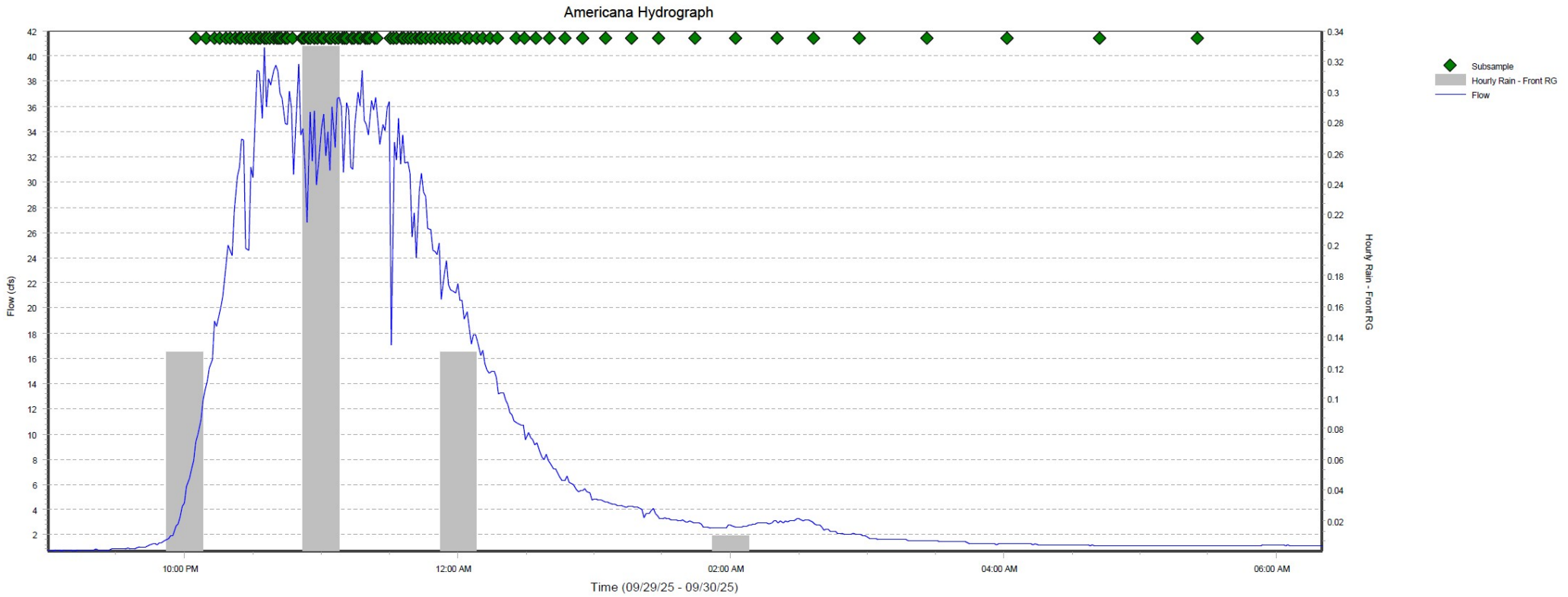
Calculated RC = runoff volume (ft^3) / [precip (ft) x area (ft^2)]

Where volume (ft^3) is the measured discharge, precip (ft) is the measured amount from local rain guage, and area (ft^2) is the watershed area.

Expected volume (ft^3) = RC x expected precip (ft) x area (ft^2)

Attachment B: Storm Event Hydrographs


Whitewater Hydrograph
Flow (cfs)
Hourly Rain - Whitewater RG
Time (09/29/25 - 09/30/25)
10:00 PM
12:00 AM
02:00 AM
Subsample
Hourly Rain - Whitewater RG
Flow


Americana Hydrograph
Flow (cfs)
Hourly Rain - Front RG
Time (09/29/25 - 09/30/25)
10:00 PM
12:00 AM
02:00 AM
04:00 AM
06:00 AM
Subsample
Hourly Rain - Front RG
Flow

Attachment C: Field Forms

Set Up/ Shut Down Form – ISCO (Whitewater, Americana, Main, State)

TATION: Whitewater

SET UP

Personnel: ST, KJ, JM

Date/Time On-Site: 9-29-25 1035

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
1039	5.75	1.83	1.59	—

Enable Condition:	7.0
Hysteresis:	1
Flow Pulse Interval:	801 cf

On-Site

- ☒ Check desiccant on flowmeter and sampler
- ☒ Replace flowmeter battery, install sampler battery
- ☒ Perform decon. cycle
- ☒ Install 15L sample bottle, with ice
- ☒ Leave bottle lid at site, in a clean re-sealable plastic bag
- ☒ Set sampler program parameters
- ☒ Check date/time on sampler
- ☒ Verify all cable and tubing connections
- ☒ Verify sampler program is running

Flowlink (Refer to PG 411 or PG 412, if needed)

- ☒ Direct or Remote; Date/time 9/29/25 10:41
- ☒ Retrieve data and review recent flow history
- ☒ Change Wireless Power Control to Storm Event
- ☒ Change Data Storage Rates to 1 minute for Level, Velocity, Total Flow, and Flow Rate
- ☒ Enable Sampler: On Trigger, and set Sampler Enable equation
- ☒ Set Sampler Pacing to Flow Paced, and set trigger volume

Comments: changed flow meter time from 1037 to 1039

Date/Time Off-Site: 9/29/25 10:57

SHUT DOWN

Personnel: ST

Date/Time On-Site: 10/1/25 12:23

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
858	8.39	1.77	0.92	—
Downloaded to:		ST Laptop		

On-Site

- ☐ Replace flowmeter battery
- ☐ Remove battery from sampler

Flowlink (Refer to Flowlink Instructions, if needed)

- ☒ Direct or Remote; Date/time 10/1/25 9:54
- ☒ Retrieve data
- ☒ Change Wireless Power Control to Dry Weather
- ☒ Change Data Storage Rates to 15 minutes for Level, Velocity, Total Flow, and Flow Rate
- ☒ Enable Sampler: Never

Comments:

Date/Time Off-Site: 10/1/25 12:26

STATION: Whitewater
Personnel: ST, KJ

Bottle — **of** —
Date/Time On-Site: 9/29/25 22:29

☐ Halt sampler program	
☐ Put lid on sample bottle; label sample bottle	
Sample ID:	-WC
Approx Sample Volume (mL):	—
Clarity (ex. Clear, Cloudy, Silty):	—
Color (ex. Clear, Gray, Tan, Brown, Black):	—
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	9/29/25 1139	Success	13	9/29/25 1214	Success
2	1141		14	1216	
3	1145		15	1219	
4	1148		16	1222	
5	1151		17	1225	
6	1154		18	1228	
7	1157		19	1233	
8	1159		20	1236	
9	1202		21	1240	
10	1205		22	1244	
11	1208		23	1248	
12	1210		24	1252	

Comments: This bottle was dumped because it was made up of non stormwater dry weather flow.

Date/Time Off-Site: _____

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: 9/29/25 22:33
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: Whitewater
Personnel: KJ, ST
Bottle 1 **of** 6
Date/Time On-Site: ~~9/29/25 1107~~ 9/29/25 2307

☒ Halt sampler program	
☒ Put lid on sample bottle; label sample bottle	
Sample ID:	250929-11 -WC
Approx Sample Volume (mL):	13250 mL
Clarity (ex. Clear, Cloudy, Silty):	Cloudy
Color (ex. Clear, Gray, Tan, Brown, Black):	Black
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	9/29/25 2234	Success	13	9/29/25 2243	Success
2	2235		14	2244	
3	2235		15	2245	
4	2236		16	2245	
5	2237		17	2246	
6	2238		18	2247	
7	2239		19	2248	
8	2239		20	2248	
9	2240		21	2249	
10	2241		22	2250	
11	2242		23	2251	
12	2242		24	2251	Success

Comments:

Date/Time Off-Site: 9/29/25 ~~1113~~ 2313

If sampling is complete:	If continuing sampling (sample bottle change-out):
☐ Power off sampler, if separate from flowmeter	☑ Keep flowmeter running
☐ Keep flowmeter running	☑ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☑ Restart program from beginning
	Date/Time Restarted: 9/29/25 2311
	☑ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	3.0"	3500 mL	5.5"	7250 mL	8.0"	11000 mL	10.5"	14750 mL
1.0"	800 mL	3.5"	4250 mL	6.0"	8000 mL	8.5"	11750 mL	11.0"	15500 mL
1.5"	1400 mL	4.0"	5000 mL	6.5"	8750 mL	9.0"	12500 mL	11.5"	16250 mL
2.0"	2000 mL	4.5"	5750 mL	7.0"	9500 mL	9.5"	13250 mL	After 12"	1" = 1500 mL
2.5"	2750 mL	5.0"	6500 mL	7.5"	10250 mL	10.0"	14000 mL	Lab min	8,000 mL

Composite Sample Collection

STATION: Whitaker
Personnel: KJ, ST

Bottle 2 **of** 6
Date/Time On-Site: 9/29/25 1152

☒ Halt sampler program		
☒ Put lid on sample bottle; label sample bottle		
Sample ID:	250929-11	-WC
Approx Sample Volume (mL):	13,250 mL	
Clarity (ex. Clear, Cloudy, Silty):	Silty	
Color (ex. Clear, Gray, Tan, Brown, Black):	Brown	
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	9/29/25 2310	Success	13	9/29/25 2319	Success
2	2311		14	2320	
3	2311		15	2320	
4	2312		16	2321	
5	2313		17	2322	
6	2314		18	2323	
7	2314		19	2323	
8	2315		20	2324	
9	2316		21	2325	
10	2317		22	2326	
11	2317		23	2326	
12	2318		24	2327	

Comments:

Date/Time Off-Site: 9/29/25 2355

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: 9/29 2354
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: Whitewater
Personnel: ST, KJ

Bottle 3 **of** 6
Date/Time On-Site: 9/30/25 0030

☒ Halt sampler program		
☒ Put lid on sample bottle; label sample bottle		
Sample ID:	250929-11	-WC
Approx Sample Volume (mL):	13,250 mL	
Clarity (ex. Clear, Cloudy, Silty):	Cloudy	
Color (ex. Clear, Gray, Tan, Brown, Black):	Brown	
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	9/29/25 2355	Success	13	9/30/25 0004	Success
2	2356		14	0005	
3	2356		15	0005	
4	2357		16	0006	
5	2358		17	0007	
6	2359		18	0008	
7	2359		19	0008	
8	9/30/25 0000		20	0009	
9	0001		21	0010	
10	0002		22	0011	
11	0002		23	0012	
12	0003		24	0013	

Comments:

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: ~~9/30 12:35~~ 5T 00:36
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	3.0"	3500 mL	5.5"	7250 mL	8.0"	11000 mL	10.5"	14750 mL
1.0"	800 mL	3.5"	4250 mL	6.0"	8000 mL	8.5"	11750 mL	11.0"	15500 mL
1.5"	1400 mL	4.0"	5000 mL	6.5"	8750 mL	9.0"	12500 mL	11.5"	16250 mL
2.0"	2000 mL	4.5"	5750 mL	7.0"	9500 mL	9.5"	13250 mL	After 12"	1" = 1500 mL
2.5"	2750 mL	5.0"	6500 mL	7.5"	10250 mL	10.0"	14000 mL	Lab min	8,000 mL

Composite Sample Collection

STATION: Whitewater **Bottle** 4 **of** 6

Personnel: KT, ST **Date/Time On-Site:** 9/30/25 0114

☒ Halt sampler program	
☒ Put lid on sample bottle; label sample bottle	
Sample ID:	250929-11 -WC
Approx Sample Volume (mL):	~3,250 mL
Clarity (ex. Clear, Cloudy, Silty):	Silty
Color (ex. Clear, Gray, Tan, Brown, Black):	Brown
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	9/30/25 0036	Success	13	9/30/25 0053	Success
2	0037		14	0054	
3	0039		15	0056	
4	0040		16	0058	
5	0041		17	0059	
6	0043		18	0101	
7	0044		19	0103	
8	0046		20	0105	
9	0047		21	0105	
10	0048		22	0108	
11	0050		23	0110	
12	0050		24	0112	

Comments:

If sampling is complete:
- ☐ Power off sampler, if separate from flowmeter
- ☐ Keep flowmeter running
- ☐ Add ice to sample transport cooler

If continuing sampling (sample bottle change-out):
- ☒ Keep flowmeter running
- ☒ Install new 15L bottle; add ice
- ☒ Restart program from beginning

Date/Time Restarted: 9/30 1116

- ☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: Whitewater **Bottle** 5 **of** 6

Personnel: ST, KT **Date/Time On-Site:** 9/30/25 2:10

☒ Halt sampler program	
☒ Put lid on sample bottle; label sample bottle	
Sample ID:	250929-11 -WC
Approx Sample Volume (mL):	13,250 mL
Clarity (ex. Clear, Cloudy, Silty):	Clear
Color (ex. Clear, Gray, Tan, Brown, Black):	Tan
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	9/30/25 0118	Success	13	9/30/25 0143	Success
2	0120		14	0145	
3	0122		15	0149	
4	0124		16	0151	
5	0126		17	0153	
6	0129		18	0156	
7	0131		19	0158	
8	0132		20	0201	
9	0135		21	0203	
10	0137		22	0206	
11	0140		23	0208	
12	0142		24	0209	

Comments:

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: 9/30 2:15
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: Whitewater **Bottle** 6 **of** 6

Personnel: KJ, ST **Date/Time On-Site:** 9/30/25 0310

☒ Halt sampler program	
☐ Put lid on sample bottle; label sample bottle	
Sample ID:	250929-11 -WC
Approx Sample Volume (mL):	13250
Clarity (ex. Clear, Cloudy, Silty):	Cloudy
Color (ex. Clear, Gray, Tan, Brown, Black):	Tan
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	9/30/25 0216	Success	13	9/30/25 0248	Success
2	0218		14	0250	
3	0220		15	0253	
4	0223		16	0255	
5	0226		17	0258	
6	0229		18	0300	
7	0230		19	0303	
8	0233		20	0304	
9	0236		21	0308	
10	0240		22	0311	
11	0243		23	0314	
12	0245		24	0317	

Comments:

If sampling is complete:
- ☐ Power off sampler, if separate from flowmeter
- ☐ Keep flowmeter running
- ☐ Add ice to sample transport cooler

If continuing sampling (sample bottle change-out):
- ☒ Keep flowmeter running
- ☒ Install new 15L bottle; add ice
- ☒ Restart program from beginning

Date/Time Restarted: 9/30/25 0321

- ☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: Whitewater — Bottle 7 ST of —

Personnel: KJ, ST — **Date/Time On-Site:** 9/30/25

☒ Halt sampler program	
☐ Put lid on sample bottle; label sample bottle	
Sample ID:	~~250930~~ 250929-11 -WC
Approx Sample Volume (mL):	
Clarity (ex. Clear, Cloudy, Silty):	
Color (ex. Clear, Gray, Tan, Brown, Black):	
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	9/30/25 324	Success	13	9/30/25 405	Success
2	327		14	409	
3	329		15	413	
4	334		16	417	
5	337		17		
6	340		18		
7	344		19		
8	347		20		
9	351		21		
10	355		22		
11	358		23		
12	402		24		

Comments: This bottle was not submitted to the lab due to suspected non-stormwater flow. Rain stopped around 1:45 and subsamples were still pulling at 3-5 minute intervals without slowing down. Bottle was very clear too.

Date/Time Off-Site: _____

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☒ Power off sampler, if separate from flowmeter	☐ Keep flowmeter running
☒ Keep flowmeter running	☐ Install new 15L bottle; add ice
☒ Add ice to sample transport cooler	☐ Restart program from beginning
	Date/Time Restarted: _____
	☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Set Up/ Shut Down Form – ISCO (Whitewater, Americana, Main, State)

TATION: Americana

SET UP

Personnel: ST, KJ

Date/Time On-Site: 9/29/25 11:19

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
11:20	3.78	0.66	1.430	11.44

Enable Condition:	5.75
Hysteresis:	1
Flow Pulse Interval:	2960 cf

On-Site
- ☒ Check desiccant on flowmeter and sampler
- ☒ Replace flowmeter battery, install sampler battery
- ☒ Perform decon. cycle
- ☒ Install 15L sample bottle, with ice
- ☒ Leave bottle lid at site, in a clean re-sealable plastic bag
- ☒ Set sampler program parameters
- ☒ Check date/time on sampler
- ☒ Verify all cable and tubing connections
- ☒ Verify sampler program is running

Flowlink (Refer to PG 411 or PG 412, if needed)
- ☒ Direct or Remote; Date/time 9/29/25 11:25
- ☒ Retrieve data and review recent flow history
- ☒ Change Wireless Power Control to Storm Event
- ☒ Change Data Storage Rates to 1 minute for Level, Velocity, Total Flow, and Flow Rate
- ☒ Enable Sampler: On Trigger, and set Sampler Enable equation
- ☒ Set Sampler Pacing to Flow Paced, and set trigger volume

Comments: Changed flowmeter time from 11:22 to 11:25

Date/Time Off-Site: 9/29/25 11:40

SHUT DOWN

Personnel: ST

Date/Time On-Site: 10/1/2025 10:50

Time	Level (in)	Flow (cfs)	Velocity (fps)	Battery (V)
9:06	7.69	3.02	2.324	11.82
	Downloaded to:	ST Laptop		

On-Site
- ☒ Replace flowmeter battery
- ☒ Remove battery from sampler

Flowlink (Refer to Flowlink Instructions, if needed)
- ☒ Direct or (Remote); Date/time 10/1 ~~9:07~~ ST 10:17
- ☒ Retrieve data
- ☒ Change Wireless Power Control to Dry Weather
- ☒ Change Data Storage Rates to 15 minutes for Level, Velocity, Total Flow, and Flow Rate
- ☒ Enable Sampler: Never

Comments:

Date/Time Off-Site: 10/1/2025 10:55

Revised 250922 ST

STATION: Americana **Bottle** 1 **of** 4

Personnel: KJ, ST **Date/Time On-Site:** 9/29/25 22:45

☒ Halt sampler program	
☒ Put lid on sample bottle; label sample bottle	
Sample ID:	250929 - 14 -WC
Approx Sample Volume (mL):	14750 mL
Clarity (ex. Clear, Cloudy, Silty):	Silty
Color (ex. Clear, Gray, Tan, Brown, Black):	Black
QA/QC Sample ID:	-103 (Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	9/29/25 2203	Success	13	9/29/25 2231	Success
2	2208	↓	14	2232	↓
3	2212	↓	15	2234	↓
4	2214	↓	16	2235	↓
5	2217	↓	17	2236	↓
6	2218	↓	18	2238	↓
7	2221	↓	19	2239	↓
8	2223	↓	20	2240	↓
9	2224	↓	21	2241	↓
10	2226	↓	22	2242	↓
11	2228	↓	23	2244	↓
12	↓ 2229	↓	24	↓ 2246	↓

Comments:

Date/Time Off-Site: 9/29/25 2251

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning ST
	Date/Time Restarted: 9/29/25 ~~10~~ 2249
	☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: Americana **Bottle** 2 **of** 4

Personnel: KS, ST **Date/Time On-Site:** 9/29/25 2320

☒ Halt sampler program		
☒ Put lid on sample bottle; label sample bottle		
Sample ID:	250929-14	-WC
Approx Sample Volume (mL):	14750	
Clarity (ex. Clear, Cloudy, Silty):	Silty	
Color (ex. Clear, Gray, Tan, Brown, Black):	Brown	
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	9/29/25 2250	Success	13	9/29/25 2308	Success
2	2251		14	2309	
3	2253		15	2310	
4	2254		16	2312	
5	2256		17	2313	
6	2257		18	2315	
7	2259		19	2316	
8	2300		20	2318	
9	2302		21	2319	
10	2303		22	2320	
11	2305		23	2322	
12	2306		24	2323	

Comments:

KS 9/29/25

Date/Time Off-Site: ~~9/29/25~~ 2330

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: 9/29 2328
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	~~14750 mL~~
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: Americana **Bottle** 3 **of** 4

Personnel: KJ, ST **Date/Time On-Site:** 9/30/25 0010

☐ Halt sampler program		
☐ Put lid on sample bottle; label sample bottle		
Sample ID:	250929-14	-WC
Approx Sample Volume (mL):	15500 mL	
Clarity (ex. Clear, Cloudy, Silty):	Cloudy	
Color (ex. Clear, Gray, Tan, Brown, Black):	Brown	
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	9/29/25 2329	Success	13	9/29/25 2349	Success
2	2330		14	2351	
3	2332		15	2353	
4	2334		16	2355	
5	2335		17	2356	
6	2337		18	2359	
7	2338		19	9/30/25 0002	
8	2340		20	0004	
9	2341		21	0007	
10	2343		22	0010	
11	2344		23	0013	
12	2347		24	0016	

Comments:

Date/Time Off-Site: 9/30/25 0023

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☐ Power off sampler, if separate from flowmeter	☒ Keep flowmeter running
☐ Keep flowmeter running	☒ Install new 15L bottle; add ice
☐ Add ice to sample transport cooler	☒ Restart program from beginning
	Date/Time Restarted: 0020
	☒ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Composite Sample Collection

STATION: Americana **Bottle** 4 **of** 4

Personnel: ST, KJ **Date/Time On-Site:** 9/30/25 0437

☒ Halt sampler program		
☒ Put lid on sample bottle; label sample bottle		
Sample ID:	250929-14	-WC
Approx Sample Volume (mL):	10250 mL	
Clarity (ex. Clear, Cloudy, Silty):	Clear	
Color (ex. Clear, Gray, Tan, Brown, Black):	Tan	
QA/QC Sample ID:	-103	(Time: 1200)

Subsample Information

Trigger #	Date/Time	Error Message/ Subsample Result	Trigger #	Date/Time	Error Message/ Subsample Result
1	9/30/25 0024	Success	13	9/30/25 235	Success
2	0028		14	255	
3	0033		15	325	
4	0039		16	400	
5	0046		17	441	
6	0054		18	524	
7	104		19		
8	115		20		
9	127		21		
10	143		22		
11	201		23		
12	219		24		

Comments:

If sampling is complete:	**If continuing sampling (sample bottle change-out):**
☒ Power off sampler, if separate from flowmeter ☒ Keep flowmeter running ☒ Add ice to sample transport cooler	☐ Keep flowmeter running ☐ Install new 15L bottle; add ice ☐ Restart program from beginning **Date/Time Restarted:** _____ ☐ Verify running

Liquid Height vs. Approximate Sample Volume Conversion Chart

Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume	Liquid Height	Sample Volume
0.5"	400 mL	**3.0"**	3500 mL	**5.5"**	7250 mL	**8.0"**	11000 mL	**10.5"**	14750 mL
1.0"	800 mL	**3.5"**	4250 mL	**6.0"**	8000 mL	**8.5"**	11750 mL	**11.0"**	15500 mL
1.5"	1400 mL	**4.0"**	5000 mL	**6.5"**	8750 mL	**9.0"**	12500 mL	**11.5"**	16250 mL
2.0"	2000 mL	**4.5"**	5750 mL	**7.0"**	9500 mL	**9.5"**	13250 mL	**After 12"**	1" = 1500 mL
2.5"	2750 mL	**5.0"**	6500 mL	**7.5"**	10250 mL	**10.0"**	14000 mL	**Lab min**	8,000 mL

Attachment D: Storm Event Analytical Reports

Report Date: 10/29/2025 14:48

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Samples in this Report

Lab ID	Sample	Sample Description	Matrix	Qualifiers	Sampled	Received
AC00445-01	ACST1C	250929-11-WC	Water		9/30/25 3:17	9/30/25 6:07
Comments:	Temperature at receipt, 10.5 degrees C					
AC00445-02	ACST1C	250929-14-WC	Water		9/30/25 5:24	9/30/25 6:07
Comments:	Temperature at receipt 11.4 degrees C					

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Report Date: 10/29/2025 14:48

Boise City Public Works
Water Quality Laboratory
11818 Joplin Road
Boise, Idaho 83714-1076
Telephone (208) 608-7240
Fax (208) 608-7319

Analysis Report

Location:	ACST1C	Location Description:	250929-11-WC
Date/Time Collected:	09/29/2025 22:34 - 09/30/2025 03:17		
Lab Number:	AC00445-01	Sample Collector:	K.J
Sample Type:	Composite	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
Ammonia, as N	B253239	0.409	mg/L	0.0450	0.0450	Timberline Ammonia-001	10/07/25	10/7/25 11:56	RCJ	
BOD5	B253163	39.6	mg/L	2.00	2.00	SM 5210 B-2016	09/30/25	10/5/25 10:48	ASE	
Chloride	B253426	5.11	mg/L	0.500	0.500	EPA 300.0, Rev. 2.1 (1993)	10/21/25	10/21/25 12:59	RHC	
COD	B253162	146	mg/L	7.00	7.00	*** DEFAULT SPECIFIC METHOD ***	09/30/25	9/30/25 11:19	NTS	
Nitrate-Nitrite, as N	B253296	0.380	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	10/09/25	10/9/25 11:50	JAL	
TKN	B253283	2.95	mg/L	0.100	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	10/09/25	10/10/25 8:42	JAL	
Total Dissolved Solids	B253207	80.7	mg/L	25.0	25.0	SM 2540 C-2015	10/02/25	10/3/25 14:43	MCB	
Total Suspended Solids	B253175	159	mg/L	0.900	0.900	SM 2540 D-2015	09/30/25	9/30/25 9:47	RCJ	
Turbidity	B253184	22.0	NTU	0.3	0.3	EPA 180.1, Rev. 2.0 (1993)	10/01/25	10/1/25 7:08	ALN	
Dissolved Wet Chemistry										
Orthophosphate, as P	B253178	0.268	mg/L	3.00E-3	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	09/30/25	9/30/25 11:45	BAK	
Total Metals										
Mercury	B253288	0.0229	ug/L	6.00E-3	6.00E-3	EPA 245.1	10/09/25	10/9/25 13:36	SAS	J
Arsenic	B253218	3.0	ug/L	0.050	0.050	EPA 200.8	10/05/25	10/8/25 13:43	DMW	
Cadmium	B253218	0.093	ug/L	0.010	0.010	EPA 200.8	10/05/25	10/8/25 13:43	DMW	
Calcium	B253203	8.77	mg/L	0.0500	0.0500	EPA 200.7	10/02/25	10/9/25 11:36	SMC	
Lead	B253218	8.4	ug/L	0.010	0.010	EPA 200.8	10/05/25	10/8/25 13:43	DMW	
Magnesium	B253203	1790	ug/L	40.0	40.0	EPA 200.7	10/02/25	10/9/25 11:36	SMC	
Phosphorus as P	B253203	0.541	mg/L	0.0110	0.0110	EPA 200.7	10/02/25	10/9/25 11:36	SMC	
Hardness	B253203	29.3	mg/L	0.125	0.125	SM 2340 B-2011	10/02/25	10/9/25 11:36	SMC	
Dissolved Metals										
Cadmium	B253211	<0.0100	ug/L	0.010	0.010	EPA 200.8	10/03/25	10/3/25 15:57	DMW	U
Copper	B253211	3.9	ug/L	0.14	0.14	EPA 200.8	10/03/25	10/3/25 15:57	DMW	
Lead	B253211	0.21	ug/L	5.00E-3	5.00E-3	EPA 200.8	10/03/25	10/3/25 15:57	DMW	
Zinc	B253211	15.5	ug/L	0.50	0.50	EPA 200.8	10/03/25	10/3/25 15:57	DMW	

* The reported adjusted "MDL" is sample-specific. The analysis MDL as defined by 40 CFR pt 136 App.B. was corrected for dilution, dry weight, or method-defined ML.

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Report Date: 10/29/2025 14:48

Boise City Public Works
Water Quality Laboratory
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Boise, Idaho 83714-1076
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Analysis Report

Location:	ACST1C	Location Description:	250929-14-WC
Date/Time Collected:	09/29/2025 22:03 - 09/30/2025 05:24		
Lab Number:	AC00445-02	Sample Collector:	K.J
Sample Type:	Composite	Sample Matrix:	Water

Analyte Name	Batch	Result	Units	Adjusted MDL *	Method MDL	Analysis Method Reference	Prepared	Analyzed	Analyst Initials	Qualifier
Wet Chemistry										
Ammonia, as N	B253239	0.695	mg/L	0.0450	0.0450	Timberline Ammonia-001	10/07/25	10/7/25 12:00	RCJ	
BOD5	B253163	46.4	mg/L	2.00	2.00	SM 5210 B-2016	09/30/25	10/5/25 10:45	ASE	
Chloride	B253426	6.64	mg/L	0.500	0.500	EPA 300.0, Rev. 2.1 (1993)	10/21/25	10/21/25 14:39	RHC	
COD	B253162	215	mg/L	7.00	7.00	*** DEFAULT SPECIFIC METHOD ***	09/30/25	9/30/25 11:19	NTS	
Nitrate-Nitrite, as N	B253296	0.470	mg/L	0.0250	0.0250	EPA 353.2, Rev. 2.0 (1993)	10/09/25	10/9/25 11:55	JAL	
TKN	B253157	3.38	mg/L	0.100	0.100	EPA 351.2, 10-107-06-2-M (Equivalent)	09/30/25	9/30/25 14:26	ALN	
Total Dissolved Solids	B253207	87.5	mg/L	25.0	25.0	SM 2540 C-2015	10/02/25	10/3/25 14:46	MCB	
Total Suspended Solids	B253175	171	mg/L	0.900	0.900	SM 2540 D-2015	09/30/25	9/30/25 9:58	RCJ	
Turbidity	B253184	32.3	NTU	0.3	0.3	EPA 180.1, Rev. 2.0 (1993)	10/01/25	10/1/25 7:16	ALN	
Dissolved Wet Chemistry										
Orthophosphate, as P	B253178	0.277	mg/L	3.00E-3	3.00E-3	EPA 365.1, Rev. 2.0 (1993)	09/30/25	9/30/25 11:46	BAK	
Total Metals										
Mercury	B253288	0.0249	ug/L	6.00E-3	6.00E-3	EPA 245.1	10/09/25	10/9/25 13:53	SAS	J
Arsenic	B253218	3.9	ug/L	0.050	0.050	EPA 200.8	10/05/25	10/8/25 14:01	DMW	
Cadmium	B253218	0.18	ug/L	0.010	0.010	EPA 200.8	10/05/25	10/8/25 14:01	DMW	
Calcium	B253203	10.4	mg/L	0.0500	0.0500	EPA 200.7	10/02/25	10/9/25 11:52	SMC	
Lead	B253218	11.7	ug/L	0.010	0.010	EPA 200.8	10/05/25	10/8/25 14:01	DMW	
Magnesium	B253203	2200	ug/L	40.0	40.0	EPA 200.7	10/02/25	10/9/25 11:52	SMC	
Phosphorus as P	B253203	0.637	mg/L	0.0110	0.0110	EPA 200.7	10/02/25	10/9/25 11:52	SMC	
Hardness	B253203	35.1	mg/L	0.125	0.125	SM 2340 B-2011	10/02/25	10/9/25 11:52	SMC	
Dissolved Metals										
Cadmium	B253211	<0.0100	ug/L	0.010	0.010	EPA 200.8	10/03/25	10/3/25 16:07	DMW	U
Copper	B253211	5.3	ug/L	0.14	0.14	EPA 200.8	10/03/25	10/3/25 16:07	DMW	
Lead	B253211	0.18	ug/L	5.00E-3	5.00E-3	EPA 200.8	10/03/25	10/3/25 16:07	DMW	
Zinc	B253211	31.0	ug/L	0.50	0.50	EPA 200.8	10/03/25	10/3/25 16:07	DMW	

* The reported adjusted "MDL" is sample-specific. The analysis MDL as defined by 40 CFR pt 136 App.B. was corrected for dilution, dry weight, or method-defined ML.

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Report Date: 10/29/2025 14:48

Boise City Public Works
Water Quality Laboratory
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Boise, Idaho 83714-1076
Telephone (208) 608-7240
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Quality Control Report

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry									
Batch: B253157									
Blank (B253157-BLK1)									
TKN	<0.1	mg/L					09/30/2025	ALN	U
LCS (B253157-BS1)									
TKN			97.2	80-120			09/30/2025	ALN	
Duplicate (B253157-DUP1) Source ID: BB05074-01									
TKN					15.1	20	09/30/2025	ALN	D
Matrix Spike (B253157-MS1) Source ID: BB05074-01									
TKN			80.5	80-120			09/30/2025	ALN	D
Matrix Spike (B253157-MS4) Source ID: EP00505-02									
TKN			95.2	80-120			09/30/2025	ALN	D
Matrix Spike Dup (B253157-MSD1) Source ID: BB05074-01									
TKN			96.3	80-120	11.7	20	09/30/2025	ALN	D
Batch: B253162									
Blank (B253162-BLK1)									
COD	<7	mg/L					09/30/2025	NTS	U
LCS (B253162-BS1)									
COD			99.0	90-110			09/30/2025	NTS	
Duplicate (B253162-DUP1) Source ID: AC00445-02									
COD					9.76	10	09/30/2025	NTS	
Batch: B253163									
Blank (B253163-BLK1)									
BOD5	<2	mg/L					10/05/2025	ASE	Seed-01, U
LCS (B253163-BS1)									
BOD5			101	84.6-115.4			10/05/2025	ASE	
LCS (B253163-BS2)									
BOD5			106	84.6-115.4			10/05/2025	ASE	
Duplicate (B253163-DUP1) Source ID: LS02491-02									
BOD5					1.61	30	10/05/2025	ASE	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B253175									
Blank (B253175-BLK1)									
Total Suspended Solids	<0.9	mg/L					09/30/2025	RCJ	U
LCS (B253175-BS1)									
Total Suspended Solids			97.2	90-110			09/30/2025	RCJ	
Duplicate (B253175-DUP1) Source ID: AC00445-01									
Total Suspended Solids					13.6	20	09/30/2025	RCJ	
Batch: B253184									
Blank (B253184-BLK1)									
Turbidity	<0.3	NTU					10/01/2025	ALN	U
LCS (B253184-BS1)									
Turbidity			102	90-110			10/01/2025	ALN	
Duplicate (B253184-DUP1) Source ID: AC00445-02									
Turbidity					0.932	25	10/01/2025	ALN	
Batch: B253207									
Blank (B253207-BLK1)									
Total Dissolved Solids	<25	mg/L					10/02/2025	MCB	U
LCS (B253207-BS1)									
Total Dissolved Solids			97.3	90-110			10/02/2025	MCB	
Duplicate (B253207-DUP1) Source ID: AC00445-01									
Total Dissolved Solids					1.03	10	10/03/2025	MCB	
Batch: B253239									
Blank (B253239-BLK1)									
Ammonia, as N	<0.045	mg/L					10/07/2025	RCJ	U
Blank (B253239-BLK2)									
Ammonia, as N	<0.045	mg/L					10/07/2025	RCJ	U
LCS (B253239-BS1)									
Ammonia, as N			102	90-110			10/07/2025	RCJ	
LCS (B253239-BS2)									
Ammonia, as N			102	90-110			10/07/2025	RCJ	
Duplicate (B253239-DUP1) Source ID: BB05074-01									
Ammonia, as N					1.28	20	10/07/2025	RCJ	
Duplicate (B253239-DUP2) Source ID: WB04007-06									
Ammonia, as N					1.15	20	10/07/2025	RCJ	D
Matrix Spike (B253239-MS1) Source ID: BB05074-01									
Ammonia, as N			98.0	84-115			10/07/2025	RCJ	
Matrix Spike (B253239-MS2) Source ID: WB04007-06									
Ammonia, as N			99.7	84-115			10/07/2025	RCJ	D
Matrix Spike (B253239-MS3) Source ID: EP00505-02									
Ammonia, as N			103	84-115			10/07/2025	RCJ	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B253239 (Continued)									
Matrix Spike (B253239-MS4) Source ID: EP00506-01									
Ammonia, as N			99.1	84-115			10/07/2025	RCJ	D
Matrix Spike (B253239-MS5) Source ID: EP00506-02									
Ammonia, as N			103	84-115			10/07/2025	RCJ	D
Matrix Spike Dup (B253239-MSD1) Source ID: BB05074-01									
Ammonia, as N			100	84-115	1.82	20	10/07/2025	RCJ	
Matrix Spike Dup (B253239-MSD2) Source ID: WB04007-06									
Ammonia, as N			98.5	84-115	0.819	20	10/07/2025	RCJ	D
Batch: B253283									
Blank (B253283-BLK1)									
TKN	<0.1	mg/L					10/10/2025	JAL	U
LCS (B253283-BS1)									
TKN			98.8	80-120			10/10/2025	JAL	
Duplicate (B253283-DUP1) Source ID: BB05086-01									
TKN					0.452	20	10/10/2025	JAL	D
Duplicate (B253283-DUP2) Source ID: WB04007-05									
TKN					1.88	20	10/10/2025	JAL	D
Matrix Spike (B253283-MS1) Source ID: BB05086-01									
TKN			97.3	80-120			10/10/2025	JAL	D
Matrix Spike (B253283-MS2) Source ID: WB04007-05									
TKN			109	80-120			10/10/2025	JAL	D
Matrix Spike (B253283-MS3) Source ID: EP00503-02									
TKN			105	80-120			10/10/2025	JAL	D
Matrix Spike (B253283-MS4) Source ID: EP00505-03									
TKN			105	80-120			10/10/2025	JAL	D
Matrix Spike (B253283-MS5) Source ID: EP00506-01RE1									
TKN			101	80-120			10/10/2025	JAL	D
Matrix Spike (B253283-MS6) Source ID: EP00506-02									
TKN			97.9	80-120			10/10/2025	JAL	D
Matrix Spike Dup (B253283-MSD1) Source ID: BB05086-01									
TKN			103	80-120	2.74	20	10/10/2025	JAL	D
Matrix Spike Dup (B253283-MSD2) Source ID: WB04007-05									
TKN			112	80-120	1.09	20	10/10/2025	JAL	D

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Boise, Idaho 83714-1076
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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B253296									
Blank (B253296-BLK1)									
Nitrate-Nitrite, as N	<0.025	mg/L					10/09/2025	JAL	U
Blank (B253296-BLK2)									
Nitrate-Nitrite, as N	<0.025	mg/L					10/09/2025	JAL	U
Blank (B253296-BLK3)									
Nitrate-Nitrite, as N	<0.025	mg/L					10/09/2025	JAL	U
LCS (B253296-BS1)									
Nitrate-Nitrite, as N			96.5	90-110			10/09/2025	JAL	
LCS (B253296-BS2)									
Nitrate-Nitrite, as N			103	90-110			10/09/2025	JAL	
LCS (B253296-BS3)									
Nitrate-Nitrite, as N			103	90-110			10/09/2025	JAL	
Duplicate (B253296-DUP1) Source ID: AC00445-01									
Nitrate-Nitrite, as N					0.517	10	10/09/2025	JAL	
Duplicate (B253296-DUP2) Source ID: BB05086-02									
Nitrate-Nitrite, as N					3.62	10	10/09/2025	JAL	
Duplicate (B253296-DUP3) Source ID: EP00501-01									
Nitrate-Nitrite, as N					NR	10	10/09/2025	JAL	U
Duplicate (B253296-DUP4) Source ID: WB04007-06									
Nitrate-Nitrite, as N					0.129	10	10/09/2025	JAL	
Duplicate (B253296-DUP5) Source ID: BB05070-02									
Nitrate-Nitrite, as N					0.162	10	10/09/2025	JAL	
Matrix Spike (B253296-MS1) Source ID: AC00445-01									
Nitrate-Nitrite, as N			97.2	90-110			10/09/2025	JAL	
Matrix Spike (B253296-MS2) Source ID: BB05086-02									
Nitrate-Nitrite, as N			100	90-110			10/09/2025	JAL	
Matrix Spike (B253296-MS3) Source ID: EP00501-01									
Nitrate-Nitrite, as N			105	90-110			10/09/2025	JAL	
Matrix Spike (B253296-MS4) Source ID: WB04007-06									
Nitrate-Nitrite, as N			108	90-110			10/09/2025	JAL	
Matrix Spike (B253296-MS5) Source ID: BB05070-02									
Nitrate-Nitrite, as N			102	90-110			10/09/2025	JAL	
Matrix Spike Dup (B253296-MSD1) Source ID: AC00445-01									
Nitrate-Nitrite, as N			97.5	90-110	0.186	10	10/09/2025	JAL	
Matrix Spike Dup (B253296-MSD2) Source ID: BB05086-02									
Nitrate-Nitrite, as N			102	90-110	1.17	10	10/09/2025	JAL	
Matrix Spike Dup (B253296-MSD3) Source ID: EP00501-01									
Nitrate-Nitrite, as N			106	90-110	0.496	10	10/09/2025	JAL	
Matrix Spike Dup (B253296-MSD4) Source ID: WB04007-06									
Nitrate-Nitrite, as N			107	90-110	0.0566	10	10/09/2025	JAL	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Wet Chemistry (Continued)									
Batch: B253296 (Continued)									
Matrix Spike Dup (B253296-MSD5) Source ID: BB05070-02									
Nitrate-Nitrite, as N			99.9	90-110	1.40	10	10/09/2025	JAL	
Batch: B253426									
Blank (B253426-BLK1)									
Chloride	<0.5	mg/L					10/21/2025	RHC	U
Blank (B253426-BLK2)									
Chloride	<0.5	mg/L					10/21/2025	RHC	U
Blank (B253426-BLK3)									
Chloride	<0.5	mg/L					10/22/2025	RHC	U
LCS (B253426-BS1)									
Chloride			97.9	90-110			10/21/2025	RHC	
Duplicate (B253426-DUP1) Source ID: AC00445-01									
Chloride					0.924	10	10/21/2025	RHC	
Duplicate (B253426-DUP2) Source ID: BB05139-04									
Chloride					0.0951	10	10/22/2025	RHC	D
Matrix Spike (B253426-MS1) Source ID: AC00445-01									
Chloride			98.3	90-110			10/21/2025	RHC	
Matrix Spike (B253426-MS2) Source ID: BB05139-04									
Chloride			96.3	90-110			10/22/2025	RHC	D
Matrix Spike Dup (B253426-MSD1) Source ID: AC00445-01									
Chloride			96.1	90-110	1.83	10	10/21/2025	RHC	
Matrix Spike Dup (B253426-MSD2) Source ID: BB05139-04									
Chloride			96.7	90-110	0.351	10	10/22/2025	RHC	D
Dissolved Wet Chemistry									
Batch: B253178									
Blank (B253178-BLK1)									
Orthophosphate, as P	<0.003	mg/L					09/30/2025	BAK	U
LCS (B253178-BS1)									
Orthophosphate, as P			95.6	90-110			09/30/2025	BAK	
Duplicate (B253178-DUP1) Source ID: DX00337-01									
Orthophosphate, as P					0.851	10	09/30/2025	BAK	
Matrix Spike (B253178-MS1) Source ID: DX00337-01									
Orthophosphate, as P			103	90-110			09/30/2025	BAK	
Matrix Spike Dup (B253178-MSD1) Source ID: DX00337-01									
Orthophosphate, as P			102	90-110	0.450	10	09/30/2025	BAK	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals									
Batch: B253203									
Blank (B253203-BLK1)									
Calcium	<0.05	mg/L					10/09/2025	SMC	U
Magnesium	<40	ug/L					10/09/2025	SMC	U
Phosphorus as P	<0.011	mg/L					10/09/2025	SMC	U
LCS (B253203-BS1)									
Calcium			98.5	85-115			10/09/2025	SMC	
Magnesium			97.6	85-115			10/09/2025	SMC	
Phosphorus as P			105	85-115			10/09/2025	SMC	
Duplicate (B253203-DUP1) Source ID: AC00445-01									
Calcium					1.45	20	10/09/2025	SMC	
Magnesium					4.96	20	10/09/2025	SMC	
Phosphorus as P					0.163	20	10/09/2025	SMC	
Duplicate (B253203-DUP2) Source ID: ME00405-03									
Calcium					0.371	20	10/09/2025	SMC	
Magnesium					0.178	20	10/09/2025	SMC	
Phosphorus as P					0.253	20	10/09/2025	SMC	
Matrix Spike (B253203-MS1) Source ID: AC00445-01									
Calcium			98.5	70-130			10/09/2025	SMC	
Magnesium			97.6	70-130			10/09/2025	SMC	
Phosphorus as P			106	70-130			10/09/2025	SMC	
Matrix Spike (B253203-MS2) Source ID: ME00405-03									
Calcium			97.3	70-130			10/09/2025	SMC	
Magnesium			96.2	70-130			10/09/2025	SMC	
Phosphorus as P			107	70-130			10/09/2025	SMC	
Matrix Spike Dup (B253203-MSD1) Source ID: AC00445-01									
Calcium			98.6	70-130	0.0296	20	10/09/2025	SMC	
Magnesium			97.2	70-130	0.330	20	10/09/2025	SMC	
Phosphorus as P			106	70-130	0.0610	20	10/09/2025	SMC	
Matrix Spike Dup (B253203-MSD2) Source ID: ME00405-03									
Calcium			96.4	70-130	0.315	20	10/09/2025	SMC	
Magnesium			95.2	70-130	0.661	20	10/09/2025	SMC	
Phosphorus as P			107	70-130	0.230	20	10/09/2025	SMC	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Total Metals (Continued)									
Batch: B253218									
Blank (B253218-BLK1)									
Arsenic	<0.050	ug/L					10/08/2025	DMW	U
Cadmium	<0.010	ug/L					10/08/2025	DMW	U
Lead	<0.010	ug/L					10/08/2025	DMW	U
LCS (B253218-BS1)									
Arsenic			96.5	85-115			10/08/2025	DMW	
Cadmium			97.2	85-115			10/08/2025	DMW	
Lead			102	85-115			10/08/2025	DMW	
Duplicate (B253218-DUP1) Source ID: AC00445-01									
Arsenic					3.66	20	10/08/2025	DMW	
Cadmium					4.43	20	10/08/2025	DMW	
Lead					4.79	20	10/08/2025	DMW	
Matrix Spike (B253218-MS1) Source ID: AC00445-01									
Arsenic			95.7	70-130			10/08/2025	DMW	
Cadmium			97.8	70-130			10/08/2025	DMW	
Lead			98.8	70-130			10/08/2025	DMW	
Matrix Spike Dup (B253218-MSD1) Source ID: AC00445-01									
Arsenic			95.1	70-130	0.482	20	10/08/2025	DMW	
Cadmium			97.9	70-130	0.0171	20	10/08/2025	DMW	
Lead			99.5	70-130	0.389	20	10/08/2025	DMW	
Batch: B253288									
Blank (B253288-BLK1)									
Mercury	<0.006	ug/L					10/09/2025	SAS	U
LCS (B253288-BS1)									
Mercury			102	85-115			10/09/2025	SAS	
Duplicate (B253288-DUP1) Source ID: AC00445-01									
Mercury					1.47	20	10/09/2025	SAS	J
Duplicate (B253288-DUP2) Source ID: LS02508-07									
Mercury					5.04	20	10/09/2025	SAS	J
Matrix Spike (B253288-MS1) Source ID: AC00445-01									
Mercury			97.6	70-130			10/09/2025	SAS	
Matrix Spike (B253288-MS2) Source ID: LS02508-07									
Mercury			106	70-130			10/09/2025	SAS	
Matrix Spike Dup (B253288-MSD1) Source ID: AC00445-01									
Mercury			101	70-130	2.51	20	10/09/2025	SAS	
Matrix Spike Dup (B253288-MSD2) Source ID: LS02508-07									
Mercury			90.7	70-130	12.5	20	10/09/2025	SAS	

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Quality Control Report
(Continued)

Analyte Name	Method Blank	Units	% Recovery	Recovery Limits	RPD	RPD Limit	Analyzed	Analyst Initials	Qualifier
Dissolved Metals									
Batch: B253211									
Blank (B253211-BLK1)									
Cadmium	<0.010	ug/L					10/03/2025	DMW	U
Copper	<0.14	ug/L					10/03/2025	DMW	U
Lead	<0.0050	ug/L					10/03/2025	DMW	U
Zinc	<0.50	ug/L					10/03/2025	DMW	U
LCS (B253211-BS1)									
Cadmium			96.1	85-115			10/03/2025	DMW	
Copper			102	85-115			10/03/2025	DMW	
Lead			96.3	85-115			10/03/2025	DMW	
Zinc			108	85-115			10/03/2025	DMW	
Duplicate (B253211-DUP1) Source ID: AC00445-01									
Cadmium					NR	10	10/03/2025	DMW	U
Copper					0.279	10	10/03/2025	DMW	
Lead					1.09	10	10/03/2025	DMW	
Zinc					0.818	10	10/03/2025	DMW	
Matrix Spike (B253211-MS1) Source ID: AC00445-01									
Cadmium			92.5	70-130			10/03/2025	DMW	
Copper			95.7	70-130			10/03/2025	DMW	
Lead			91.0	70-130			10/03/2025	DMW	
Zinc			96.7	70-130			10/03/2025	DMW	
Matrix Spike Dup (B253211-MSD1) Source ID: AC00445-01									
Cadmium			93.5	70-130	0.995	10	10/03/2025	DMW	
Copper			97.2	70-130	1.18	10	10/03/2025	DMW	
Lead			92.1	70-130	1.15	10	10/03/2025	DMW	
Zinc			96.6	70-130	0.0654	10	10/03/2025	DMW	

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Report Date: 10/29/2025 14:48

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Notes and Definitions

Item	Definition
D	Data reported from a dilution
J	Estimated value
Seed-01	The seed depletion is greater than that recommended by the method. The LCS is acceptable showing the seed supports the method.
U	Analyte included in the analysis, but not detected
NR	No result for this parameter.

Method Reference Acronyms

Colilert	Colilert, IDEXX Laboratories, Inc.
EPA	Manual of Methods for Chemical Analysis of Water and Wastes, USEPA
GS	USGS Techniques of Water-Resources Investigations
HH	Hach Spectrophotometer Procedures Manual
SM	Standard Methods for the Examination of Water and Wastewater
SW	Test methods for Evaluating Solid Waste, SW-846

Stephen Quintero or Azubike Emenari
QA/QC Coordinator

Leslea Basterrechea
Water Quality Laboratory Manager

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Ada County Highway District

ACHD

Attn: Steven Turner
3775 Adams Street
Garden City, Idaho 83714–6418
Tel. (208) 407–4284

Purchase Order: 63069586

Project: Stormwater PI

Sampler(s): Kristen Jolliffe
Steven Turner

Lab#	Begin Date	End Date	Begin Time	End Time	Sample Identification	Sampler Initials	Matrix: Water	Type: Grab	Type: Composite	BOD_5 - SM 5210 B	COD - Hach 8000	TSS - SM 2540 D	TDS - SM 2540 C	TKN - EPA 351.2	TP - EPA 200.7	Orthophosphate - EPA 365.1	Total As, Cd, Pb - EPA 200.8	Diss. Cd Cu, Pb, Zn - EPA 200.8	Total Hg – EPA 245.1	E. Coli - IDEXX Colilert	Turbidity - EPA 180.1	Hardness - SM 2340 B-2011	NO_3+NO_2 - EPA 353.2	Timberline Ammonia-001	Chloride – EPA 300.0	Total Containers
ACQ0415-01	9/29/25	9/30/25	2234	0317	250929-11-WC	KJ	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	6
↓ -02	1	1	2203	0524	250929-14-WC	KJ	X		X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	4

Relinquished by (sign)	Date &Time Transferred	Received by (sign)	Comments/ Special Instructions
Kristen Jolliffe	9/30/25 0607	[signature] 09/30/25 0607	250929-11-WC - 10.5°C 250929-14-WC 11.4°C

241010 ST

ACQ0415

Attachment D

Americana Sub Watershed Summary

Americana Subwatershed Monitoring Summary

Water Year 2025

Prepared by
Ada County Highway District
January 7, 2026

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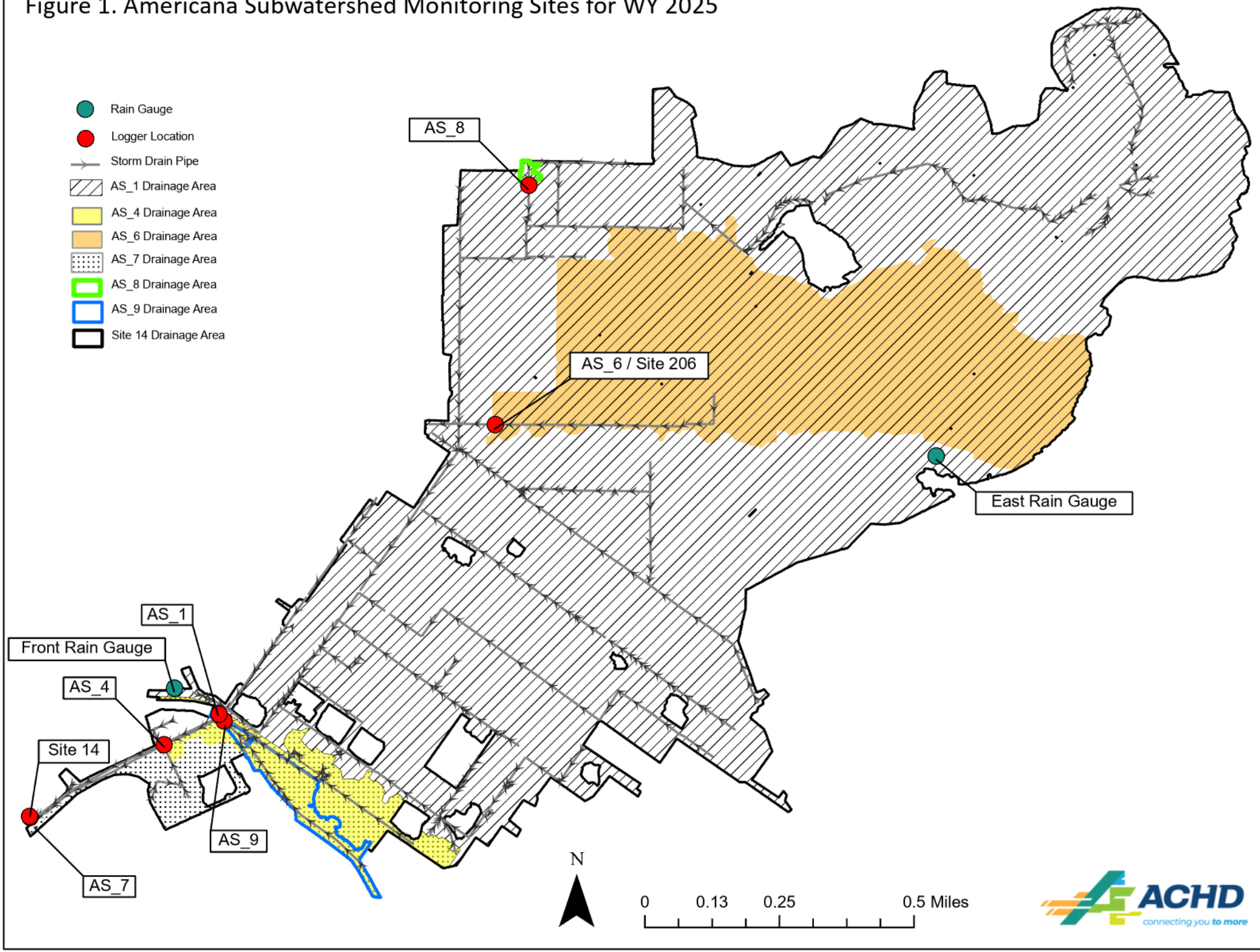
1 Introduction

Ada County Highway District, Boise State University, City of Boise, City of Garden City, Drainage District #3, and the Idaho Transportation Department District #3 (Permittees) were issued a National Pollutant Discharge Elimination System Phase I Permit #IDS-027561 (Permit) on October 1, 2021. The Permit authorizes the Permittees to discharge from municipal separate storm sewer system outfalls to the Boise River and its tributaries. According to Permit Part 6.2.2, *Subwatershed Monitoring,* Permittees are required to conduct monitoring within the Americana subwatershed to better define wet weather and dry weather flow volumes, sources, and pollutant loads.

The Americana subwatershed is one of the largest urban subwatersheds on the lower Boise River and drains a significant portion of downtown Boise and the North End and Foothills residential areas. Stormwater discharge monitoring (flow measurement and analytical sample collection) is currently conducted at the Americana outfall as identified in the Stormwater Outfall Monitoring Plan (SWOMP) (ACHD, 2022). While data collected at the outfall is important for understanding discharges to the Boise River, the dataset does not provide much information about the pollutant load and dry weather sources farther up in the storm drain system. Guided by the Americana Subwatershed Plan (ACHD, 2020), the Americana subwatershed is divided into subcatchments at major nodes in the system to parse out non-stormwater flow sources and characterize pollutant contributions. The following summary describes Americana subwatershed monitoring activities during water year (WY) 2025 (October 1, 2024–September 30, 2025). A report summarizing all data collected during the permit term will be submitted as an attachment to the Permit Renewal Application, required by Part 8.2, no later than April 3, 2026.

In WY 2025, data collection throughout the Americana subwatershed included precipitation, water level, flow, and water quality samples. Precipitation data were collected at two representative locations, and water level data were collected at six subwatershed locations and at the Americana monitoring station. The water level data were compared to the precipitation data to look for anomalies in the municipal separate storm sewer system, such as instances when the water level in pipe increases or decreases without a corresponding precipitation event and when the water level increases from isolated subcatchment areas. Additionally, water quality data from targeted wet weather discharges were collected from one subcatchment site (Site 206) to compare with the Americana outfall site (Site 14). The water quality data, along with flow data, were used to calculate pollutant loads and identify pollutants discharging from Site 206 that are disproportionately high compared to Site 14.

Figure 1. Americana Subwatershed Monitoring Sites for WY 2025



2 Monitoring Sites, Equipment, and Sample Types

Data were collected at the following monitoring sites during WY 2025: AS_1, AS_4, AS_7, AS_8, AS_9, Site 14, Site 206, Front, and East (Figure 1). Details on each of the monitoring sites, including subcatchment areas, pipe characteristics, and equipment deployment start and end dates, are found in Table 1. Figure 2 shows the locations of the monitoring sites in relation to each other using a conceptual layout of the storm drain system.

Site 14 is the Americana outfall monitoring station used in the National Pollutant Discharge Elimination System Phase I Stormwater Outfall Monitoring Program. This monitoring site is equipped with a flowmeter and sampler to collect water level, velocity, flow, and composite samples. Water level, velocity, and flow data are collected at 15-minute intervals during dry weather and 1-minute intervals when the equipment is set up to monitor a forecasted storm event.

Site 206 is a subcatchment of the Americana subwatershed. Similar to Site 14, it is equipped with a flowmeter and sampler to collect flow and water quality data during targeted storm events.

AS_7 is a secondary outfall to Site 14, with a connection between storm drain pipes farther up in the system. This site is equipped with a flowmeter to capture continuous water level, velocity, and flow data at 5-minute intervals.

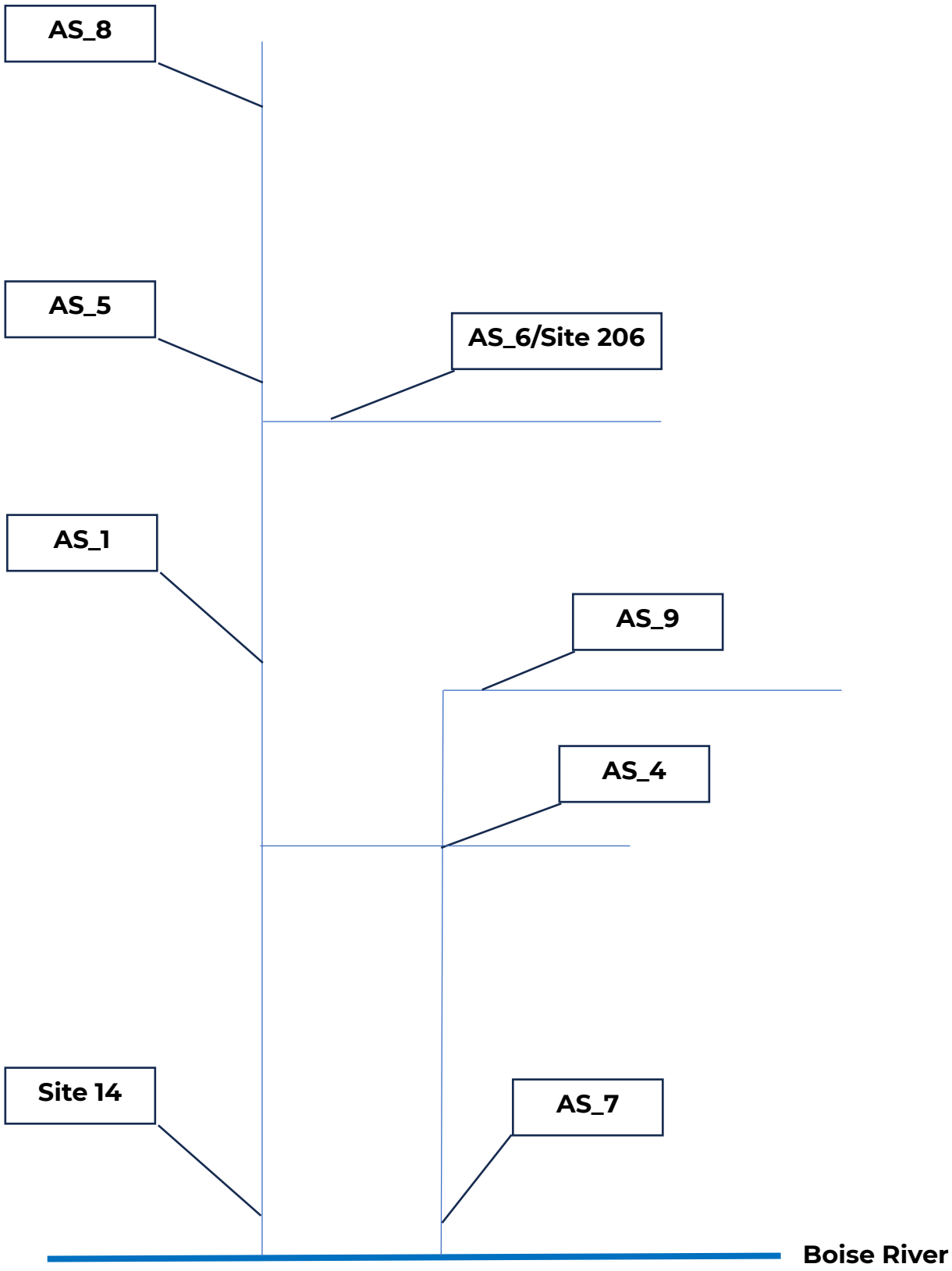
AS_1, AS_4, AS_8, and AS_9 represent subcatchment areas within the Americana subwatershed. Each site is equipped with a water level logger to collect in-pipe water level data. The loggers continuously record pressure readings at 5-minute intervals. The pressure readings are corrected using local barometric pressure and converted to water level.

The AS_8 site was initially installed during the second quarter of WY 2023 to replace AS_5 and capture Hull's Gulch flows into the Americana storm drain system. It was determined in the second quarter of WY 2025 that the level data collected at the site was inaccurate due to the positioning of the logger in the storm drain pipe. A camera inspection was completed to evaluate potential alterations to the site installation and logger positioning. As a result, it was determined that the storm drain pipe would need to be cleaned to further assess the pipe condition, and the logger was removed from the site during the third quarter. Due to safety concerns with high pedestrian and vehicle traffic in the area, cleaning was scheduled for the fall of 2025. The site location and logger positioning will be reevaluated upon establishing the current pipe condition. All data collected during WY 2025 at AS_8 has been rejected and excluded from the analysis.

The AS_9 site was added to measure dry weather flow at AS_4 by splitting the subwatershed into two areas, with AS_9 representing the upstream portion of the AS_4 subwatershed.

Front and East are rain gauge sites and are equipped with tipping bucket rain gauges. The rain gauges collect continuous precipitation data in 0.01-inch increments using event data loggers. The precipitation data are used to determine the date and times of wet weather storm events and dry weather periods.

Figure 2. Conceptual Layout of Monitoring Sites



2.1 Water Quality Sample Types

The sample types collected during WY 2025 include grab samples and composite samples. Grab samples represent a discrete measurement from the overall storm discharge while composite samples represent the entire discharge.

Grab samples were manually collected from wet weather discharges using a swing sampler. The grab samples were submitted to the Boise City Public Works Water Quality Laboratory (WQL) and analyzed for *E. coli*. At the time that the *E. coli* grab samples were collected, field parameters (temperature, pH, dissolved oxygen, and conductivity) were measured using In-Situ Aqua TROLL 400 multiparameter probes.

Composite samples were collected using automatic samplers, which worked in conjunction with flowmeters. After a predetermined volume of flow was discharged, the flowmeters triggered the sampler to collect a subsample. Each subsample was deposited into a 15-liter carboy, resulting in a flow-proportional composite sample. The composite samples were submitted to WQL where they were split for analysis. The following constituents were analyzed: biological oxygen demand, 5-day (BOD_5); chemical oxygen demand (COD); chloride; hardness as calcium carbonate ($CaCO_3$); turbidity; total suspended solids (TSS); total dissolved solids (TDS); total phosphorus (TP); orthophosphate as P; ammonia, as N; nitrate + nitrite, as N; total Kjeldahl nitrogen (TKN); total arsenic; dissolved and total cadmium; dissolved copper; dissolved and total lead; total mercury; and dissolved zinc.

3 Americana Subwatershed Monitoring Results

This section describes water level monitoring results and water quality results and provides high-level conclusions and outcomes based on WY 2025 data.

3.1 Water Level Monitoring Results

For WY 2025, water level data from five monitoring sites (AS_1, AS_4, AS_7, AS_9, and Site 14) were evaluated for occurrences of increasing or decreasing water level not attributed to precipitation. Though the pipe size at each site differs, the change in water level is still evident in the data. When a change in water level is seen at one or more sites, the discharge must originate from the site that is farthest “up pipe” in the storm drain system. Figures 3–6 show hydrographs for each quarter of WY 2025. Color bands were applied to the hydrographs to indicate periods where no rain was recorded, but the water level fluctuated at one or more sites for more than two hours. While fluctuations of less than 2 hours were evaluated as non-stormwater sources, these instances were not flagged with color bands to better highlight fluctuations of longer duration in the quarterly summaries. The following conclusions were extracted from visually inspecting the hydrographs:

- Sudden water level increases and decreases were observed, which are likely caused by human-related activities such as turning on a pump or opening a headgate.
- Reoccurring water level spikes were observed at AS_7 beginning between 2330 and 0200. Similar spikes were observed in WY 2023 and WY 2024. Due to the frequency and regularity of these level spikes, color bands were omitted from WY 2025 quarterly summaries unless an AS_7 water level increase aligned with other site(s) to allow for better graph legibility. In October 2024, it was confirmed by ISCO technical support staff that the level readings were accurate based upon corresponding level changes with all sites during rain events and associated changs in temperature during logged non-stormwater level spikes. The consistent timing and duration of these spikes

occurring only at AS_7 may be associated with a pump located on W. River St. or Americana Blvd. downstream of AS_4. An investigation into the source of level spikes at AS_7 is ongoing.

- Concurrent water level increases and decreases were observed at AS_1, AS_4, and AS_9, apart from the fourth quarter where only AS_1 and AS_4 saw level increases. Using the conceptual pipe layout in Figure 2 as a reference, it becomes apparent that there may be two different pipe connections further in the AS_4 and AS_9 subcatchment areas causing water level anomalies. Further investigation is needed to confirm the location of the pipes in the AS_4 and AS_9 subcatchment areas.
- Significant building and road construction activities have been observed in the AS_4 and AS_1 subwatershed areas. Non-stormwater flows attributed to known dewatering activities were omitted from the quarterly summaries.
- Periodic fluctuations in the water level were observed at the AS_1, AS_4, AS_7, and Site 14 stations from July 1, 2025, through August 30, 2025. Due to the regularity and uniformity of the fluctuations, associated color bands were omitted from WY 2025 quarter four summary for graph legibility. The source of the fluctuations is unconfirmed.
- Periodic fluctuations in water level were observed at the AS_1 and Site 14 stations from August 30 to September 27, 2025. Due to the regularity and uniformity of the fluctuations, associated color bands were omitted from the WY 2025 quarter four summary for graph legibility. The source of the fluctuations is unconfirmed.
- Non-stormwater discharge originated from the AS_1 subcatchment 71 times, with the most anomalies occurring in the third quarter (42%).
- Non-stormwater discharge originated from AS_4 subcatchment 26 times, with the most anomalies occurring in the first quarter (35%).
- No anomalies identified were associated with Site 14.

3.2 Water Quality Monitoring Results

During WY 2025, water quality samples from wet weather discharges were collected from one subcatchment site (Site 206) to compare with the Americana outfall site (Site 14). Samples were collected from six storm events. A summary of the storm dates and sample types collected is provided in Table 3-1. Attempts were made to collect samples from both Site 14 and Site 206 during the same storm event. When paired samples were successfully collected from both sites, the water quality results were directly compared to one another. Rejected data and results from samples that were collected from only one of the two sites were omitted from the subsequent discussion; however, all accepted and qualified values will be used when calculating statistics for the final report. Comprehensive analytical results from all samples collected are included in Table 2, attached.

Table 3-1. Storm Event Summary

Storm Event Date	Site 14	Site 206
12/14/2024	Grab, Composite	Grab, Composite
1/31/2025	Composite[1]	Composite[2]
2/23/2025	Grab, Composite[1]	Grab, Composite
5/17/2025	Grab, Composite	Grab, Composite[3]
8/26/2025	--	Composite[3]
9/29/2025	Composite[3]	--

– = No data

[1] Composite sample qualified due to lack of representativeness (50%–75%).

[2] Composite sample rejected due to lack of representativeness (<50%).

[3] Composite sample qualified due to exceedance of 6.0° C.

3.2.1 Grab Samples

Paired grab samples were collected from Site 14 and Site 206 on December 14, 2024; February 23, 2025; and May 17, 2025. *E.* coli, dissolved oxygen, pH, conductivity, and temperature results were compared, and notable conclusions from each storm event are provided below.

December 14, 2024

- *E. coli* at Site 206 was approximately two times higher than at Site 14.

February 23, 2025

- *E. coli* at Site 14 was approximately nine times higher than at Site 206.
- Dissolved oxygen was approximately two times higher at Site 206 than at Site 14.
- Specific conductivity at Site 14 was approximately two times higher at Site 14 than Site 206.
- Temperature was approximately two times higher at Site 14 than Site 206.

May 17, 2025

- *E. coli* at Site 206 was approximately twenty-nine times higher than at Site 14.
- Dissolved oxygen at Site 14 was approximately two times higher than at Site 206.

3.2.2 Composite Samples

Paired composite samples were collected from Site 14 and Site 206 on December 14, 2024; February 23, 2025; and May 17, 2025.

Event-specific pollutant loads for each analyzed constituent were calculated by multiplying the volume of discharge as measured at the site by the constituent concentration. When constituent concentrations were less than the minimum detection limit (MDL), a value of half of the MDL was used in the pollutant load calculation. The pollutant loads, in pounds, are in Table 3, attached.

To evaluate the contribution Site 206 had on the overall pollutant load discharging from the Americana outfall, the percentage of the pollutant load was compared to the percentage of discharge volume. When the percentage of the pollutant load is greater than the percentage of discharge volume, the pollutant load discharging from the subcatchment is disproportionately high. This logic statement is illustrated below.

$$\frac{pollutant\ load\ (lbs) from\ subcatchment}{pollutant\ load\ (lbs) from\ outfall} > \frac{discharge\ volume\ (cf) from\ subcatchment}{discharge\ volume\ (cf) from\ outfall}$$

$$IF$$

$$THEN$$

$$pollutant\ load\ from\ subcatchment\ is\ disproportionately\ high$$

The percent contribution of pollutant load and the percent contribution of discharge volume were calculated for both Site 206 and Site 14 from each storm event (Figures 7, 8, and 9). The graphs include a

vertical orange line indicating the value for the percent of discharge. Constituent loads that exceed the orange line are disproportionately high. Noteworthy outcomes from each paired storm event are presented below.

December 14, 2024

- Load contributions from Site 206 were disproportionately high for all constituents except for the following parameters: chloride; hardness as $CaCO_3$; TDS; ammonia, as N; nitrate + nitrite, as N; total arsenic; total and dissolved cadmium; and total mercury.
- The percent of pollutant load from Site 206 was approximately 3.0 times higher than the percent of discharge volume for dissolved lead.
- The percent of pollutant load from Site 206 was approximately 2.0 to 2.5 times higher than the percent of discharge volume for the following parameters: BOD_5, COD, total phosphorus, and orthophosphate as P.

February 23, 2025

- Load contributions from Site 206 were disproportionately high for all constituents except for the following parameters: hardness as $CaCO_3$; TDS; ammonia, as N; nitrate + nitrite, as N; total arsenic; dissolved cadmium; and dissolved zinc.
- The percent of pollutant load from Site 206 was approximately 4.5 times higher than the percent of discharge volume for dissolved lead.
- The percent of pollutant load from Site 206 was approximately 2.0 to 3.0 times higher than the percent of discharge volume for turbidity and total lead.
- The percent of pollutant load from Site 206 was approximately 1.5 to 2.0 times higher than the percent of discharge volume for the following parameters: BOD_5, COD, chloride, TSS, total phosphorus, orthophosphate as P, TKN, and dissolved copper.

May 17, 2025

- Load contributions from Site 206 were disproportionately high for all constituents except for the following parameters: chloride; hardness as $CaCO_3$; TDS; nitrate + nitrite, as N; total arsenic; and total cadmium.
- The percent of pollutant load from Site 206 was approximately 3.0 to 3.5 times higher than the percent of discharge volume for dissolved lead and total mercury.
- The percent of pollutant load from Site 206 was approximately 2.5 to 3.0 times higher than the percent of discharge volume for BOD_5, total phosphorus, and orthophosphate as P.
- The percent of pollutant load from Site 206 was approximately 1.5 to 2.0 times higher than the percent of discharge volume for the following parameters: COD, turbidity, dissolved copper, and dissolved zinc.

4 Quality Assurance/Quality Control

A data validation review process was used to evaluate the analytical and field parameter results. These checklists were used to compare monitoring methods and monitoring data collected against performance criteria established to meet the data quality objectives described in the Quality Assurance Project Plan for NPDES Stormwater Permit Monitoring (QAPP) (ACHD, 2023). Analytical results that were qualified are identified in Table 2 (Appendix B).

4.1 QC Sample Results

QC sampling during WY 2025 consisted of a combination of field QC samples, laboratory QC, and equipment QC samples. Field QC sampling intervals followed a predetermined schedule, included in the SWOMP. Equipment QC samples were collected during fall maintenance. Sample results for all field QC samples are included in Table 4 (Appendix B).

4.1.1 Field QC Samples

Field QC samples include field duplicates, field blanks, and composite blanks.

Field duplicates are field grab samples that were taken alongside a parent grab sample to compare the accuracy of the data. For *E. coli,* the allowable logarithmic relative percent difference (RPD) between the duplicate sample and the parent sample is 40 percent for values where the parent and duplicates are greater than 10 MPN/100mL. All field duplicate samples collected during WY 2025 met the RPD standard.

Analytical results from field blanks and composite blanks are expected to be less than the MDL. If a water quality parameter is detected in a field blank or composite blank, all analytical results associated with the blank that exhibit a concentration of less than five times the concentration detected in the blank, are qualified. All field blank samples collected had results less than the MDL. No composite blanks were collected or analyzed in WY 2025.

4.1.2 Laboratory QC Samples

Laboratory QC samples are composite duplicate samples that are split at WQL. This type of sample serves as a check on the laboratory's ability to representatively split composite samples and is a test of analytical precision. The allowable RPD for all parameters is 20 percent. A composite duplicate was collected for AS_6 on February 23, 2025. The RPD results for dissolved copper and dissolved lead were 28% and 27%, respectively. Therefore, the dissolved copper and dissolved lead are considered estimates. All other parameters from the composite duplicate met the RPD standard.

4.1.3 Equipment QC Samples

Equipment QC samples include an equipment blank and a rinsate blank, both serving as a check on equipment decontamination procedures.

The equipment blank is collected before sampling for the water year begins and when new equipment is installed. For WY 2025, the equipment blanks were collected on September 10 and September 14, 2024, at the Americana and AS_6 monitoring stations. Dissolved copper and dissolved zinc were detected in the blanks at Americana and AS_6. However, all dissolved copper and dissolved zinc results were greater than five times the value detected in the blank at AS_6 and are unqualified. Dissolved copper and dissolved zinc results collected at Americana less than five times the value detected in the blank have been qualified and considered estimates. All other results were greater than five times the detected value in the equipment blank and are unqualified.

The rinsate blank is collected after sampling for the water year has been completed. For WY 2025, a rinsate blank was collected from Americana on September 9, 2025. Total lead, dissolved copper, and turbidity were detected in the Americana blank. However, all results collected throughout the WY were greater than five times the values detected in the blanks and are unqualified.

Appendix A: Figures

Figure 3. Americana Subwatershed Water Level WY 2025 October–December

Figure 4. Americana Subwatershed Water Level WY 2025 January–March

Figure 5. Americana Subwatershed Water Level WY 2025 April–June

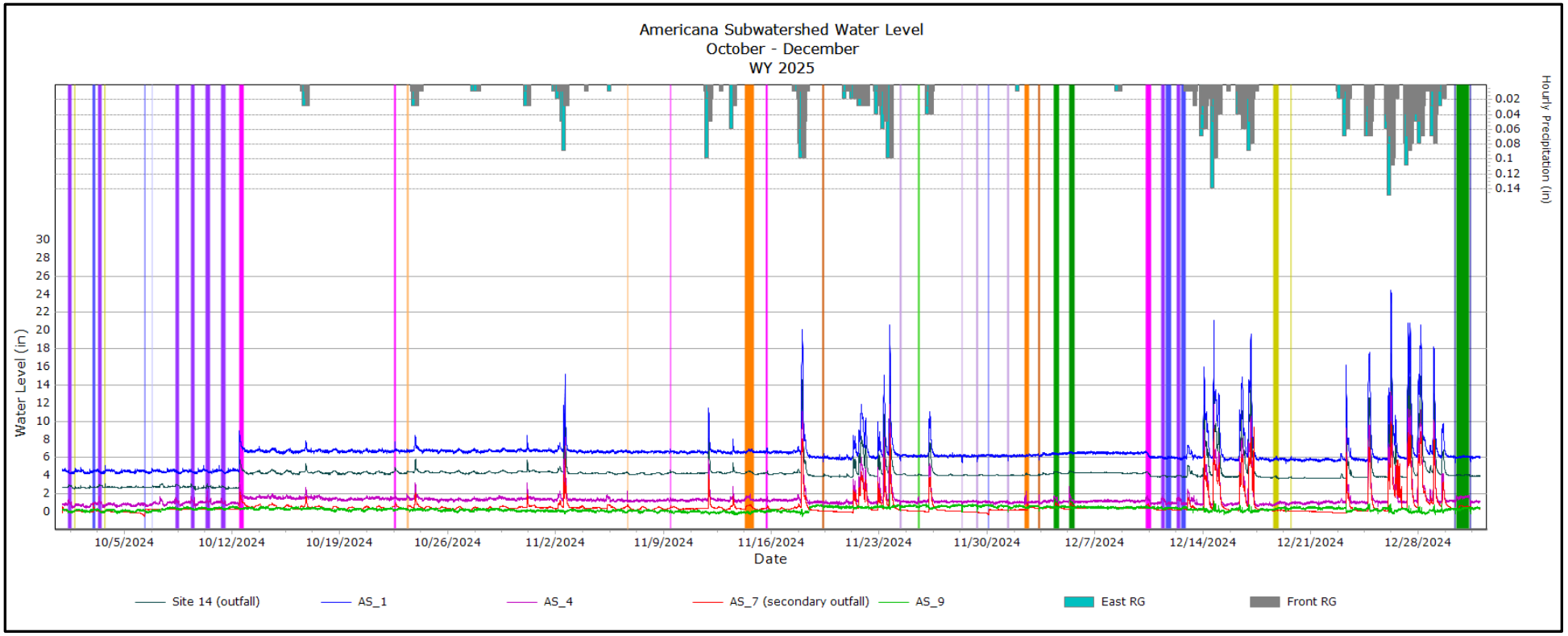
Figure 6. Americana Subwatershed Water Level WY 2025 July–September

Figure 7. Percent Contribution for Storm Event 12/14/2024

Figure 8. Percent Contribution for Storm Event 2/23/2025

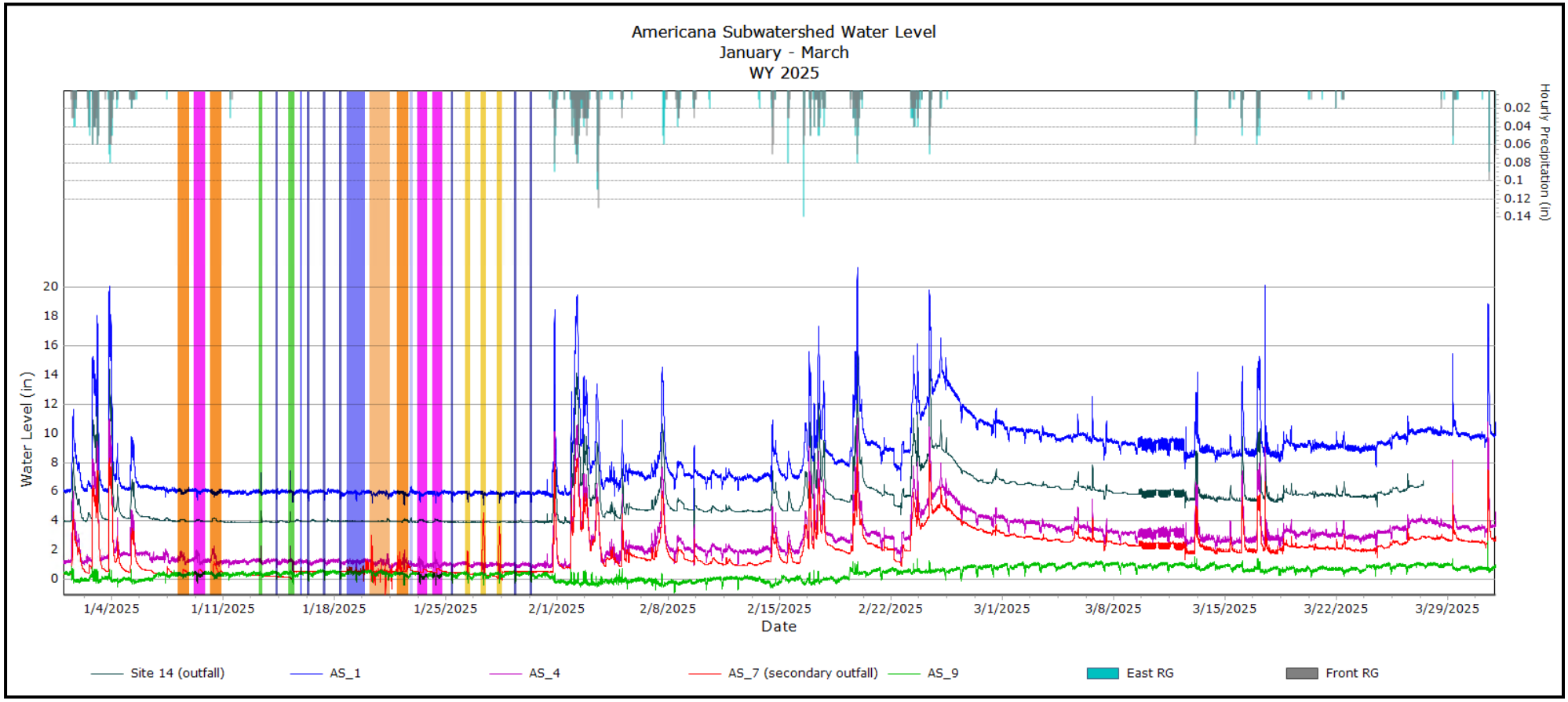
Figure 9. Percent Contribution for Storm Event 5/17/2025

Figure 3. Americana Subwatershed Water Level WY25 October - December



Color Code	Beginning Date Time	Duration (hrs)	Sites Included	Non-stormwater source
	10/1/2024 8:00:00	8.0	AS_4, Site 14	AS_4 Subcatchment
	10/1/2024 19:00:00	2.5	AS_1, Site 14	AS_1 Subcatchment
	10/2/2024 23:30:00	5.5	AS_7	AS_7 Subcatchment
	10/3/2024 7:30:00	7.5	AS_4, Site 14	AS_4 Subcatchment
	10/3/2024 17:30:00	2.5	AS_1, Site 14	AS_1 Subcatchment
	10/6/2024 8:00:00	2.0	AS_7	AS_7 Subcatchment
	10/6/2024 19:30:00	2.0	AS_1	AS_1 Subcatchment
	10/8/2024 7:30:00	8.0	AS_4, Site 14	AS_4 Subcatchment
	10/9/2024 7:30:00	8.0	AS_4, Site 14	AS_4 Subcatchment
	10/10/2024 7:30:00	8.0	AS_4, Site 14	AS_4 Subcatchment
	10/11/2024 7:30:00	8.0	AS_4, Site 14	AS_4 Subcatchment
	10/12/2024 11:30:00	8.5	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	10/22/2024 13:00:00	3.5	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	10/23/2024 8:00:00	5.0	AS_4	AS_4 Subcatchment
	11/6/2024 15:00:00	2.0	AS_4	AS_4 Subcatchment
	11/9/2024 10:00:00	3.0	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	11/14/2024 7:00:00	15.0	AS_4, AS_7, Site 14	AS_4 Subcatchment
	11/15/2024 16:00:00	4.5	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	11/19/2024 7:30:00	4.5	AS_1, AS_9, AS_4, Site 14	AS_1 Subcatchment
	11/24/2024 7:30:00	4.5	AS_1, AS_9, AS_4	AS_1 Subcatchment
	11/25/2024 13:00:00	3.5	AS_1, AS_4, Site 14	AS_1 Subcatchment
	11/28/2024 8:00:00	3.5	AS_1, AS_9, AS_4	AS_1 Subcatchment
	11/29/2024 8:00:00	3.5	AS_1, AS_9, AS_4	AS_1 Subcatchment
	11/30/2024 2:00:00	3.0	AS_7	AS_7 Subcatchment
	12/1/2024 8:00:00	3.5	AS_1, AS_9, AS_4	AS_1 Subcatchment
	12/2/2024 11:00:00	8.0	AS_4, AS_7, Site 14	AS_4 Subcatchment
	12/3/2024 8:00:00	3.5	AS_1, AS_4, AS_9, Site 14	AS_1 Subcatchment
	12/4/2024 8:00:00	10.5	AS_4, AS_7	AS_4 Subcatchment
	12/5/2024 7:30:00	11.0	AS_4, AS_7	AS_4 Subcatchment
	12/10/2024 7:00:00	9.5	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	12/11/2024 7:00:00	7.0	AS_4, Site 14	AS_4 Subcatchment
	12/11/2024 14:00:00	10.5	AS_7	AS_7 Subcatchment
	12/12/2024 7:00:00	7.0	AS_4, Site 14	AS_4 Subcatchment
	12/12/2024 14:00:00	9.5	AS_7	AS_7 Subcatchment
	12/18/2024 14:00:00	9.5	AS_1, Site 14	AS_1 Subcatchment
	12/19/2024 16:00:00	3.5	AS_1, Site 14	AS_1 Subcatchment
	12/30/2024 8:00:00	3.5	AS_8, AS_1, AS_9, AS_4	AS_8 Subcatchment
	12/30/2024 11:30:00	21.0	AS_4, AS_7	AS_4 Subcatchment
	12/31/2024 8:00:00	3.5	AS_8, AS_1, AS_9, AS_4	AS_8 Subcatchment

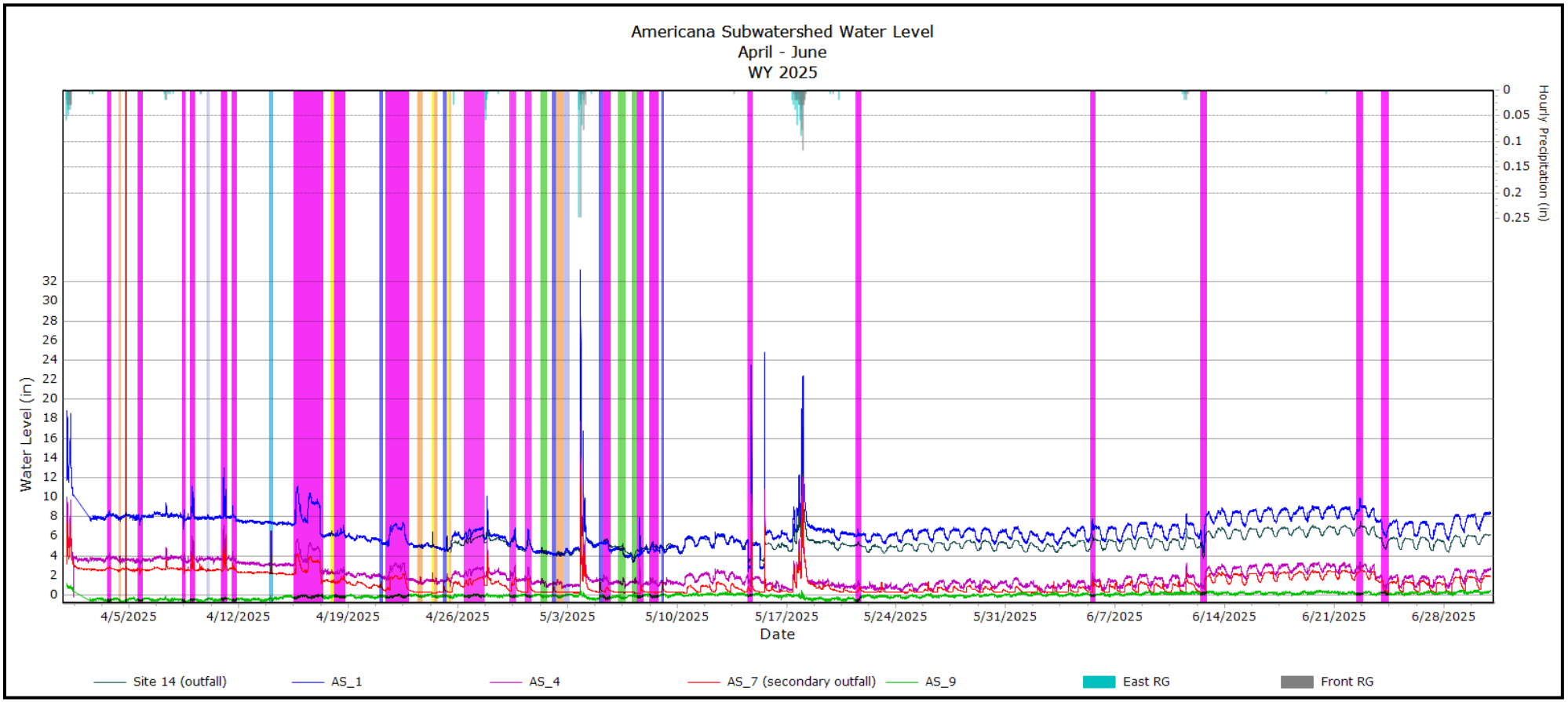
Figure 4. Americana Subwatershed Water Level WY 2025 January–March



Note: Due to known dewatering activities in the AS_1 subcatchment area from early February through the end of March, no color bands were assigned to level spikes or dips originating from the AS_1 subcatchment area.

Color Code	Beginning Date Time	Duration (hrs)	Sites Included	Non-stormwater source
	1/8/2025 4:30:00	18.0	AS_4, AS_7, Site 14	AS_4 Subcatchment
	1/9/2025 4:30:00	18.0	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	1/10/2025 4:30:00	18.0	AS_4, AS_7, Site 14	AS_4 Subcatchment
	1/13/2025 6:30:00	6.0	AS_1, AS_4, Site 14	AS_1 Subcatchment
	1/14/2025 8:30:00	3.0	AS_1, AS_9, AS_4	AS_1 Subcatchment
	1/15/2025 3:30:00	9.0	AS_1, AS_4, Site 14	AS_1 Subcatchment
	1/15/2025 20:30:00	2.0	AS_7	AS_7 Subcatchment
	1/16/2025 6:30:00	5.0	AS_1, AS_9, AS_4	AS_1 Subcatchment
	1/17/2025 6:30:00	5.0	AS_1, AS_9, AS_4	AS_1 Subcatchment
	1/18/2025 6:30:00	5.0	AS_1, AS_9, AS_4	AS_1 Subcatchment
	1/18/2025 19:00:00	28.5	AS_7	AS_7 Subcatchment
	1/20/2025 5:00:00	33.0	AS_4	AS_4 Subcatchment
	1/22/2025 0:00:00	17.0	AS_4, AS_7, Site 14	AS_4 Subcatchment
	1/22/2025 17:00:00	6.5	AS_1	AS_1 Subcatchment
	1/23/2025 5:00:00	16.5	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	1/24/2025 2:00:00	17.5	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	1/25/2025 8:30:00	3.0	AS_1, AS_9, AS_4	AS_1 Subcatchment
	1/26/2025 5:00:00	9.5	AS_1, AS_9, AS_7	AS_1 Subcatchment
	1/27/2025 5:00:00	9.5	AS_1, AS_9, AS_7	AS_1 Subcatchment
	1/28/2025 5:00:00	9.5	AS_1, AS_9, AS_7	AS_1 Subcatchment
	1/29/2025 6:30:00	5.0	AS_1, AS_9, AS_4	AS_1 Subcatchment
	1/30/2025 6:30:00	5.0	AS_1, AS_9, AS_4	AS_1 Subcatchment

Figure 5. Americana Subwatershed Water Level WY 2025 April–June

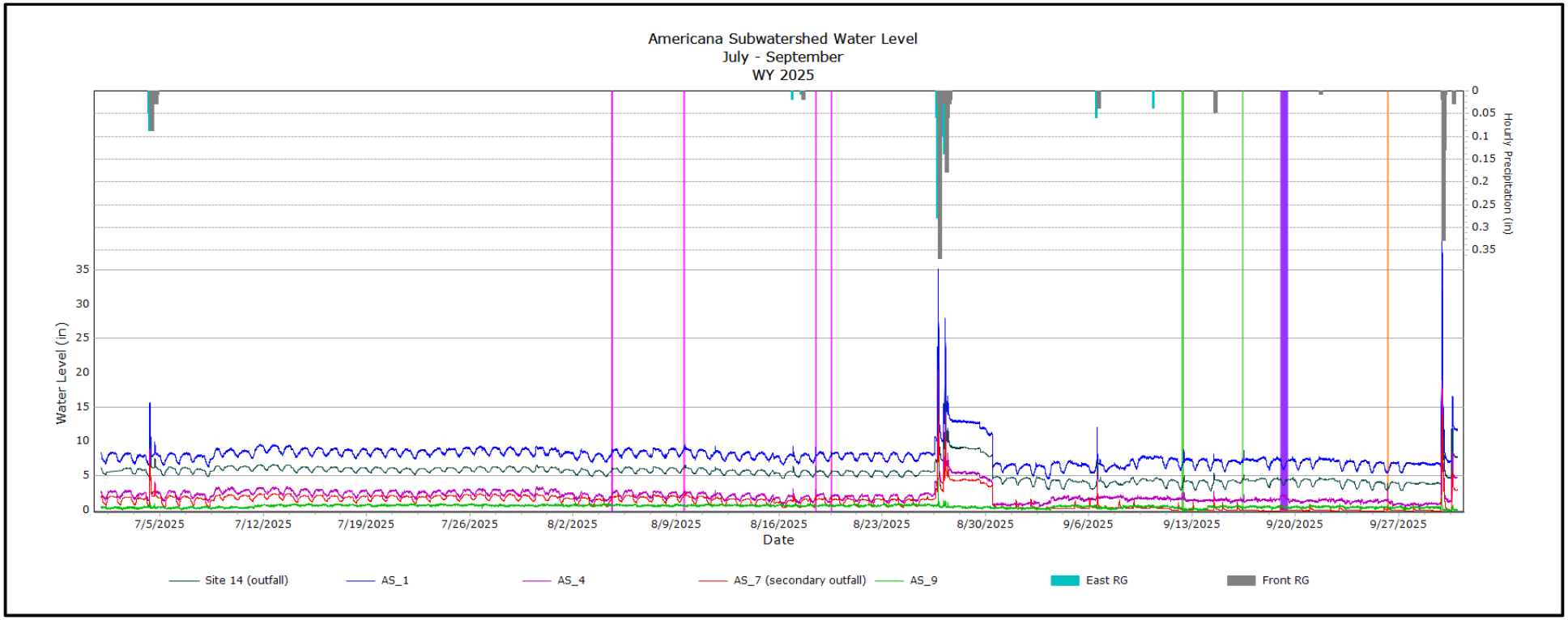


Notes: (1) Periodic fluctuations in the water level were observed at the AS_1, AS_4, AS_7, and Site 14 stations from May 9, 2025, at 0500 through May 14, 2025, at 1530 and May 21, 2025, at 2100 through June 30, 2025, at 2330. Fluctuations were observed approximately every 20 hours with reduced water levels lasting for approximately 10 hours. Due to the regularity and uniformity of the fluctuations, color bands were omitted from this summary for graph legibility. The source of these fluctuations is unconfirmed.

(2) From April 1, 2025, to April 25, 2025, the flow level equipment at Site 14 was uninstalled due to a Boise River surcharge. During this period, various anomalies were observed at the AS_1, AS_4, and AS_7 sites. Despite the absence of level data from Site 14, it is reasonable to assume that Site 14 would be included in the anomaly affecting AS_1, AS_4, and AS_7 based on historical data observations.

Color Code	Beginning Date Time	Duration (hrs)	Sites Included	Non-stormwater source
	4/3/2025 14:30:00	6.0	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	4/4/2025 8:00:00	4.0	AS_4	AS_4 Subcatchment
	4/4/2025 18:00:00	3.0	AS_1, AS_7	AS_1 Subcatchment
	4/5/2025 12:00:00	9.0	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	4/8/2025 9:30:00	5.0	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	4/8/2025 20:30:00	9.0	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	4/9/2025 23:00:00	4.5	AS_1	AS_1 Subcatchment
	4/10/2025 21:00:00	10.5	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	4/11/2025 13:00:00	9.5	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	4/13/2025 22:00:00	8.5	AS_9, AS_4, AS_7	AS_9 Subcatchment
	4/15/2025 11:00:00	48.5	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	4/17/2025 21:00:00	6.5	AS_1, AS_4	AS_1 Subcatchment
	4/18/2025 3:30:00	18.0	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	4/21/2025 0:00:00	6.5	AS_7	AS_7 Subcatchment
	4/21/2025 8:00:00	39.5	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	4/23/2025 10:00:00	9.5	AS_4	AS_4 Subcatchment
	4/24/2025 8:30:00	3.0	AS_1, AS_4	AS_1 Subcatchment
	4/24/2025 11:30:00	6.5	AS_4	AS_4 Subcatchment
	4/25/2025 0:00:00	5.5	AS_7	AS_7 Subcatchment
	4/25/2025 5:30:00	5.0	AS_1, AS_4	AS_1 Subcatchment
	4/25/2025 10:30:00	3.0	AS_4	AS_4 Subcatchment
	4/26/2025 8:30:00	33.0	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	4/29/2025 7:00:00	12.0	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	4/30/2025 7:00:00	12.0	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	5/1/2025 6:30:00	12.5	AS_1, AS_4, Site 14	AS_1 Subcatchment
	5/2/2025 0:00:00	6.0	AS_7	AS_7 Subcatchment
	5/2/2025 6:00:00	13.0	AS_4	AS_4 Subcatchment
	5/2/2025 19:00:00	10.0	AS_1	AS_1 Subcatchment
	5/5/2025 0:00:00	6.0	AS_7	AS_7 Subcatchment
	5/5/2025 6:00:00	13.0	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	5/6/2025 6:00:00	13.5	AS_1, AS_4, Site 14	AS_1 Subcatchment
	5/7/2025 3:00:00	7.0	AS_1, AS_4, Site 14	AS_1 Subcatchment
	5/7/2025 10:00:00	12.0	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	5/8/2025 5:00:00	17.0	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	5/9/2025 0:00:00	5.0	AS_7	AS_7 Subcatchment
	5/14/2025 14:30:00	9.0	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	5/21/2025 10:00:00	11.0	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	6/5/2025 10:00:00	10.0	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	6/12/2025 10:00:00	12.0	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	6/22/2025 10:00:00	12.0	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	6/24/2025 0:30:00	13.0	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment

Figure 6. Americana Subwatershed Water Level WY 2025 July - September



Notes: (1) Periodic fluctuations in the water level were observed at the AS_1, AS_4, AS_7, and Site 14 stations from July 1, 2025, through August 30, 2025, each lasting approximately 12 hours. Due to the regularity and uniformity of the fluctuations, they were omitted from this summary. The source of these fluctuations is unconfirmed.

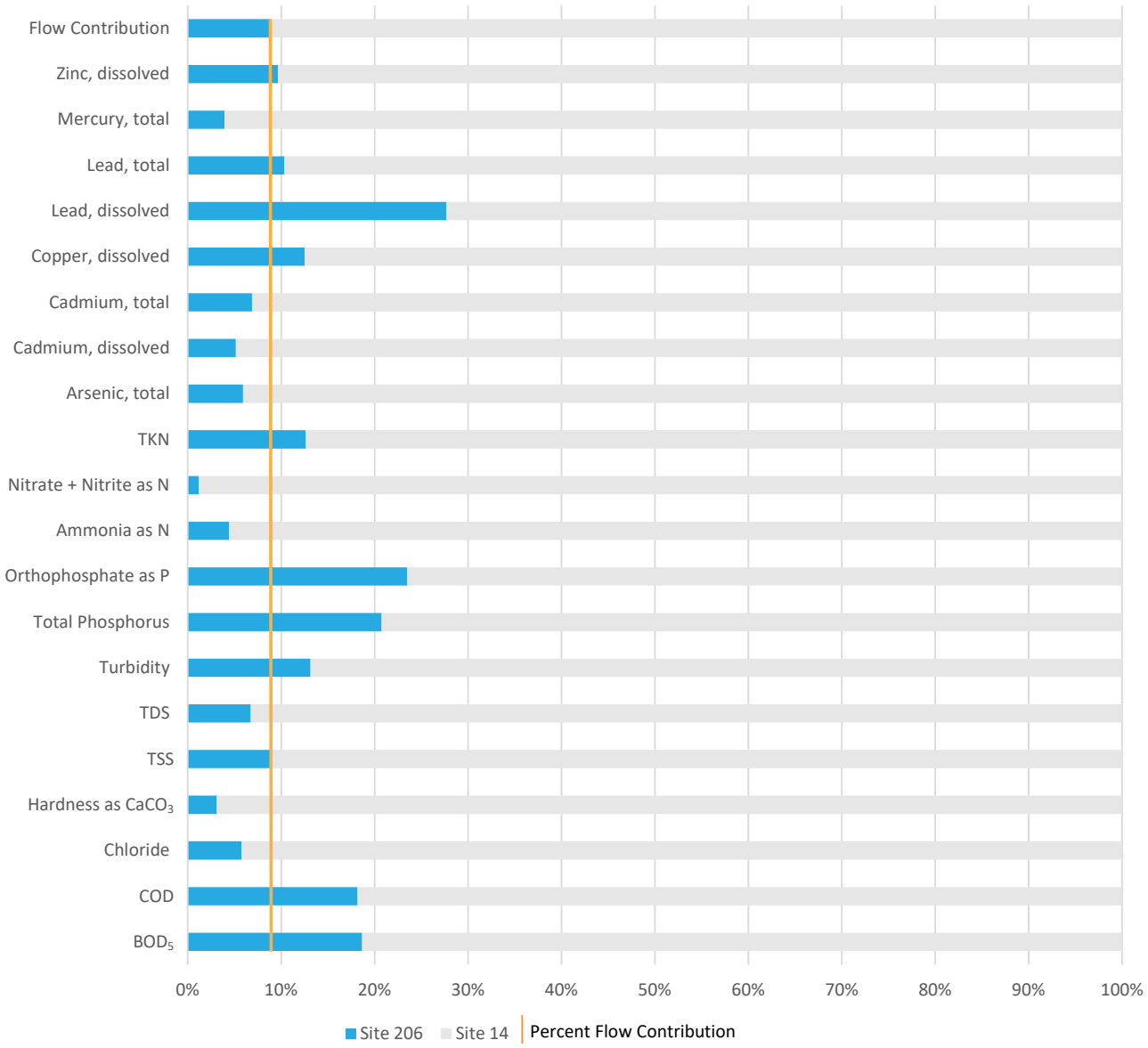
(2) Periodic fluctuations in water level were observed at the AS_1 and Site 14 stations from August 30 to September 27, 2025. Due to the regularity and uniformity of the fluctuations, color bands were omitted from this summary for graph legibility. The source of these fluctuations is unconfirmed.

(3) Reoccurring level spikes were observed at AS_7 beginning September 1 through September 28. These spikes begin approximately between 2330 and 0200. Color bands been omitted from this summary due to uniformity of the spikes and similar observations in WY 2023 and WY 2024 for graph legibility.

(4) No data was collected at the East rain gauge from 9/11/2025 to 10/1/2025.

Color Code	Beginning Date Time	Duration (hrs)	Sites Included	Non-stormwater source
	8/4/2025 14:35:00	2.5	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	8/9/2025 12:15:00	4	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	8/18/2025 10:45:00	2	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	8/19/2025 12:00:00	2	AS_1, AS_4, AS_7, Site 14	AS_1 Subcatchment
	9/12/2025 7:25:00	4	AS_1, AS_4, Site 14	AS_1 Subcatchment
	9/16/2025 9:50:00	3	AS_1, AS_4, Site 14	AS_1 Subcatchment
	9/18/2025 23:00:00	15	AS_4, Site 14	AS_4 Subcatchment
	9/26/2025 6:00:00	2	AS_4, AS_7, Site 14	AS_4 Subcatchment

Figure 7. Percent Contribution 12/14/2024



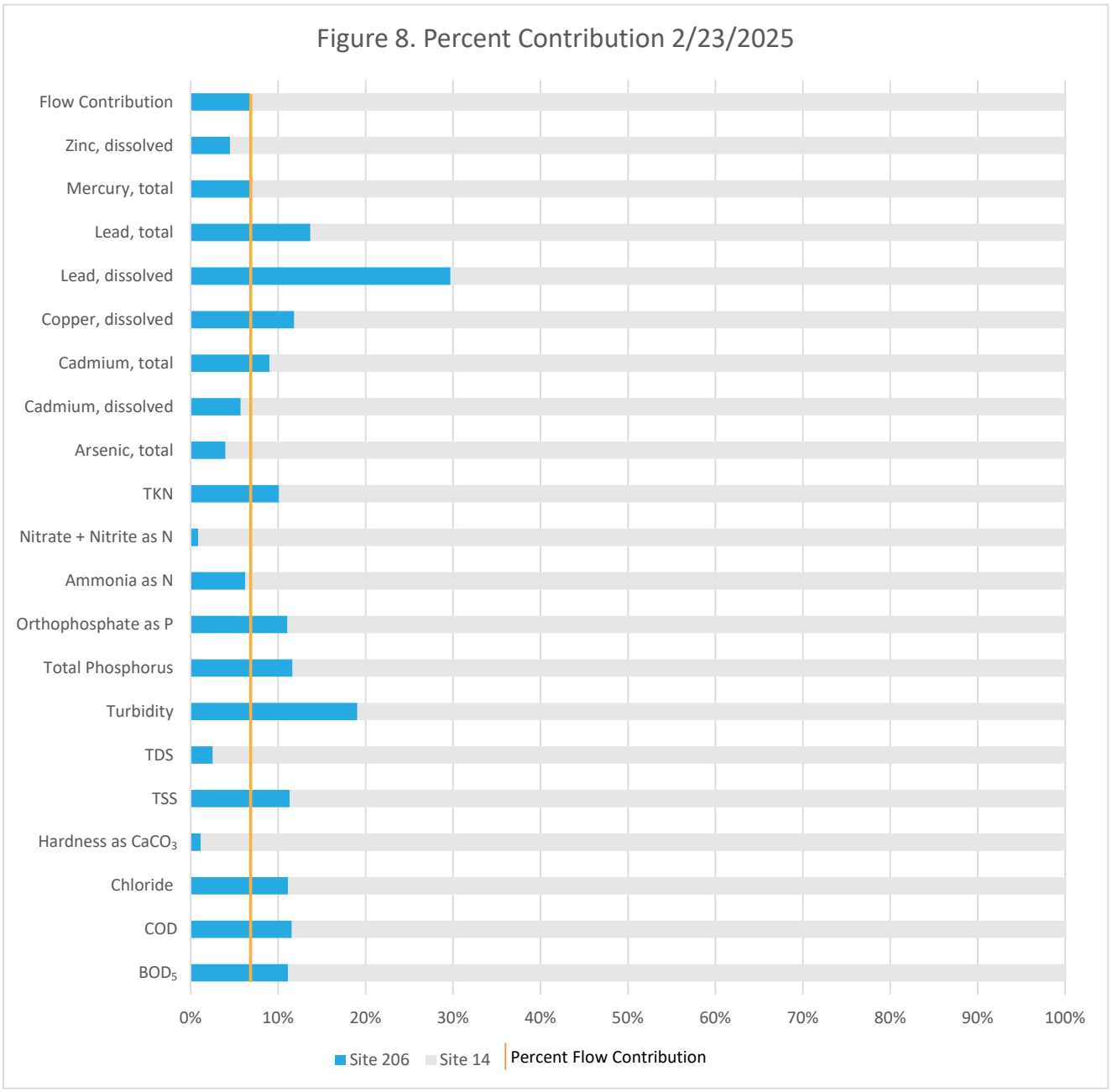
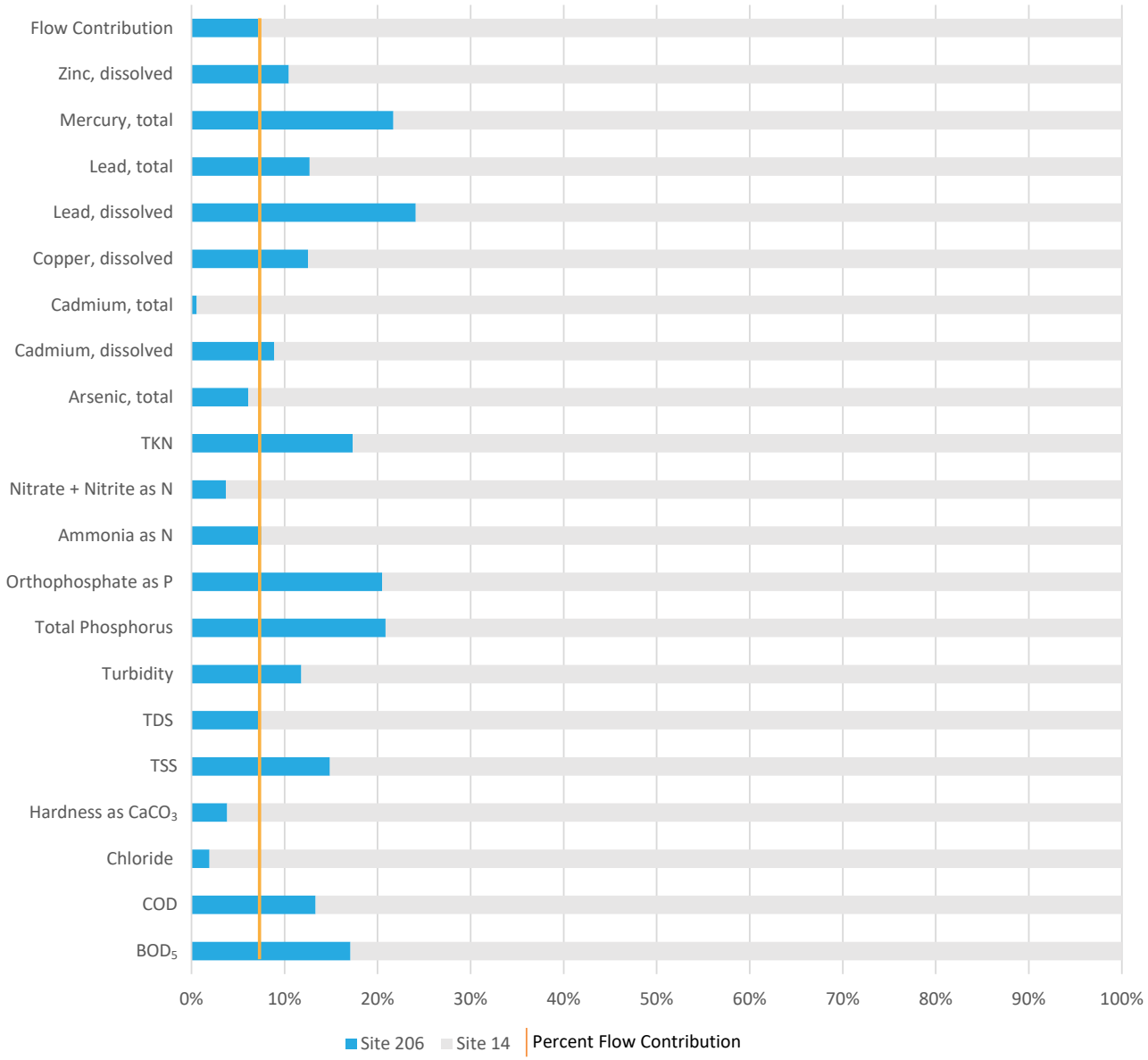

Figure 8. Percent Contribution 2/23/2025
Flow Contribution
Zinc, dissolved
Mercury, total
Lead, total
Lead, dissolved
Copper, dissolved
Cadmium, total
Cadmium, dissolved
Arsenic, total
TKN
Nitrate + Nitrite as N
Ammonia as N
Orthophosphate as P
Total Phosphorus
Turbidity
TDS
TSS
Hardness as $CaCO_3$
Chloride
COD
BOD_5
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Site 206
Site 14
Percent Flow Contribution

Figure 9. Percent Contribution 5/17/2025



Appendix B: Tables

Table 1. Monitoring Site Information

Table 2. Field and Analytical Data Summary

Table 3. Event Pollutant Loading Estimates in Pounds

Table 4. QC Sample Summary

Table 1. Monitoring Site Information

Location Name	Study ID	Latitude/ Longitude	Manhole ID (SWMM File)	Manhole ID (Americana Manholes Files)	Subcatchment Total Area (acres)	Subcatchment Impervious Area (acres)	Pipe Diameter (in)	Pipe Construction	Manning's Coefficient (n value)	Pipe Slope	Water Level During Installation (in)	Equipment ID	Equipment Deploy Start Date	Equipment Deploy End Date	Installation Notes
Americana Monitoring Station	Site 14	43°36'57.93"N 116°13'16.37"W	NA	NA	915	291	48	concrete	NA	NA	NA	Hach Flowmeter (FL-23)	2013	9/8/2020	
												Hach Sampler (SA-17)	2013	9/8/2020	
												ISCO Signature Flowmeter (FL-29)	9/8/2020	NA	
												ISCO 6712 Sampler (SA-20)	9/8/2020	NA	
16th_Front	AS_1	43°37'7.57"N 116°12'52.66"W	J87872	33634	869	255	42	concrete	0.015	0.0001	4.13	HOBO Logger (SN:20029104)	8/10/2018	9/15/2023	Logger installed downstream of manhole with conduit facing downstream
												ISCO 2150 Flowmeter	10/25/2019	1/24/2020	
												HOBO Logger (SN:20029102)	9/15/2023	11/7/2023	
												HOBO Logger (SN:20029105)	11/7/2023	NA	
Americana_River_South	AS_2	43°37'4.63"N 116°13'0.20"W	J5567	35568	39	28	42	concrete	0.015	0.0001	1.5	HOBO Logger (SN:20029109)	8/10/2018	4/28/2020	Large pipe downstream of manhole (south) that leads to secondary outfall with conduit facing downstream
Americana_River_East	AS_3	43°37'4.63"N 116°13'0.20"W	J5567	35568	10	5	16	concrete	0.015	0.0001	2	HOBO Logger (SN:20029106)	8/10/2018	1/6/2021	Small pipe upstream of manhole (east) with conduit facing upstream
Americana_River	AS_4	43°37'4.63"N 116°13'0.20"W	J5567	35568	29	23	42	concrete	0.015	0.0001	NA	HOBO Logger (SN:20029101)	8/10/2018	3/7/2024	Large pipe upstream of manhole (north) with conduit perpendicular to flow
											2.7	ISCO 2150 Flowmeter	7/10/2020	3/5/2021	Water level at installation: 2.7 inches
											2	HOBO Logger (SN:20029102)	3/7/2024	4/2/2024	Water level at installation: 2.0 inches
											3	HOBO Logger (SN:21904490)	4/2/2024	NA	Water level at installation: 3.0 inches
15th_Resseguie	AS_5	43°37'36.17"N 116°12'21.10"W	J5577	23810	289	49	30	concrete	0.015	0.0001	1.5	HOBO Logger (SN:20029105)	8/10/2018	2/17/2023	Logger installed downstream of manhole with conduit facing downstream
14th_Resseguie	AS_6	43°37'35.73"N 116°12'16.60"W	J16834	13187	206	23	22	corrugated metal	0.024	0.0001	NA	HOBO Logger (SN:20029102)	8/17/2018	3/7/2023	Installed downstream of vault
	Site 206	43°37'35.73"N 116°12'16.60"W	J16834	13187	203	22	22	corrugated metal	0.024	0.0001	NA	Hach Flowmeter (FL-25)	1/23/2020	3/4/2020	Installed upstream of vault, and has a smaller drainage area than AS_6.
												Hach Flowmeter (FL-18)	3/4/2020	4/18/2024	
												Hach Sampler (SA-11)	1/23/2020	10/9/2020	
												Hach Sampler (SA-13)	10/9/2020	9/16/2024	
												Hach Sampler (SA-14)	9/16/2024	12/10/2024	
												Hach Sampler (SA-09)	12/10/2021	4/18/2024	
												Hach Flowmeter (FL-31)	9/18/2024	3/18/2025	
												Hach Sampler (SA-17)	9/18/2024	NA	
												Hach Flowmeter (FL32)	3/18/2025	NA	
Americana East	AS_7	43°36'57.66"N 116°13'17.75"W	NA	NA	40	30	42	concrete	0.015	0.0001	NA	ISCO 2150 Flowmeter	1/10/2019	NA	ISCO flowmeter installed
13th_Lemp to Heron	AS_8	43°37'59.66"N 116°12'11.80"W	NA	NA	0.7	0.4	36	corrugated metal	0.024	0.0001	NA	HOBO logger (SN: 20029106)	2/24/2023	11/7/2023	
												HOBO logger (SN:20029104)	11/7/2023	7/14/2025	
16th_Rhodes	AS_9	43°37'7.18"N 116°12'52.07"W	NA	NA	10	5	21	concrete	0.015	0.0001	NA	HOBO logger (SN:20029109)	2/24/2023	4/2/2024	There was a data gap between 9/15/2023 and 11/7/2023 because of a dead battery and no replacements. The manufacture sent back the logger and was reinstalled. Logger was unistalled on 4/2/2024 and replaced with SN:21904491.
												HOBO logger (SN:21904491)	4/2/2024	NA	

Table 2. Field and Analytical Data Summary

Sample Date	Monitoring Station	Sample ID Grab	Field Parameters				Analytical Parameters																				
			Dissolved Oxygen	pH	Conductivity	Temperature	E. coli	Sample ID Composite	BOD_5	COD	Chloride	Hardness as $CaCO_3$	Turbidity	TSS	TDS	Total Phosphorus	Orthophosphate as P	Ammonia as N	Nitrate + Nitrite as N	TKN	Arsenic, total	Cadmium, dissolved	Cadmium, total	Copper, dissolved	Lead, dissolved	Lead, total	Mercury, total	Zinc, dissolved
			mg/L	S.U.	µS/cm	C	MPN/100 mL		mg/L	mg/L	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
12/14/2024	Site 14	241214-14-WG	10.69	7.60	596.06	7.48	517.2	241214-14-WC	14.8	75.0	150	107	31.8	42.3	360	0.347	0.212	0.251	0.778	1.17	3.4	0.034	0.091	3.2^{3}	0.15	3.8	0.0119	24.3
	Site 206	241214-206-WG	10.49	7.73	533.81	5.16	1,299.7	241214-206-WC	34.9	171	94.0	35.3	49.4	43.5	267	0.934	0.668	0.119	0.0960	1.74	2.2	0.019	0.069	4.7	0.59	4.5	<0.0100	26.7
1/31/2025	Site 14	--	--	--	--	--	--	250131-14-WC	22.6^{1}	153^{1}	176^{1}	98.5^{1}	97.7^{1}	118^{1}	378^{1}	0.365^{1}	0.157^{1}	0.851^{1}	0.734^{1}	2.31^{1}	3.7^{1}	0.024^{1}	0.14^{1}	$3.8^{1,3}$	0.091^{1}	7.0^{1}	0.0144^{1}	35.0^{1}
	Site 206	--	--	--	--	--	--	250131-206-WC	38.8^{1R}	250^{1R}	37.6^{1R}	33.5^{1R}	144^{1R}	230^{1R}	126^{1R}	0.740^{1R}	0.384^{1R}	0.941^{1R}	0.267^{1R}	4.33^{1R}	2.8^{1R}	0.015^{1R}	0.15^{1R}	4.6^{1R}	0.27^{1R}	10.6^{1R}	0.0145^{1R}	27.9^{1R}
2/23/2025	Site 14	250223-14-WG	5.59	8.04	714.07	12.19	17.3	250223-14-WC	3.56^{1}	31^{1}	72.4^{1}	87.8^{1}	13.9^{1}	21.3^{1}	214^{1}	0.123^{1}	0.0604^{1}	0.0779^{1}	0.687^{1}	0.583^{1}	3.4^{1}	0.012^{1}	0.032^{1}	$2.0^{1,3}$	0.036^{1}	1.9^{1}	$<0.0100^{1}$	$15.4^{1,3}$
	Site 206	250223-206-WG	10.85	8.23	320.50	6.25	161.6	250223-206-WC	6.17	56.0	17.8	14.4	45.2	37.6	76.5	0.224	0.104	0.0719	0.0847	0.905	2.1	<0.0100	0.044	3.7^{4}	0.21^{4}	4.2	<0.0100	10.1
5/17/2025	Site 14	250517-14-WG	8.39	6.93	385.45	15.56	248.9	250517-14-WC	25.4	132	17.2	53.9	38.9	74.8	104	0.320	0.163	0.323	0.429	1.64	3.0	0.012	0.070	5.0	0.10	4.1	<0.0100	26.8
	Site 206	250517-206-WG	4.81	6.96	216.39	16.29	7,270	250517-206-WC	67.6^{2}	262^{2}	4.36	27.8	67.3^{2}	169^{2}	106^{2}	1.09^{2}	0.543^{2}	0.338^{2}	0.213^{2}	4.45^{2}	2.5	0.015^{2}	0.10	9.4^{2}	0.41^{2}	7.7	0.0179	40.4^{2}
8/26/2025	Site 206	--	--	--	--	--	--	250826-206-WC	311^{2}	773^{2}	6.92	64.3	285^{2}	496^{2}	391^{2}	2.60^{2}	1.33^{2}	2.26^{2}	0.922^{2}	11.5^{2}	9.8	0.037^{2}	0.31	16.7^{2}	0.64^{2}	20.8	0.0641	108^{2}
9/29/2025	Site 14	--	--	--	--	--	--	250929-14-WC	46.4^{2}	215^{2}	6.64	35.1	32.3^{2}	171^{2}	87.5^{2}	0.637^{2}	0.277^{2}	0.695^{2}	0.470^{2}	3.38^{2}	3.9	$<0.0100^{2}$	0.18	5.3^{2}	0.18^{2}	11.7	0.0249	31.0^{2}

Notes:

– No data

[1] *Composite sample qualified due to lack of representativeness (50%–75%).*

[2] *Composite sample qualified due to exceedance of 6.0° C .*

[3] *Analytical parameter is qualified due to being less than five times the value detected in the equipment blank.*

[4] *Relative percent difference was greater than 20% and both parent and QC samples were greater than five times the method detection limit. Values are considered estimates.*

[1R] *Composite sample rejected due to lack of representativeness (<50%).*

Table 3. Event Pollutant Loading Estimates in Pounds

Event Date	BOD_5		COD		Chloride		Hardness as $CaCO_3$		Turbidity		TSS		TDS		Total Phosphorus		Orthophosphate as P		Ammonia as N		Nitrate + Nitrite as N		TKN		Arsenic, total		Cadmium, dissolved		Cadmium, total		Copper, dissolved		Lead, dissolved		Lead, total		Mercury, total		Zinc, dissolved	
	Site 14	Site 206	Site 14	Site 206	Site 14	Site 206	Site 14	Site 206	Site 14	Site 206	Site 14	Site 206	Site 14	Site 206	Site 14	Site 206	Site 14	Site 206	Site 14	Site 206	Site 14	Site 206	Site 14	Site 206	Site 14	Site 206	Site 14	Site 206	Site 14	Site 206	Site 14	Site 206	Site 14	Site 206	Site 14	Site 206	Site 14	Site 206	Site 14	Site 206
12/14/2024	116.6	26.8	591.0	131	1182	72.1	843	27.1	250.6	37.9	333.3	33	2837	205	2.734	0.72	1.671	0.512	1.978	0.091	6.131	0.07	9.22	1.33	0.03	0.002	0.00027	0.000015	0.00072	0.000053	0.025	0.0036	0.00118	0.000453	0.030	0.0035	0.0000938	0.00000384[5]	0.191	0.0205
2/23/2025	68.86[1]	8.64	600[1]	78.4	1400.4[1]	24.9	1698.3[1]	20.2	268.9[1]	63.3	412[1]	52.7	4139[1]	107.1	2.379[1]	0.314	1.1683[1]	0.146	1.5068[1]	0.1007	13.288[1]	0.1186	11.277[1]	1.268	0.07[1]	0.003	0.00023[1]	0.000014	0.000621	0.000062	0.039[1,3]	0.0052[4]	0.000696[1]	0.000294[4]	0.037[1]	0.0059	0.0000967[1,5]	0.00000700[5]	0.298[1,3]	0.0141
5/17/2025	390.3	80.4[2]	2029	312[2]	264.3	5.19	828	33.1	597.8	80.1[2]	1149	201[2]	1598	126[2]	4.918	1.297[2]	2.505	0.646[2]	4.96	0.402[2]	6.593	0.253[2]	25.20	5.29[2]	0.05	0.003	0.00018	1.82E-05	0.0011	0.0000059[5]	0.077	0.011[2]	0.001537	0.000488[2]	0.063	0.0092	0.0000768[5]	0.0000213	0.412	0.0481[2]

Notes:

[1] *Composite sample qualified due to lack of representativeness (50%–75%).*

[2] *Composite sample qualified due to exceedance of 6.0° C .*

[3] *Analytical parameter is qualified due to being less than five times the value detected in the equipment blank.*

[4] *Relative percent difference was greater than 20% and both parent and QC samples were greater than five times the method detection limit. Values are considered estimates.*

[5] *Concentrations are below the method detection limit (MDL). A value of half the MDL was used in calculations.*

Table 4. QC Sample Summary																							
Event Date	Parent Sample	Sample ID	QC Sample Type	Analytical Parameters																			
				E. coli	BOD_5	COD	Chloride	Hardness as $CaCO_3$	Turbidity	TSS	TDS	Total Phosphorus	Orthophosphate as P	Ammonia as N	Nitrate + Nitrite as N	TKN	Arsenic, total	Cadmium, dissolved	Cadmium, total	Copper, dissolved	Lead, dissolved	Lead, total	Mercury, total	Zinc, dissolved
				MPN/100 mL	mg/L	mg/L	mg/L	mg/L	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
September 10, 2024	--	240910-14-003	Equipment blank	--	<2.00	<7.00	--	<0.100	<0.3	<0.900	<25.0	<0.0120	<0.003	<0.0450	<0.0250	<0.100	<0.0500	<0.0100	<0.0200	0.93	<0.0100	<0.0100	<0.0100	4.0
September 17, 2024	--	240917-206-003	Equipment blank	--	<2.00	<7.00	--	<0.100	<0.3	<0.900	<25.0	<0.0120	<0.003	<0.0450	<0.0250	<0.100	<0.0500	<0.0100	<0.0200	0.37	<0.0100	<0.0100	<0.0100	1.6
December 14, 2024	Americana grab	241214-14-001	Field blank	<1.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Americana grab	241214-14-101	Field duplicate	727.0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	Calculated parent/duplicate RPD			**4%**	–	–	--	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
February 23, 2025	AS_6 Composite	250223-206-103	Lab duplicate/ composite split	--	6.18	61.0	18.3	14.4	46.3	36.8	75.0	0.222	0.103	0.0784	0.0970	0.941	2.0	<0.0100	0.038	4.9	0.16	4.0	<0.0100	9.6
	Calculated parent/duplicate RPD			--	**0%**	**9%**	**3%**	**0%**	**2%**	**2%**	**2%**	**1%**	**1%**	**9%**	**14%**	**4%**	**5%**	**0%**	**15%**	**28%**	**27%**	**5%**	**0%**	**5%**
September 9, 2025	–	250909-14-004	Rinsate blank	–	<2.00	<7.00	<0.500	<0.100	0.4	<0.900	<25.0	<0.0120	<0.003	<0.0450	<0.0250	<0.100	<0.0500	<0.0100	<0.0100	0.29	<0.005	0.030	<0.0100	<0.500
Allowable RPD				40%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%

-- = No data.

Attachment E:

Temperature Monitoring Summary

Temperature Monitoring Summary

Water Year 2025

Prepared by
Ada County Highway District
January 8, 2026

Table of Contents

1 Introduction 1

2 Monitoring Sites, Equipment, and Sample Type 1

3 Results 2

Appendix A: Figures A-1

1 Introduction

Ada County Highway District, Boise State University, City of Boise, City of Garden City, Drainage District #3, and the Idaho Transportation Department District #3 (Permittees) were issued a National Pollutant Discharge Elimination System Phase I Permit #IDS027561 (Permit) on October 1, 2021. The Permit authorizes the Permittees to discharge from municipal separate storm sewer (MS4) outfalls to the Boise River and its tributaries. According to Permit Part 4.1, *Temperature Monitoring,* Permittees must monitor temperature in stormwater discharges from the MS4 to the Boise River including assessment units 17050114SW005_06, 17050114SW005_06a, and 17050114SW005_06b. The Boise River assessment units (AU) within the Permit area are 17050114SW011a_06 and 17050114SW005_06. The remaining two AUs, 17050114SW005_06a and 17050114SW005_06b, are not in the Permit area and therefore do not receive Permittee stormwater contributions. Temperature data is collected from all water quality samples collected from the MS4 to the Boise River and other waterways. The following summary provides temperature data collected during water year (WY) 2025 (October 1, 2024 – September 30, 2025) from the MS4 directly to the Boise River assessment units 17050114SW011a_06 and 17050114SW005_06.

2 Monitoring Sites, Equipment, and Sample Type

Temperature monitoring occurred at 9 outfalls that discharge to the Boise River assessment units 17050114SW011a_06 and 17050114SW005_06. Temperature measurements are collected as either discrete or continuous. Discrete measurements represent one instance in time and were measured manually using In-Situ AquaTROLL multiparameter probes. Continuous measurements were taken at specified intervals by equipment installed at the outfall sites. In WY 2025, continuous temperature readings were taken at four outfall locations: three using ISCO area velocity sensors and one using a HOBO TidbiT temperature logger. Table 2-1 below shows the number of outfalls where temperature data was collected, the outfall ID, sample type, receiving water and assessment unit designation. Figure 1 is a map of the sampled outfall locations.

Table 2-1. Temperature Monitored Outfalls

Receiving Water	Assessment Unit	# of Temperature Monitored Outfalls	Outfall ID (Station Name)	Sample Type
Boise River	17050114SW011a_06	8	3n2e04_010 (Main/ Main Alt)	Discrete and Continuous
			3n2e09_024 (Americana)	Discrete and Continuous
			3n2e09_025 (AS_7)	Continuous
			3n2e10_012	Discrete
			3n2e10_022	Discrete
			3n2e10_031	Discrete
			3n2e14_013	Discrete
			3n2e24_006	Discrete
	17050114SW005_06	1	4n2e30_012 (Plantation)	Continuous

3 Results

All discrete dry weather and wet weather temperature results collected during WY 2025 are provided in Table 3-1, organized by outfall ID and date. Figure 2 provides a visual representation of the results derived from dry weather or wet weather discharges, symbolized by a circle or star, respectively.

Table 3-1. Discrete Temperature Results			
Outfall ID (Station Name)	Date	Weather	Temperature (C)
3n2e04_010 (Main/ Main Alt)	12/14/2024 2/23/2025 5/17/2025	Wet Weather	6.56 7.74 17.60
3n2e09_024 (Americana)	1/7/2025 9/17/2025	Dry Weather	14.03 19.46
3n2e09_024 (Americana)	12/14/2024 2/23/2025 5/17/2025	Wet Weather	7.48 12.19 15.56
3n2e10_012	1/17/2025 9/23/2025	Dry Weather	10.6 17.28
3n2e10_022	1/7/2025 8/6/2025	Dry Weather	14.52 18.97
3n2e10_031	6/17/2025	Dry Weather	16.59
3n2e14_013	6/26/2025	Dry Weather	14.77
3n2e24_006	9/25/2025	Dry Weather	21.14

Graphs of continuous temperature results are found in Figures 3-6. Figure 3 depicts continuous temperature collected only during targeted storm events. The graphs from sites where temperature is recorded using ISCO area velocity sensors (Figures 3-5) display water temperature, water level, and hourly precipitation for reference. Temperature at the Plantation site is recorded using a HOBO TidbiT temperature logger that records data associated with the presence of water. Figure 6 displays Plantation temperature results and hourly precipitation for reference. Notable observations from these graphs are discussed below.

Beginning on approximately March 27, 2025, the Boise River water level rose enough to surcharge the Main and Americana monitoring stations. The May 17, 2025, data displayed in Figure 3 were collected at the Main Alternate site. All monitoring equipment was removed from Americana on March 27 and reinstalled on April 25 once the river water level decreased. This period is reflected by a data gap displayed in Figure 4.

Throughout WY 2025, low water levels were often observed at AS_7. According to the sensor manufacturer, accuracy of the area velocity sensor decreases at water levels below one inch. It is difficult to discern the accuracy of the low flow data and distinguish between air and water temperature under these conditions. Therefore, all recorded temperature data from AS_ 7 has been included in the graph shown in Figure 5.

Gaps in the Plantation temperature data, shown in Figure 6, indicate water was not present, the data was rejected due to sediment interference, or a gap in data collection. Unlike the other graphs of

continuous temperature results, water level data is not available at this monitoring site. From October 1 through November 6, sediment was observed on the temperature logger, which yielded results that water was present when the logger was observed to be dry. Therefore, temperature readings recorded during this period have been rejected. Sediment interference has since been mitigated by an increased frequency of inspection, cleaning, and scheduled maintenance. Another data gap occurred from January 7 – February 12, 2025, when the logger failed to collect readings and was replaced.

Plantation temperature data shown in Figure 6 display water presence when no rain data was recorded. An unknown dry weather flow was observed from late March through mid-April. Attempts were made to trace and characterize the flow; however, a source has yet to be confirmed due to the short flow duration. Additionally, visual observations have suggested that sources of dry weather flow in this system can often be attributed to sprinkler runoff. From mid-June through the end of September, daily intermittent water temperature readings were recorded. Due to the daily occurrences of these readings, temperature in Figure 6 appears to be continuous despite being intermittent throughout each day.

Appendix A: Figures

Figure 1. Overview Map WY 2025

Figure 2. Discrete Temperature Results WY 2025

Figure 3. Continuous Temperature Results – Main WY 2025

Figure 4. Continuous Temperature Results – Americana WY 2025

Figure 5. Continuous Temperature Results – AS_7 WY 2025

Figure 6. Continuous Temperature Results – Plantation (4n2e30_012) WY 2025

Figure 1. Overview Map – Temperature Monitored Outfalls WY 2025

Created: 12/2/2025



Figure 2. Discrete Temperature Results WY 2025

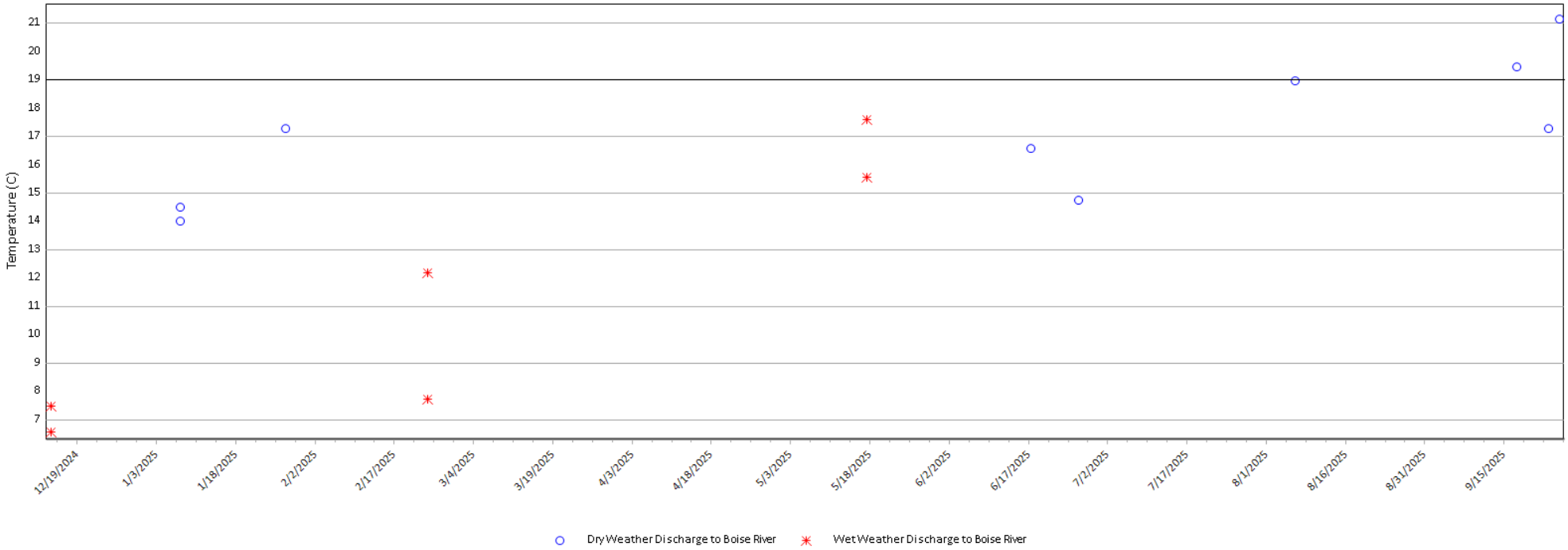


Figure 3. Continuous Temperature Results - Main WY 2025

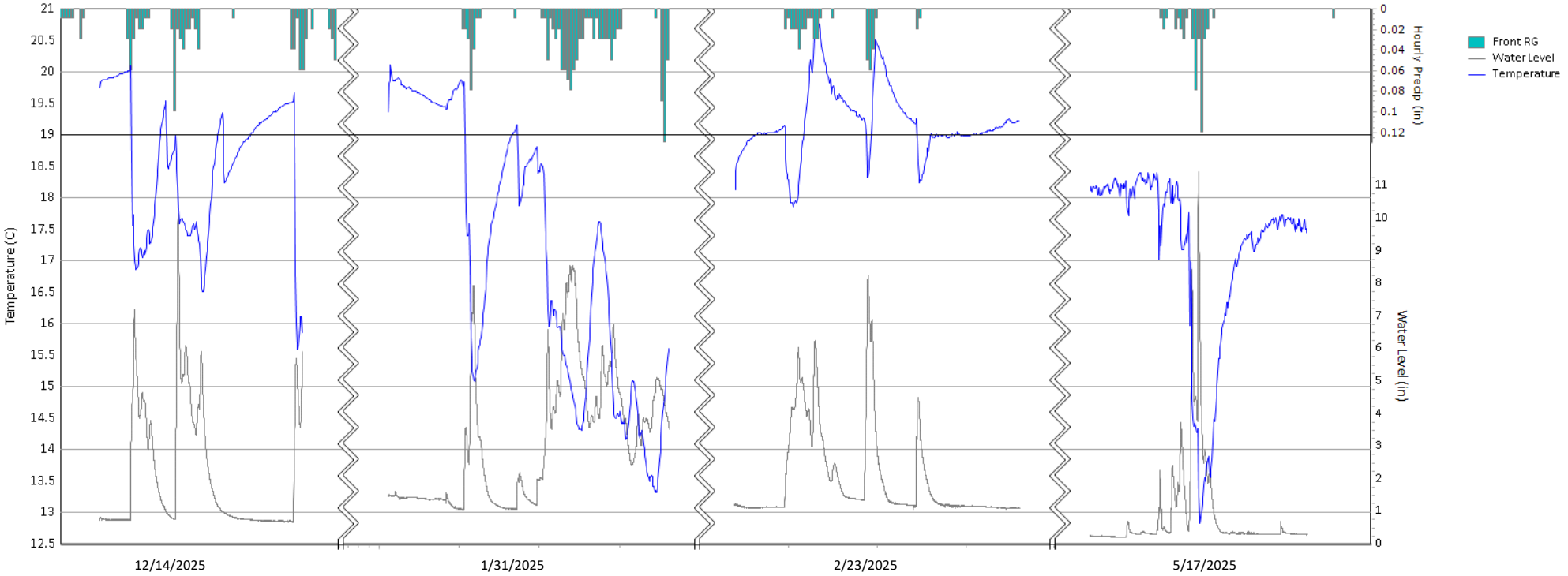


Figure 4. Continuous Temperature Results - Americana WY 2025

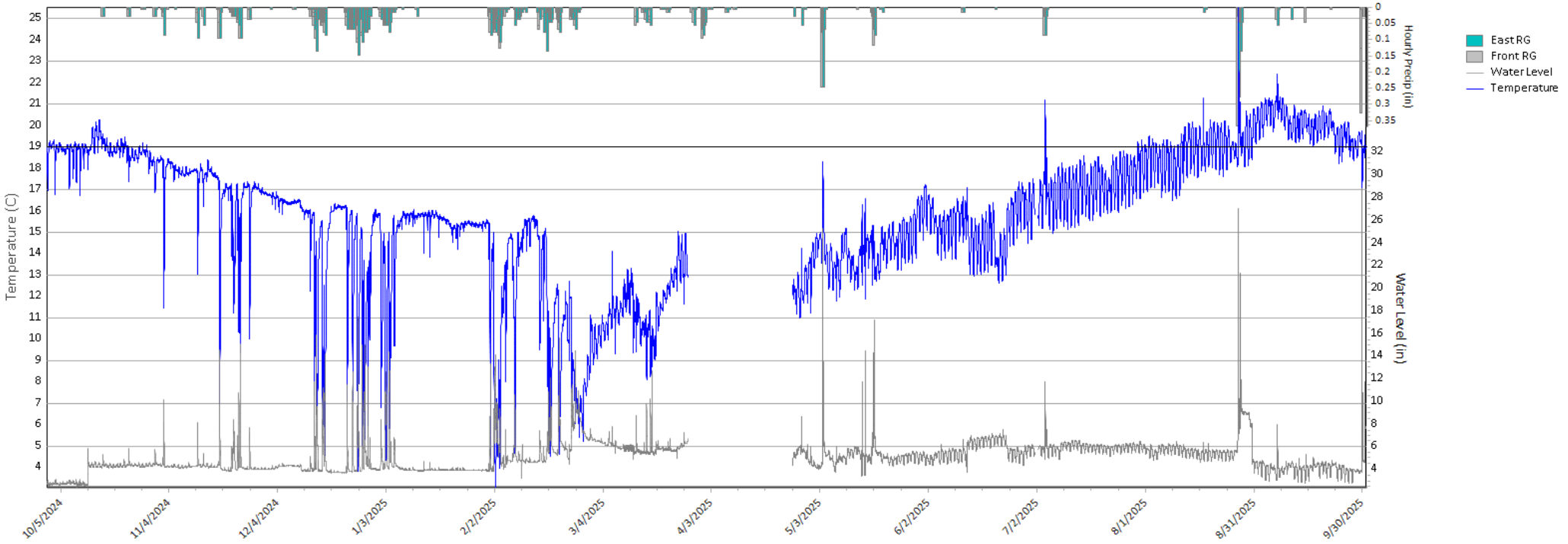


Figure 5. Continuous Temperature Results - AS_7 WY 2025

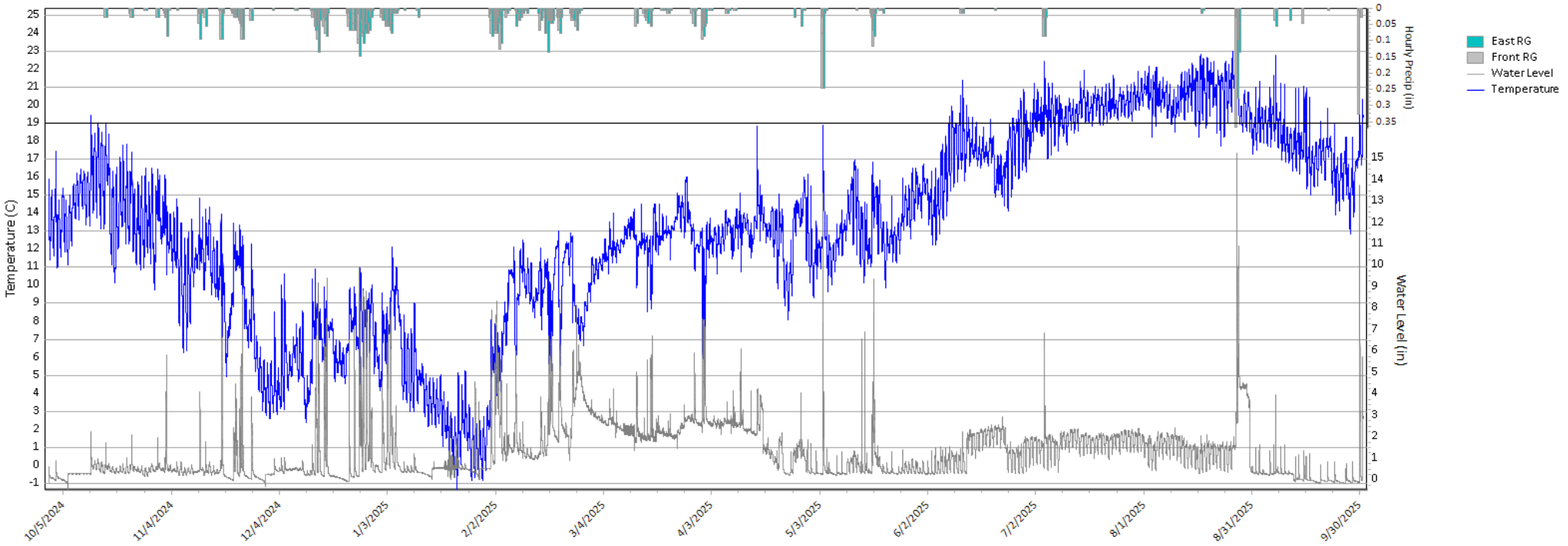
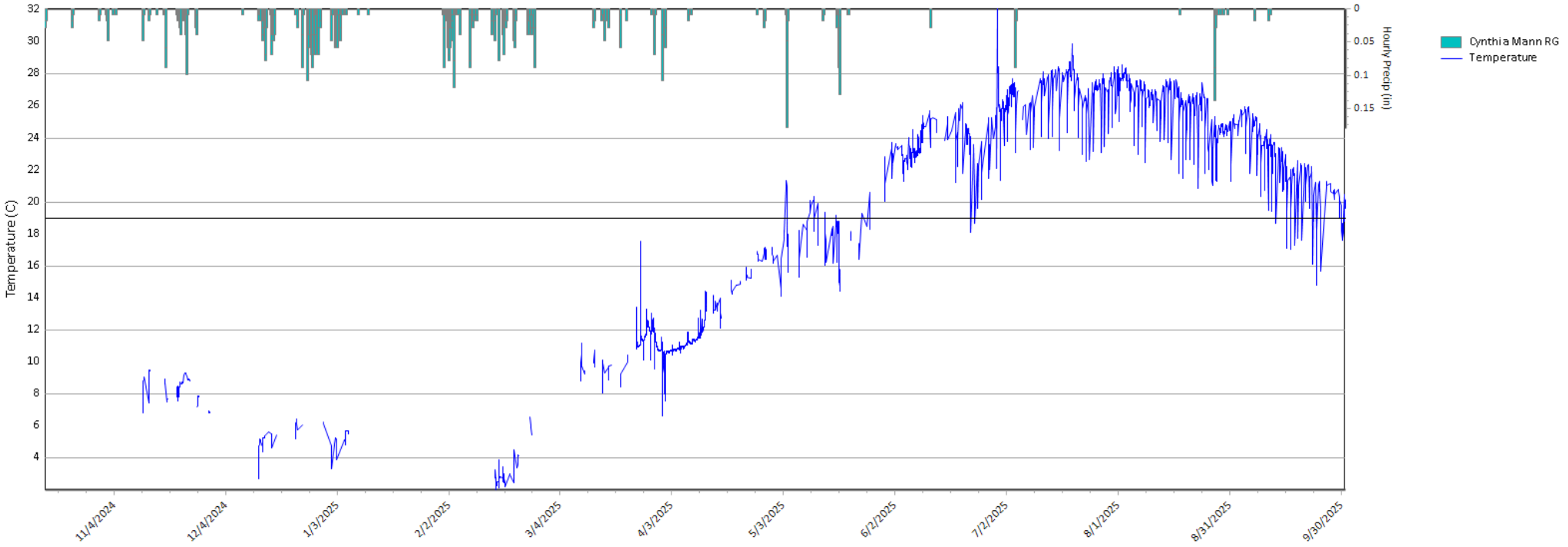


Figure 6. Continuous Temperature Results - Plantation (4n2e30_012) WY 2025



Attachment F:

ITD Dry Weather Monitoring

Check ✓ - If further action including sampling is required ☑

ITD ILLICIT DISCHARGE INVESTIGATION FIELD FORM

Today's Date: 10.8.25 Outfall ID: 01-03 Investigator: G. VIJLET
Time: 12:20 Subwatershed: RIDENBAUGH Title: ENV. PLANNER
Highway Description/ Location: COLE & BARRISTER CANAL
Air Temperature (°F): 73° Rainfall (in.): 0 Last 24 Hours: 0
Last 48 Hours: 0
Last 72 Hours: 0
Latitude: 43.61 Longitude: -116.27 MS4 Area: (circle one)
Phase I Phase II

Event Communication

Sampling Event	Event Initiation	Date of Initiation
☑ Dry Weather Flow Sampling	☐ Public Complaint/Report	
	☐ Flow observed during annual dry screening	
☒ Dry Weather Screening	☐ Annual Screening	
☐ Wet Weather Flow Sampling	☐ Appropriate storm event forecasted	

Field Observations

Drainage Area Description (check all that apply)

☒ Interstate	☐ All grass- roadway open channel	☐ All grass- irrigation
☐ Channel- Urban	☐ Curb and gutter- stormdrain	☐ Gutter- no curb
☐ Rural-Urban	☐ Asphalt/lined channel	☐ Other:

Outfall Condition

Condition:	Maintenance:	
☒ Good	☐ Remove Trash/ Debris	☐ Ditch Work
☐ Fair	☐ Blocked Pipe	☐ Structure Corrosion
☐ Poor	☐ Erosion at Structure	☐ N/A
☐ Crumbling	☐ Tree Work	
	☐ Other:	

Outfall Description

Location	Material	Submerged
Closed Pipe	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: CONCRETE	☐ In Water ☐ With Sediment
	Shape	**Diameter/Dimensions (in.)**
	☒ Circular ☐ Single ☐ Elliptical ☐ Double ☐ Box ☐ Triple ☐ Other:	36"
Open Drainage	☐ Grass Ditch ☐ Rap Concrete ☐ Earth Ditch ☐ Asphalt ☐ Rip ☐ Other:	**Average Dimensions:** Width: Depth:

Flow present: YES ☒ NO ☐ (If no, skip the following sections)

Flow Estimating					
Nature of Discharge:	☐ Rainfall	☐ Snowmelt	☒ Other: INFILTRATION GROUND WATER.		
Flow Description:	☒ Trickle	☐ Moderate	☐ Substantial		
Estimated Flow – See SOP for Details					
Flow Method 1 (Bottle Method)	**Parameter**	**Unit**	**Results**	**Equipment**	
	☒ Volume ☒ Time to Fill	☒ Liter ☒ sec.	3 SECONDS/ 1 LITER	☐ Bottle ☐ Stop Watch	
Flow Method 2 (Float Method)	☐ Average Depth ☐ Average Width ☐ Float Time ☐ Length of reach	☐ ft. ☐ ft. ☐ sec. ☐ ft.		☐ Tape Measure ☐ Stop Watch ☐ Stakes/ String ☐ Hammer ☐ Marker ☐ Orange (float) ☐ Net	
Flow Method 3 (Normal Depth Method)	☐ Normal Depth ☐ Pipe Diameter	☐ in. ☐ in.		☐ Tape Measure ☐ As-Built Plans ☐ Wood dowel	

Physical Indicators			
Indicator	**Present**	**Description**	**Relative Severity**
Odor	☐	☐ Sewage ☐ Rancid/Sour ☐ Sulfide ☐ Petroleum/Gas ☐ Other: _____	1 2 3 (Choose One)
Color	☐	☒ Clear ☐ Grey ☐ Green ☐ Yellow ☐ Brown ☐ Red ☐ Other: _____	1 2 3 (Choose One)
Floatables (Not including trash)	☐	☐ Sewage ☐(toilet paper, etc.) ☐ Suds ☐ Paint ☐ Petroleum (oil sheen) ☐ Other: _____	1 2 3 (Choose One)
Staining on Ground	☐	☐ Oily ☐ Flow Line ☐ Salts ☐ Other: _____	1 2 3 (Choose One)
Overall Outfall Illicit Discharge Characterization		☒ Unlikely ☐ Potential* ☐ Suspect** ☐ Obvious	

**Presence of 2 or more indicators*
*** One or more indicators with a severity of 3*

Detail any concerns, additional comments, descriptions of pictures taken, and any corrective actions taken:

Inspector has mobilized for a grab sampling event YES ☒ NO ☐ (If no, follow up within 3 days)

CHECK THE BOX AT TOP OF PAGE 1 FOR FURTHER INVESTIGATION

Grab Sampling – See SOP for Details

Time Collected: 10.8.25 @ 12:20 P.M. WATER TEMP 45°

Parameter	Method	Minimum Level	Bottleware	Preservation	Holding Time	Duplicate collected
☒ *E. coli*	SM 9221 BCF	1.8 MPN/100 mL	Plastic or Glass	Cool, <10 °C, 0.008% Na2S2O3	8 hours	☐ Yes
☒ Total suspended solids	SM 2540 D	5 ug/L	Polyethylene, fluoropolymer, or glass	Cool, ≤6 °C	7 days	☐ Yes
☒ Total Phosphorus	EPA 365.1	10 ug/L	Polyethylene, fluoropolymer, or glass	Cool, <6 °C H2SO4	28 days	☐ Yes
☒ Total Kjeldahl Nitrogen	Perstorp PAI-DK01	0.4 mg/L	Polyethylene, fluoropolymer, or glass	Cool, <6 °C H2SO4	28 days	☐ Yes
☒ Nitrate + Nitrite - Nitrogen	EPA 353.2	0.1 mg/L	Polyethylene, fluoropolymer, or glass	Cool, <6 °C H2SO4	28 days	☐ Yes

Chain of Custody (COC) completed: ☒ Yes ○ No

COC Information (Date, Time, Lab Name): 10.8.25 @ 4:00 pm ANALYTICAL LABORATORY

Field Parameter Measurements – See SOP for Details

Time Collected:_____ Time Analyzed:_____

Parameter	Method	Minimum Level of Sensitivity	Holding Time	Field Screening Result
pH	Horiba multi-meter	N/A	Analyze within 15 minutes	
Temperature	Horiba multi-meter	0.2 °C	Analyze within 15 minutes	
Dissolved Oxygen	Horiba multi-meter	0.2 mg/L	Analyze within 15 minutes	
Conductivity	Horiba multi-meter	1 uS/cm	Analyze within 15 minutes[1]	
Turbidity	Horiba multi-meter	0.1 NTU	Analyze within 15 minutes[2]	

Inspector has mobilized for Enforcement and Resolution YES ☐ NO ☐ (If no, follow up within 3 days)

CHECK THE BOX AT TOP OF PAGE 1 FOR FURTHER INVESTIGATION

Enforcement and Resolution

Illicit Discharge Elimination

☐ Source Identified (Describe Below)

☐ 3- Day Follow up Inspection Required (describe reason why below)

Enforcement Action taken? O Yes Ø No

If yes, describe:

Additional Enforcement Actions taken? O Yes Ø No

If yes, describe:

Source/Resolution:

☐ No flow and no sign of illicit discharge, investigation closed. Date:





Analytical Laboratories Inc

1804 N. 33rd Street
Boise, Idaho 83703
Phone (208) 342-5515

www.analyticallaboratories.com
Lab Federal ID# ID00020

Laboratory Analysis Report

Report To: GREG VITLEY
IDAHO TRANSPORTATION DIST 3
8150 CHINDEN BLVD PO BOX 8028
BOISE, ID 83707
Phone: (208) 334-8350 Copy:
e-mail: greg.vitley@itd.idaho.gov
Date Received: 10/08/2025
Collection Date/Time: 10/08/2025 12:20

Lab/Sample Number: 2523085-01
Sample Location: ITO DRY SCREENING - 1A - COLE & BARRISTER

Date Printed: 10/23/2025 15:38
Collector's Name: GREG VITLEY
Transported By: G. VITLEY
Temp C Received at Lab: 13.60

Field Measurements

pH: Total Chlorine mg/L: DO mg/L:
Temp C: Free Chlorine mg/L: Flow g/min:

Analyte	Result	Units	MRL	MDL	MCL	Analyzed	Analyst	Method	Notes
Inorganics									
Total Suspended Solids	5	mg/L	2	2		10/15/25 11:10	MAA	USGS I-3765	

Analytical Laboratories Inc

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Boise, Idaho 83703
Phone (208) 342-5515

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Lab Federal ID# ID00020

Laboratory Analysis Report

Report To: GREG VITLEY
IDAHO TRANSPORTATION DIST 3
8150 CHINDEN BLVD PO BOX 8028
BOISE, ID 83707
Phone: (208) 334-8350 Copy:
e-mail: greg.vitley@itd.idaho.gov
Date Received: 10/08/2025
Collection Date/Time: 10/08/2025 12:20

Lab/Sample Number: 2523085-02
Sample Location: ITO DRY SCREENING - 1B - COLE & BARRISTER

Date Printed: 10/23/2025 15:38
Collector's Name: GREG VITLEY
Transported By: G. VITLEY
Temp C Received at Lab: 13.60

Field Measurements

pH: Total Chlorine mg/L: DO mg/L:
Temp C: Free Chlorine mg/L: Flow g/min:

Analyte	Result	Units	MRL	MDL	MCL	Analyzed	Analyst	Method	Notes
Inorganics									
Total Kjeldahl Nitrogen (as N)	0.44	mg/L	0.10	0.03		10/14/25 17:16	AY	EPA 351.2	
Nitrate + Nitrite (as N)	ND	mg/L	0.02	0.0002		10/16/25 17:13	JM	EPA 353.2	
Total Phosphate (as P)	0.06	mg/L	0.05	0.03		10/14/25 17:16	AY	EPA 365.4	

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Boise, Idaho 83703
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Lab Federal ID# ID00020

Laboratory Analysis Report

Report To: GREG VITLEY
IDAHO TRANSPORTATION DIST 3
8150 CHINDEN BLVD PO BOX 8028
BOISE, ID 83707
Phone: (208) 334-8350 Copy:
e-mail: greg.vitley@itd.idaho.gov
Date Received: 10/08/2025
Collection Date/Time: 10/08/2025 12:20

Lab/Sample Number: 2523085-03
Sample Location: ITO DRY SCREENING - 1C - COLE & BARRISTER

Date Printed: 10/23/2025 15:38
Collector's Name: GREG VITLEY
Transported By: G. VITLEY
Temp C Received at Lab: 13.60

Field Measurements

pH: Total Chlorine mg/L: DO mg/L:
Temp C: Free Chlorine mg/L: Flow g/min:

Analyte	Result	Units	MRL	MDL	MCL	Analyzed	Analyst	Method	Notes
Microbiology									
Total Coliform Bacteria	>1,600	MPN/100mL	2	2		10/11/25 14:20	DB	SM 9221B	
Fecal Coliforms	900	MPN/100mL	2	2		10/11/25 14:40	DB	SM 9221E	
Escherichia coli	170	MPN/100mL	1	1		10/9/25 14:15	DB	SM 9223	

Authorized Signature,

BRIAN MCGOVERN, Client Manager

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

ND - Non Detect
MCL - Maximum Contaminant Level
MDL - Method Detection Limit
MRL - Method Reporting Limit

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Phone (208) 342-5515

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Lab Federal ID# ID00020

Quality Control Data

Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEJ0464 - WetBench2										
Blank (BEJ0464-BLK1)				Prepared: 10/14/2025 Analyzed: 10/15/2025						
Total Suspended Solids	ND		2	mg/L						
LCS (BEJ0464-BS1)				Prepared: 10/14/2025 Analyzed: 10/15/2025						
Total Suspended Solids	244		2	mg/L	250		97.6	85-115		
Duplicate (BEJ0464-DUP1)	**Source: 2523067-01**			Prepared: 10/14/2025 Analyzed: 10/15/2025						
Total Suspended Solids	89		2	mg/L		84			5.78	20
Duplicate (BEJ0464-DUP2)	**Source: 2523077-01**			Prepared: 10/14/2025 Analyzed: 10/15/2025						
Total Suspended Solids	548		2	mg/L		536			2.21	20

Quality Control Data

Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEJ0542 - FIA										
Blank (BEJ0542-BLK1)				Prepared & Analyzed: 10/14/2025						
Total Kjeldahl Nitrogen (as N)	ND		0.10	mg/L						
Total Phosphate (as P)	ND		0.05	mg/L						
LCS (BEJ0542-BS1)				Prepared & Analyzed: 10/14/2025						
Total Phosphate (as P)	0.73		0.05	mg/L	0.745		97.6	85-115		
Total Kjeldahl Nitrogen (as N)	2.81		0.10	mg/L	2.88		97.7	70-130		
Duplicate (BEJ0542-DUP1)	**Source: 2523091-01**			Prepared & Analyzed: 10/14/2025						
Total Kjeldahl Nitrogen (as N)	4.98		0.10	mg/L		5.64			12.4	20
Total Phosphate (as P)	0.99		0.05	mg/L		0.94			4.54	20
Matrix Spike (BEJ0542-MS1)	**Source: 2523091-01**			Prepared & Analyzed: 10/14/2025						
Total Phosphate (as P)	1.95		0.05	mg/L	1.00	0.94	101	85-115		
Total Kjeldahl Nitrogen (as N)	6.46		0.10	mg/L	1.00	5.64	81.8	70-130		

Quality Control Data

Inorganics

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEJ0655 - FIA										
Blank (BEJ0655-BLK1)				Prepared & Analyzed: 10/16/2025						
Nitrate + Nitrite (as N)	ND		0.02	mg/L						
LCS (BEJ0655-BS1)				Prepared & Analyzed: 10/16/2025						
Nitrate + Nitrite (as N)	1.09		0.02	mg/L	1.07		102	90-110		
Duplicate (BEJ0655-DUP1)	**Source: 2523063-01**			Prepared & Analyzed: 10/16/2025						
Nitrate + Nitrite (as N)	1.41		0.02	mg/L		1.45			2.80	20
Matrix Spike (BEJ0655-MS1)	**Source: 2523063-01**			Prepared & Analyzed: 10/16/2025						
Nitrate + Nitrite (as N)	1.96		0.02	mg/L	0.500	1.45	102	90-110		

CLIENT CODE=

CHAIN OF CUSTODY RECORD

2523085

ANALYTICAL LAB
1804 N. 33rd Street • Boise, I
(208) 342-5515 • Fax: (208) 342-5591
Website: www.analyticallaboratories.com
E-mail: ali@analyticallaboratories.com

CLIENT INFORMATION:		PROJECT INFORMATION:	
Project Manager:	GREG VITLEY	Project Name:	ITD DRY SCREENING
Company:	ITD-Idaho Trans. Dept. 3	PWS Number:	
Address:	8150 Chinden Blvd	Purchase Order Number:	
		Required Due Date:	10.28.25
Phone:	334-8952	Fax:	
E-mail Address:	greg.vitley@itd.idaho.gov		
Sampled by: (Please print)	GREG VITLEY	Transported by: (Please print)	GVITLEY

TESTS REQUESTED

Lab ID	Date Sampled	Time Sampled	Sample Description (Source)	Sample Matrix	SS	TRPHC, Nitrates, Ecoli, TC, FC	Remarks:
1A	10.8.25	12:20	COLE & BARRISTER	23085-01	✓		
1B	"	"	"	-02		✓	
1C	"	"	"	-03		✓	

Invoice to: *(If different than above address)*

Special Instructions:

ALLOCATIONS OF RISK: Analytical Laboratories, Inc. will perform preparation and testing services, obtain findings and prepare reports in accordance with Good Laboratory Practices (GLP). If, for any reason, Analytical Laboratories, Inc. errors in the conduct of a test or procedure, their liability shall be limited to the cost of the test or procedure completed in error. Under no circumstances will Analytical Laboratories, Inc. be liable for any other cost associated with obtaining a sample or use of data.

Note: Samples are discarded 21 days after results are reported. Hazardous samples will be returned to client or disposed of at client expense.

	Print Name:	Company:	Date:	Time:
Relinquished By: *(Signature)*	GREG VITLEY	ITD D3	10-8-25	16.22
Received By: *(Signature)*				
Relinquished By: *(Signature)*				
Received By: *(Signature)* Maggie Mulhall	Maggie Mulhall	ALI	10-8-25	16:22

SAMPLE RECEIPT: Total # of Containers: 3 | Chains of Custody Seals Y / (N) / NA | Intact: Y / (N) / NA | Temperature Received: 13.6° | Condition: good

Page 5 of 6 2523085_1 AL 10 23 25 1538

WHITE: STAYS WITH SAMPLE (S) YELLOW: SAMPLER

Analytical Laboratories Inc
1804 N. 33rd Street
Boise, Idaho 83703
(208) 342-5515

2523085

SAMPLE RECEIPT & PRESERVATION FORM

ACCEPTANCE INFO

CLIENT NAME & ADDRESS: IDAHO TRANS DEPT.

CLIENT PROJECT: ITD DRY SCREENING

EMAIL:

PHONE:

RECEIVED BY: MAGGIE

DATE RECEIVED: 10-08-25 TIME RECEIVED: 16:22

PACKAGE INFO (IF APPLICABLE)

COURIER SERVICE: ALI

TRACKING NUMBER: N/A

OF BOXES/COOLERS: 1

CUSTODY SEAL ON COOLER: INTACT BROKEN (NO SEAL)

PACKAGING MATERIAL: BUBBLES BAGS PEANUTS FOAM PAPER OTHER: _____

TEMPERATURE RECEIVED: 13.6

THERMOMETER USED: LOG IN

TEMPERATURE CONTROL: WATER ICE (ICE PACK(S)) DRY ICE NONE OTHER: _____

SAMPLE STATUS

COC PRESENT:	(YES)	NO	N/A	COC COMPLETE:	(YES)	NO	N/A
SAMPLES RECEIVED INTACT:	(YES)	NO	N/A	LABELS MATCH COC:	(YES)	NO	N/A
ALI CONTAINERS USED:	(YES)	NO	N/A	CORRECT CONTAINERS RECEIVED:	(YES)	NO	N/A
WITHIN HOLD TIME:	(YES)	NO	N/A	CUSTODY SEALS ON BOTTLES:	YES	(NO)	N/A
RECEIVED PRESERVED:	YES	(NO)	N/A	TRAVEL BLANKS RECEIVED:	YES	NO	(N/A)

PRESERVED BY ALI EMPLOYEE (INITIALS):

TOTAL NUMBER OF BOTTLES: 3

NOTES/ADDITIONAL EMAILS: