

Pretreatment Audit Report

City of Missoula

MT-0022594

Missoula, Montana

September 25, 2023 to September 27, 2023



Prepared by:

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Pretreatment Audit Summary Table

City of Missoula Pretreatment Audit Report

MT-0022594

September 25, 2023 to September 27, 2023

Pretreatment Audit Findings	Pretreatment Requirement and Corrective Action
<i>Section 3.0 – Resources</i>	
1. The Pretreatment Regulations found in 40 C.F.R. § 403.8(f)(1-6) include POTW Pretreatment requirements and procedures to implement an approved Pretreatment program. These requirements and procedures include the legal authority and the implementation procedures of the Pretreatment program (permitting, inspections, sampling, industrial waste survey, receipt of IU reporting and notification, record-keeping, slug discharge control, data evaluation and enforcement for non-compliance). The Pretreatment Regulations found in 40 C.F.R. § 403.8(f)(3) state that the POTW shall have sufficient resources and qualified personnel to carry out the authorities and implementation procedures of the Pretreatment program. Based on EPA’s review of the City’s implementation of its Pretreatment program, it does not appear that the City’s current resources, including qualified personnel and budget are adequate to implement all programmatic activities of the Pretreatment program, as required in 40 C.F.R. § 403.8(f)(3). During the EPA’s evaluation of the City’s Pretreatment program, there were significant areas of concern with the City’s implementation of the Pretreatment program that are documented in the following sections of the audit report. This appears to be a result of a need for resources and ensuring the current personnel are trained and qualified to implement the programmatic activities of the Pretreatment program.	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(1-6) 40 C.F.R. § 403.8(f)(3) <u>Corrective Action Item</u> Evaluate the current City of Missoula Pretreatment staffing plan and determine the most efficient use of its resources. For example, the City’s laboratory personnel currently perform the required Control Authority sampling and self-monitoring for a majority of the SIUs. <u>Recommended Item</u> • The EPA recommends the City of Missoula evaluate requiring all SIUs to perform their own self-monitoring, as required in §§13.07.810(E) and 13.07.1030 of the municipal ordinance and devote the current laboratory staff time to other Pretreatment programmatic activities such as the IU inventory, permitting, receipt of self-monitoring reports/compliance evaluation, and enforcement. • The EPA recommends the City evaluate hiring a full-time FTE to implement the Pretreatment program.
<i>Section 4.0 – Municipal Ordinance and Intergovernmental Agreements</i>	
2. 40 C.F.R. § 403.8(f)(1) of the Pretreatment Regulations states: “The POTW shall operate pursuant to legal authority	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(1)

enforceable in Federal, State, or local courts, which authorizes or enables the POTW to apply and to enforce the requirements of sections 307 (b) and (c), and 402(b)(8) of the Clean Water Act (Act) and any regulations implementing those sections. Such authority may be contained in a statute, ordinance, or series of contracts or joint powers agreements which the POTW is authorized to enact, enter into or implement, and which are authorized by State law.”

The Pretreatment Regulations established by the City in Title 13-Public Utilities; Chapter 13.07-Wastewater Pretreatment Regulations of the municipal ordinance provide the City of Missoula (City) the framework to implement the Pretreatment Regulations in the POTW’s service area.

A POTW’s authority to implement and enforce its approved Pretreatment program is directly related to its regulatory jurisdiction. The POTW’s authority is established in ordinance or Rules and Regulations, which are in effect for its service area. Local entities with connectors, or outside jurisdictions to the service area that contribute wastewater, must establish legally binding mechanisms to ensure that all IUs in these outside contributing jurisdictions are subject to enforceable Pretreatment standards and requirements, as required in 40 C.F.R. §403.8(f)(1).

According to information gathered during the audit, East Missoula, an outside contributing jurisdiction, contributes non-domestic wastewater to the City’s POTW. Based on the EPA’s evaluation it is not apparent if there is an IGA between the City and East Missoula that delegates authority to the City to implement the Pretreatment regulations in the outside contributing jurisdiction.

Corrective Action Item

Provide records of annexation of East Missoula into the City of Missoula jurisdiction or an intergovernmental agreement to ensure the City has authority to implement the Pretreatment program in East Missoula.

Section 6.0 – Receipt of Discharge Monitoring Reports and Notifications

3. The Pretreatment Regulations in 40 C.F.R. §403.8(f)(2)(vii) require a POTW to “Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices required under §403.12 [IU compliance reports], or indicated by analysis, inspection, and surveillance activities [control authority monitoring].” This requires the POTW to ensure adequate receipt and tracking of self-

Pretreatment Requirements

40 C.F.R. §403.8(f)(2)(vii)

40 C.F.R. § 403.8(g)

40 C.F.R. § 3

Corrective Action Item

Ensure the reports and notices required under

monitoring reports and notifications, have procedures to evaluate the data and information contained within these reports and notices, and determine compliance with the Pretreatment standards (e.g., permit limits and conditions). Based on the EPA’s review of the Pretreatment records, it appears that the City is allowing SIUs to submit the self-monitoring compliance reports electronically. The Pretreatment Regulations at 40 C.F.R. § 403.8(g) states that “A POTW that chooses to receive electronic documents must satisfy the requirements of 40 CFR part 3—(Electronic reporting).” EPA’s Cross-Media Electronic Reporting Rule (CROMERR) provides the legal framework for electronic reporting under EPA’s regulatory programs. The Rule sets performance-based, technology-neutral system standards and provides a streamlined, uniform process for Agency review and approval of electronic reporting. The CROMERR program ensures the enforceability of regulatory information collected electronically by EPA and EPA’s state, tribal and local government partners by focusing on the following processes: • Criteria for establishing a copy of record. • Integrity of the electronic document. • Validity of the electronic signature. • Determination of the identity of the individual uniquely entitled to use a signature device; and • Opportunity to review and repudiate the copy of record. The City is not certified under CROMMER and the integrity of these electronically received reports or notices are not established and therefore, the enforceability is not ensured.	the Pretreatment program are received hard copy with a wet signature until the City of Missoula applies for and receives certification under CROMMER. The City of Missoula may allow electronic copies of the required reports or notices to be submitted as a courtesy copy but these must be followed up by a hard copy with a wet signature.
4. The Pretreatment Regulations at 40 C.F.R. §403.8(f)(2)(vii) require a POTW to “Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices required under § 403.12.” The reports under § 403.12 include self-monitoring compliance reports. Based on the EPA’s review of the Pretreatment	<u>Pretreatment Requirements</u> 40 C.F.R. §403.8(f)(2)(vii) <u>Corrective Action Item</u> Consistently date stamp the required reports and notices required under the Pretreatment program. In addition, consistently evaluate the required reports and notices for compliance

records, the City receives and date stamps the date of receipt for these reports and notifications, however, as documented in section 8.4 – Specific Permit Findings, the date stamp and evaluation of received date is not consistent. In addition, it does not appear that compliance evaluation of the required reports and notices is completed on a consistent basis.	with applicable Pretreatment Standards and Requirements established in the permit or in the City of Missoula ordinance.
Section 7.0 – Industrial User Inventory and Characterization	
5. 40 C.F.R. §403.8(f)(2) of the Pretreatment Regulations require the City to “develop and implement procedures” that “enable the POTW” to comply with these Pretreatment Program requirements. The City has developed an Industrial Waste Survey standard operating procedure (SOP) that describes identification and location of IUs within the POTW’s service area. The City participates in the business development and the building department online platform to incorporate the IU survey into the business license process. This provides the City the ability to evaluate IUs and provide notification of Pretreatment requirements.	<u>Pretreatment Requirements</u> 40 C.F.R. §403.8(f)(2) 40 C.F.R. § 403.8(f)(2)(i-iii) <u>Corrective Action Item</u> Update the Industrial Waste Survey SOP to describe how the City characterizes <u>existing</u> IUs based on their unit operations/chemical storage and handling/generation and discharge of process wastewater and notify these IUs of applicable Pretreatment Standards, as required in 40 C.F.R. § 403.8(f)(2)(i-iii). <u>Recommended Item</u> The EPA recommends the City collaborate with the Fire Department because they are in the facilities in the service area and may provide additional information regarding potential for significant process/wastewater generation or spill/slug potential in the service area.
6. 40 C.F.R. §403.8(f)(2)(i-iii) of the Pretreatment Regulations states, The POTW shall develop and implement procedures to ensure compliance with the requirements of a Pretreatment Program. At a minimum, these procedures shall enable the POTW to: • “Identify and locate all possible Industrial Users which might be subject to the POTW Pretreatment Program. Any compilation, index or inventory of Industrial Users made under this paragraph shall be made available to the Regional Administrator or Director upon request.” This requires a POTW to develop and maintain an inventory of IUs in the service area.	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(2)(i-iii) <u>Corrective Action Item</u> Provide adequate characterization on the following IUs in the POTW’s service area and provide notification of applicable Pretreatment Standards, as required in 40 C.F.R. § 403.8(f)(2)(i-iii). In addition, provide the inspection report and determination of applicable Pretreatment Standards to the EPA as a follow up to this audit report. • CM Manufacturing – 6333 Butler Creek

• “Identify the character and volume of pollutants contributed to the POTW by the Industrial Users identified under paragraph (f)(2)(i) of this section. This information shall be made available to the Regional Administrator or Director upon request.” This requires a POTW to characterize the IUs in the inventory of the service area. • “Notify Industrial Users identified under paragraph (f)(2)(i) of this section, of applicable Pretreatment Standards and any applicable requirements under sections 204(b) and 405 of the Act and subtitles C and D of the Resource Conservation and Recovery Act. Within 30 days of approval pursuant to 40 C.F.R. 403.8(f)(6), of a list of significant industrial users, notify each significant industrial user of its status as such and of all requirements applicable to it as a result of such status.” These procedures must include the notification of IUs of applicable Pretreatment Standards and other applicable requirements. Prior to the Pretreatment audit, the EPA conducted a google search for IUs in the City’s service area and the following IUs did not have adequate IU inventory or characterization records: • CM Manufacturing – 6333 Butler Creek • Vorteqe 105 North Jackson St, #6 • Metalworks of Montana 3635 West Broadway • Thatcher Company 3200 Raser Drive	• Vorteqe 105 North Jackson St, #6 • Metalworks of Montana 3635 West Broadway • Thatcher Company 3200 Raser Drive
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Section 8.0 – Control Mechanism (Permit) Evaluation and Permit Specific Issues

7. The City has developed a permit template to use when developing SIU permits in the service area. The EPA evaluated the City’s permit template to ensure it incorporates the required permit conditions found in 40 C.F.R. § 403.8(f)(1)(iii)(B)(1-6) of the Pretreatment required Regulations and Section 13.07.810 and 13.07.820 of the City’s municipal ordinance. Based on the EPA’s evaluation, the SIU permit template complies with the permit conditions found in the Pretreatment Regulations and incorporated in	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(1)(iii)(B)(1-6) 40 C.F.R § 403.12 40 C.F.R. § 403.8(g)(3) <u>Corrective Action Item</u> Update the permit template to comply with the required permit conditions found in 40 C.F.R. § 403.8(f)(1)(iii)(B)(1-6) of the Pretreatment required Regulations and Sections 13.07.810
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the City’s municipal ordinance, with the following exceptions. (Note: The EPA’s evaluation of the City’s permit template is included in the Missoula Permit Template Review.docx and the resulting comments/edits are embedded in permit template in Missoula Industrial Discharge Permit-EPA.pdf; both are included as enclosures to the audit report.) The permit template needs to be updated to include the following required provisions and notification requirements: • The requirement to conduct representative sampling, as required in 40 C.F.R. § 403.12(g)(3) is not incorporated in the permit template. • The following notifications required in 40 C.F.R. § 403.12 are not incorporated as notification requirements in the permit template: • Notification of discharge of hazardous waste - 40 C.F.R. § 403.12(p) • Upset provisions - 40 C.F.R. § 403.16. • Bypass provisions - 40 C.F.R. § 403.17.	and 13.07.820 of the City’s municipal ordinance.
8. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(ii) require the City to “Identify the character and volume of pollutants contributed to the POTW.” The SIU inspection reports do not adequately characterize the IUs or capture current conditions at the SIUs and need more detail regarding the SIU’s chemical storage/handling/transfer, process/unit operations, wastestream generation from these unit operations, wastestream management or wastewater treatment, sampling procedures to provide a current characterization, including an evaluation of slug discharge potential and process or treatment plant changes. This information is important to capture current conditions and determine if control such as an SIU permit or BMPs are necessary or if modifications to existing control mechanism or control plans such as slug discharge control plans or spill plans are necessary.	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(2)(ii) <u>Corrective Action Item</u> Provide more detail in the SIU inspection reports to capture current conditions at the SIU, as discussed in the detail provided for each SIU to identify the character and volume of contributed pollutants. <u>Recommended Action Item</u> • The EPA provided training to the City for IU inspections and information gathering during the audit. As discussed during the training, the EPA recommends the City evaluate its current IU inspection form to determine if it is an adequate tool used to adequately characterize IUs in its service area. The EPA is including the Region 8 facility inspection report form as an enclosure to this audit report for the City to evaluate. • The City should gather digital photos during SIU inspections to provide current

	photos of areas relevant to the Pretreatment permit, including but not limited to floor drains, unit operations, raw material/chemical storage, applicable chemical handling equipment, wastestreams, treatment. These digital photos should be integrated into the facility's inspection report
9. The Pretreatment Regulations require in 40 C.F.R. § 403.8(f)(2)(iii) that a POTW shall notify Industrial Users of applicable Pretreatment Standards. Based on the EPA's review of the Pretreatment records, it does not appear that the City is providing the SIU a follow-up letter after the inspection or a copy of the inspection report to notify the IU of their status under the Pretreatment program.	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(2)(iii) <u>Corrective Action Item</u> Provide follow-up after an inspection to notify the SIU or IU of applicable Pretreatment Standards.
10. The Pretreatment Regulations at 40 CFR 403.8(f)(2)(v) require the City to inspect each SIU at least once per year. 40 C.F.R. § 403.8(f)(2)(ii) requires the City to "Identify the character and volume of pollutants contributed to the POTW" and 40 C.F.R. § 403.8(f)(2)(vii) establishes the standard of evidence collection during sampling or inspection activities: • "Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices required under §403.12, or indicated by analysis, inspection, and surveillance activities described in paragraph (f)(2)(v) of this section. Sample taking and analysis and the collection of other information shall be performed with sufficient care to produce evidence admissible in enforcement proceedings or in judicial actions." • Based on the EPA's review of the Pretreatment records, the City did not inspect a significant number of SIUs, including all ten permitted breweries in 2022. This is a significant failure to implement the Pretreatment program.	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(2)(ii) 40 C.F.R. § 403.8(f)(2)(iii) 40 C.F.R. § 403.8(f)(2)(vii) <u>Corrective Action Item</u> Inspect the permitted SIUs at least once per year, as required in the Pretreatment Regulations.
11. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(1)(iii) require the City to "Control through Permit, order, or similar means, the contribution to	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(1)(iii)

the POTW by each Industrial User to ensure compliance with applicable Pretreatment Standards and Requirements.” Based on the EPA’s evaluation of the American Eagle Instruments permit, the permit needs to be updated for the following required permit conditions: • Part 4(H) requires notification of the discharge of hazardous waste for all pollutants, including permit-limited pollutants. However, the hazardous waste notification requirement in 40 C.F.R. §403.12(p) do not apply to pollutants already reported under the self-monitoring requirements of 40 CFR 403.12 (b) BMR, (d), 90-day compliance report and (e) self-monitoring reports. • The Pretreatment Regulations at 40 C.F.R. § 403.12(g)(3) state that “The required reports must be based upon data obtained through appropriate sampling and analysis performed during the period covered by the report, which data are <u>representative</u> of conditions occurring during the reporting period.” The permit does not require representative sampling.	<u>Corrective Action Item</u> Update the American Eagle permit to address the identified permit reporting and sampling requirements. <u>Recommended Action Item</u> The EPA recommends the City provide the upper and lower pH limits in the Summary of Discharge Limits table.
12. The Pretreatment Regulations at 40 C.F.R. § 403.8(g) states that “A POTW that chooses to receive electronic documents must satisfy the requirements of 40 CFR part 3 (Electronic reporting).” American Eagle submits electronic SIU self-monitoring reports as the primary method of delivery. The City is not certified under Cross-Media Electronic Reporting Rule (CROMMER) and the integrity of these electronically received reports or notices are not established and therefore, the enforceability is not ensured.	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(g) Cross-Media Electronic Reporting Rule <u>Corrective Action Item</u> Ensure the reports and notices required under the Pretreatment program are received hard copy with a wet signature until the City applies for and receives certification under CROMMER. <u>Recommended Action Item</u> The City may allow electronic copies of the required reports or notices to be submitted as a courtesy copy, but these must be followed up by a hard copy with a wet signature.
13. The Pretreatment Regulations at 40 C.F.R. §	<u>Pretreatment Requirements</u>

403.8(f)(2)(vi) require the City to “Evaluate whether each such Significant Industrial User needs a plan or other action to control Slug Discharges. For purposes of this subsection, a Slug Discharge is any Discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch Discharge, which has a reasonable potential to cause Interference or Pass Through, or in any other way violate the POTW's regulations, local limits or Permit conditions. Significant Industrial Users are required to notify the POTW immediately of any changes at its facility affecting potential for a Slug Discharge. If the POTW decides that a slug control plan is needed, the plan shall contain, at a minimum, the following elements:

- Description of discharge practices, including non-routine batch Discharges.
- Description of stored chemicals.
- Procedures for immediately notifying the POTW of Slug Discharges, including any Discharge that would violate a prohibition under § 403.5(b) with procedures for follow-up written notification within five days.
- If necessary, procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site run-off, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents), and/or measures and equipment for emergency response.

The EPA performed a facility inspection at American Eagle Instruments on 09/26/23. Based on the observations of the facility inspection, the current Slug Discharge Control Plan dated August 2017 needs to be updated to include the City’s current local limits. In addition, the facility does not discharge rinsewaters and acid chemical tanks to the sewer. The slug discharge control plan needs to be updated to describe the current discharge practices and operator training to ensure these electropolishing wastestreams

40 C.F.R. § 403.8(f)(2)(vi)

Corrective Action Item

Require American Eagle to update their 2017 slug discharge control plan to address current conditions at the facility.

are not accidentally discharged to the sanitary sewer.	
14. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(vii) require the City to “Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices.” In addition, the Pretreatment Regulations at 40 C.F.R. § 403.8(f)(5)(iv) require the City to develop an ERP to “Adequately reflect the POTW's primary responsibility to enforce all applicable pretreatment requirements and standards.” Based on the EPA’s review of the Pretreatment records for Kettlehouse North, the SIU has a history of significant pH violations. It does not appear that the City evaluated these reports for compliance because there are no enforcement action records for the following violations: • 1st Quarter-2022 – pH meter not operating all quarter. • 2nd Quarter-2022 – 3,494 pH violations below 5.0. • 3rd Quarter-2022 – 425 pH violations below 5.0. • 4th Quarter-2022 – 2,503 pH violations below 5.0. • 1st Quarter-2023 – 86 pH violations below 5.0. Because the facility is no longer conducting business at this location, the City is not required to follow up on these violations with enforcement actions, in accordance with its ERP. However, this is reflective on the City’s failure to adequately investigate significant instances of non-compliance with Pretreatment Standards and Requirements.	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(2)(vii) <u>Corrective Action Item</u> Adequately investigate instances of non-compliance with Pretreatment Standards and Requirements and ensure the self-monitoring compliance reports and notices are evaluated.
15. The Pretreatment Regulations at 40 CFR 403.8(f)(2)(v) require the City to inspect each SIU at least once per year. Based on the EPA’s review of the Pretreatment records, the City did not inspect the Big Sky Brewery in 2022. This is a significant failure to implement the Pretreatment program.	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(2)(v) <u>Corrective Action Item</u> Ensure the Big Sky Brewery is inspected at least once per year.
16. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(vii) require the City to “Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices.” In addition, the Pretreatment Regulations at 40 C.F.R. § 403.8(f)(5)(iv) require the	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(2)(vii) <u>Corrective Action Item</u> Provide an enforcement response to Big Sky

City to develop an ERP to “Adequately reflect the POTW's primary responsibility to enforce all applicable pretreatment requirements and standards.” • Big Sky Brewery submitted its 2nd Quarter-2022 compliance report on 08/01/2022, past the permit due date of 07/31/2022. • Big Sky Brewery submitted its 4th Quarter-2022 compliance report on 02/03/2022, past the permit due date of 01/31/2023. Based on the EPA’s review of the Pretreatment records, there is no documentation that the City provided an enforcement response for these permit violations.	Brewery for the late 2nd Quarter 2022 and 4th Quarter 2022 compliance reports, according to the City’s ERP.
17. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(vii) require the City to “Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices.” In addition, the Pretreatment Regulations at 40 C.F.R. § 403.8(f)(5)(iv) require the City to develop an ERP to “Adequately reflect the POTW's primary responsibility to enforce all applicable pretreatment requirements and standards.” • JR Daily’s Premium Meats has not submitted its 1st Quarter-2023 compliance report, which was due on 04/30/2023. The report is greater than 45-days overdue, which constitutes SNC. • JR Daily’s Premium Meats did not submit a renewal application a minimum of 90 days prior to permit expiration date of 08/01/2023. Although, the City issued a notice of violation on 09/11/2023 for the failure to provide a permit renewal application and discharging with a valid permit. As a result, the JR Daily’s Premium Meats LLC permit is expired and has not been administratively extended by the City. The SIU is currently discharging without a permit.	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(2)(vii) <u>Corrective Action Item</u> Provide an enforcement response for the compliance report submitted 45 days past the permit due date, in accordance with the City’s ERP. In addition, the City needs to public notice JR Daily’s Premium Meats for meeting the SNC criteria for late reporting as listed in the Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(viii)(F) and incorporated in the municipal ordinance in 13.07.1240. Provide a status update to the EPA on when a permit application is received from JR Daily’s Premium Meats and the permit is renewed.
18. The Pretreatment Regulations at 40 CFR 403.8(f)(2)(v) require the City to inspect each SIU at least once per year. Based on the EPA’s review of the Pretreatment records, the City did not inspect	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(2)(v)

Draughtworks Brewing in 2022. This is a significant failure to implement the Pretreatment program.	<u>Corrective Action Item</u> Ensure Draughtworks Brewing is inspected at least once per year.
19. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(vii) require the City to “Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices.” In addition, the Pretreatment Regulations at 40 C.F.R. § 403.8(f)(5)(iv) require the City to develop an ERP to “Adequately reflect the POTW's primary responsibility to enforce all applicable pretreatment requirements and standards.” Based on the EPA’s review of the Pretreatment records for Draughtworks Brewing, the SIU has a history of significant pH violations. It does not appear that the City evaluated these reports for compliance because there are no records for enforcement action records for the following violations: • 2nd Quarter-2022 – 242 pH violations. • 3rd Quarter-2022 – 36 pH violations. • 4th Quarter-2022 – 22 pH violations. • 1st Quarter-2023 – 6 pH violations. • 2nd Quarter-2023 – 10 pH violations.	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(2)(vii) 40 C.F.R. § 403.8(f)(5)(iv) <u>Corrective Action Item</u> Provide an enforcement response to Draughtworks Brewing for the pH violations from 2nd Quarter 2022 through 2nd Quarter 2023, in accordance with the City’s ERP.
20. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(vii) require the City to “Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices.” In addition, the Pretreatment Regulations at 40 C.F.R. § 403.8(f)(5)(iv) require the City to develop an ERP to “Adequately reflect the POTW's primary responsibility to enforce all applicable pretreatment requirements and standards. • Draughtworks Brewing submitted its 3rd Quarter-2022 compliance report on 11/04/22, past the due date of 10/31/22. • Draughtworks Brewing submitted its 4th Quarter-2022 compliance report on 01/23/23; however, the report states it is for 4Q-2023, which is not correct. • The SIU submitted 2022 and 2023 quarterly reports without a signature as required in Part 3, Section A.3 of the permit. • The SIU did not complete quarterly sampling for Q1-2023, as required in Part 2, Section A	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(2)(vii) 40 C.F.R. § 403.8(f)(5)(iv) <u>Corrective Action Item</u> Provide an enforcement response to Draughtworks Brewing for the late 3rd Quarter 2022 compliance report and the failure to submit the 1st Quarter 2023 compliance report, in accordance with the City’s ERP. Ensure the 4th Quarter 2022 compliance report is corrected and resubmitted. Ensure Draughtworks Brewing submits an appropriate signature of the certification statement for all quarterly compliance reports submitted in 2022 and 2023.

of the permit.	
21. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(vi) require the City to “Evaluate whether each such Significant Industrial User needs a plan or other action to control Slug Discharges. For purposes of this subsection, a Slug Discharge is any Discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch Discharge, which has a reasonable potential to cause Interference or Pass Through, or in any other way violate the POTW's regulations, local limits or Permit conditions. Significant Industrial Users are required to notify the POTW immediately of any changes at its facility affecting potential for a Slug Discharge. If the POTW decides that a slug control plan is needed, the plan shall contain, at a minimum, the following elements: • Description of discharge practices, including non-routine batch Discharges. • Description of stored chemicals. • Procedures for immediately notifying the POTW of Slug Discharges, including any Discharge that would violate a prohibition under § 403.5(b) with procedures for follow-up written notification within five days. • If necessary, procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site run-off, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents), and/or measures and equipment for emergency response. The SIU’s slug discharge control plan dated 2012 does not include a description of discharge practices as required in Part 4, Section A.1 of the permit.	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(2)(vi) <u>Corrective Action Item</u> Require Draughtworks Brewing to update the slug discharge control plan to provide a description of current discharge practices.
<i>Section 10.0 – Control Authority Compliance Monitoring</i>	
22. As required in 40 C.F.R. § 403.8(f)(2), the POTW shall “develop and implement procedures to ensure compliance with the requirements of a Pretreatment	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(2)

Program.” The development and implementation of a sampling plan or procedures ensures the POTW is appropriately and consistently performing sampling or monitoring events, as well as providing enforceable data that is representative of the discharge conditions at the facility. The sampling plan should include the following: • purpose and objective of the sampling program, • specific sampling protocols at each facility sampling location to ensure representative sampling, and • appropriate QA/QC procedures to ensure legally defensible data. The City has developed a standard operating procedure for SIU sampling in the service area. The sampling SOP provides a description of the general sampling procedures, equipment, sampling handling during a sampling event.	<u>Corrective Action Item</u> Update the sampling SOP to include site-specific sampling protocols for each SIU to ensure consistent sampling that is representative for the production day. In addition, the City needs to incorporate QA/QC into each IU sampling plan such as equipment blanks, trip blanks, sample duplicates, matrix spikes, control standards to ensure the sampling and analytical techniques are in control and compliance with 40 CFR 136. <u>Recommended Action Item</u> Incorporate digital photos in the site-specific sampling protocols. For example, this will ensure the correct manhole at American Eagle’s interceptors are accessed for sampling at the SIU.
23. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(1)(v) requires the POTW to have the legal authority to “Carry out all inspection, surveillance, and monitoring procedures necessary to determine, independent of information supplied by Industrial Users, compliance or noncompliance with applicable Pretreatment Standards and requirements.” Further, 40 C.F.R. § 403.8(f)(2)(v) require a POTW to “Randomly sample and analyze the effluent from Industrial Users and conduct surveillance activities in order to identify, independent of information supplied by Industrial Users, occasional and continuing noncompliance with Pretreatment Standards. Inspect and sample the effluent from each Significant Industrial User at least once a year.” The standard to which POTWs are held for purposes of evidence collection during a Control Authority monitoring event is outlined in 40 C.F.R. § 403.8(f)(2)(vii): “Sample taking and analysis and the collection of other information shall be performed with sufficient care to produce evidence which is admissible in enforcement proceedings or judicial actions.” The laboratory personnel from the City sample the permitted SIUs at least once per year. Based on	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(1)(v) 40 C.F.R. § 403.8(f)(2)(v) 40 C.F.R. § 403.8(f)(2)(vii) <u>Corrective Action Item</u> Calibrate the field pH meter prior to every SIU sampling event to ensure the pH monitoring is performed with sufficient care to produce evidence which is admissible in enforcement proceedings or judicial actions.

information gathered during the audit, the City calibrates its pH meter on a monthly frequency.	
<i>Section 11.0 – Enforcement</i>	
24. The City submitted its ERP to the EPA for review, prior to the audit. Based on the EPA’s review, the ERP needs to be updated to meet the requirements established in the Pretreatment regulations at 40 C.F.R. § 403.8(f)(5)(i-iv) and incorporated in Chapter 13.07 of the City’s municipal ordinance. (Note: the EPA’s review of the City’s ERP and the EPA’s embedded comments in the City’s ERP are included as enclosures to the audit report). <i>Describe how the POTW will investigate instances of noncompliance:</i> • <i>Provide a summary of the methods THE CITY utilizes to investigate IU noncompliance:</i> ○ IU Inventory/Inspection Procedures ○ Permitting ○ Self-monitoring notification ○ Control Authority monitoring ○ Compliance evaluation and SNC procedures <i>Enforcement Response Guide:</i> <i>The following anticipated types of violations are either absent or need to be modified:</i> • Reporting violations or deficiencies/late reports – the ERP provides a 5-day grace period for late reports that is not incorporated into the municipal ordinance. The ERP needs to be modified to eliminate the 5-day grace period. • Data Falsification • Failure to notify (24-hour, slug/potential problems, changed discharges, hazardous waste, upset, bypass) – modify to include all notifications required under 40 C.F.R. 403.12 of the Pretreatment Regulations. • Refusal of Entry • Sector Control Programs • Trucked and Hauled Waste <i>The following enforcement remedies for SNC criteria listed in the City’s municipal ordinance at §13.07.1240 need to be established in the ERP:</i>	<u>Pretreatment Requirements</u> 40 C.F.R. § 403.8(f)(5)(i-iv) Missoula Municipal Ordinance, Chapter 13.07 <u>Corrective Action Item</u> Modify the enforcement response plan to be in compliance with 40 C.F.R. § 403.8(f)(5)(i-iv) of the Pretreatment Regulations and with the City’s municipal ordinance.

• Chronic violations of wastewater discharge limits, defined here as those in which sixty-six percent (66%) or more of all the measurements taken for the same pollutant parameter taken during a six- (6-) month period exceed (by any magnitude) a numeric Pretreatment Standard or Requirement, including Instantaneous Limits as defined in Chapter 13.07 Article II MMC. • Technical Review Criteria (TRC) violations, defined here as those in which thirty-three percent (33%) or more of wastewater measurements taken for each pollutant parameter during a six- (6-) month period equals or exceeds the product of the numeric Pretreatment Standard or Requirement including Instantaneous Limits, as defined by Chapter 13.07 Article II MMC multiplied by the applicable criteria (1.4 for BOD, TSS, fats, oils and grease, and 1.2 for all other pollutants except pH). • Any other violation of a Pretreatment Standard or Requirement as defined by 40 CFR 403.3(l) that the POTW determines has caused Interference or Pass Through (including endangering the health of POTW personnel or the general public). • Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or to the environment or has resulted in the POTW's exercise of its emergency authority. • Failure to meet, within 90 days after the schedule date, a compliance schedule milestone contained in a local control mechanism or enforcement order for starting construction, completing construction, or attaining final compliance. • Failure to accurately report non-compliance. • Any other violation or group of violations, which may include a violation of Best Management Practices, which the POTW determines will adversely affect the operation or implementation of the local Pretreatment program.	
<i>Section 13.3 - Dental Amalgam Rule Requirements – 40 C.F.R. Part 441</i>	
25. The Dental Amalgam Rule, found in 40 C.F.R. Part 441, was promulgated as a final rule with new source dental facilities required to be in compliance	<u>Pretreatment Requirements</u> 40 C.F.R. Part 441

with the Pretreatment Standards as of July 14, 2017, and existing source dental facilities required to be in compliance as of June 14, 2020. Compliance with the rule requires the installation of an ISO1143 amalgam separator or equivalent device, and compliance with the following two BMPs:

- Prohibition on the use of oxidizing or chlorine-containing line cleaners; and
- Ensuring all amalgam process wastewater including chair-side traps, screens, vacuum pump filters, dental tools, cuspidors or collection devices are treated through the amalgam separator.

In addition, the new and existing dental facilities are required in 40 C.F.R. § 441.50 of the Dental Amalgam Rule to provide a report that characterizes the dental facility and certifies compliance. The new source dental facilities are required to be in compliance upon discharge and submit a one-time compliance report within 90 days of startup.

The City has identified 26 dental facilities in its industrial waste survey and these dental facilities submitted one-time amalgam compliance reports, as required by the Dental Amalgam Rule. Based on the EPA's review of these one-time compliance reports, it does not appear that the City has evaluated these reports for compliance. Table 4 of this audit report identifies the deficiencies in the one-time compliance reports.

Corrective Action Item

Ensure the one-time compliance reports are complete and the information submitted in the reports comply with Dental Amalgam Rule requirements by requiring the dental facilities to resubmit a complete, accurate and signed one-time compliance report.

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1.0 Introduction

The U.S. Environmental Protection Agency, Region 8 (EPA) conducted an audit of the Pretreatment program, administered by the City of Missoula, MT (City) from September 25, 2023 through September 27, 2023. The Pretreatment audit started on September 25, 2023 at 8:00 a.m. with an opening interview. The closing conference was held on September 27, 2023 at 8:00 a.m. during which the EPA presented the preliminary observations, conclusions, and findings from the audit.

Participants in the audit included:

City of Missoula, MT

Nate Gordon	Pretreatment Coordinator
Gene Connell	Facilities Superintendent (opening and closing conference)

EPA

Al Garcia	Region 8 Pretreatment Coordinator
Lisa-kay Prideaux	EPA Region 8 ECAD

The primary purpose of the EPA audit was to evaluate the Pretreatment program administered and implemented by the City. In addition, the audit served as a forum for the EPA and the City to discuss issues related to the implementation of the Pretreatment program, including PFAS requirements in City's NPDES permit and for the EPA to provide outreach and training to the City, such as IU (industrial user) inspection training.

The EPA Pretreatment audit consisted of an evaluation of the following:

- The City's legal authority codified in its municipal ordinance; Title 13-Public Services, Chapter 13.07-Wastewater Pretreatment Regulations.
- Development and implementation of the City's local limits.
- The City's resources to implement the Pretreatment program in its service area.
- Implementation policies and templates developed by the City.
- Review and evaluation of the Pretreatment programmatic activities and records maintained for the permitted Significant Industrial Users (SIUs).
- Site inspection of selected SIUs and IUs in the service area to ensure the Pretreatment records reflect current conditions.
- Discussion of the Pretreatment Regulations and implementation.

The following sections of the report highlight the findings, corrective actions, and recommended actions of the audit. The action items to correct program deficiencies and meet regulatory requirements are identified in the Pretreatment Audit Summary Table, beginning on page 2 of this report. Specific actions to clarify and strengthen program implementation are provided as recommendations within the body of the audit report.

2.0 Publicly Owned Treatment Works (POTW) Information

The City owns and operates a Publicly Owned Treatment Works (POTW) located at 1100 Clark Fork Ln, Missoula, MT 59808. The POTW serves the boundary of the City of Missoula. In addition, East Missoula, an outside jurisdiction contributes wastewater to the City's POTW. The service area for the POTW is shown in Figures 2 and 3, a POTW plant schematic diagram is shown in Figure 4 and a Google Earth view of the City's POTW is shown in Figure 5.

A site visit of the POTW was performed during the audit to develop an overview of the City's wastewater treatment plant operation and processes. The information regarding the City of Missoula POTW and tour was provided by Mr. Gene Connell, Facilities Superintendent. The POTW receives wastewater from the service area through gravity fed collection lines and lift stations. In addition, about 1,500 connections, including non-domestic users in the service area are served by septic tank effluent pumping (STEP) systems. Implementation of the STEP systems involved installation of an effluent pump and discharge pipe in each individual septic tank. Individual STEP systems discharge to a pressurized main that are networked to collect numerous STEP systems. The City maintains these STEP systems along with routine collection system operation and maintenance.

The service area combines into main trunk lines and a 48-inch trunkline coming into the headworks building. The wastewater enters into an influent collection box and is lifted to the bar screens with three submersible lift pumps, one is in use under normal operating conditions. The headworks contains two ¼-inch bar screens that collect solids and large organic material. The screenings are removed with an automatic raking system and are washed, compacted and collected in a roll-off bin. The POTW hauls off the roll-off bin to the landfill about once per week. In maintenance situations where the screens are not operational or during high flow, the POTW has a 3rd bypass channel to connected to a manual 1-inch bar screen.

The wastewater from the bar screens enters the vortex Pista-grit removal system. The grit is washed and collected in the roll-off bin with the bar screenings. The wastewater gravity flows to the three primary clarifiers. The scum and primary sludge are removed and 50% is pumped to the fermenter and 50% to the primary digester. The primary effluent flows to a splitter and is split to either side 1 or side 2 of the aeration basins with return activated sludge. The aeration basins utilize a modified Johannesburg biological nutrient removal (BNR) method that is optimized for phosphorus removal. Side 1 and side 2 each have three aeration basins with similar BNR methods. The aeration basins utilize anoxic/anaerobic/aerobic zones to optimize phosphorus accumulating organisms (PAOs) for phosphorus removal through the waste activated sludge (WAS) and to enhance the nitrification/denitrification cycle for nitrogen removal as atmospheric N₂ gas. The mixed liquor at the end of the aeration basins are sent to one of three secondary clarifiers where sludge is removed and about 90% returned to the aeration basins in the anoxic zones as RAS and 10% wasted as waste activated sludge (WAS) to sludge thickener.

The secondary clarifier effluent is sent to the UV disinfection building equipped with two

banks of UV lights that are programmed with variable dosage, based on transmissivity and flow of the wastewater. Approximately 1.2 MGD of the treated effluent is pumped to the poplar tree farm the City constructed and the rest is discharged from the UV building about 75 yards through outfall 01 to the Clark Fork River (Figure 1).



Figure 1 – POTW Discharge through Outfall 01 to the Clark Fork River

Solids—

The WAS is thickened in the sludge thickener from 0.5% to about 3%. The thickened sludge is then pumped to the primary digester. The primary sludge in the fermenter has a retention time of about five days to digest and promote generation of volatile fatty acids. The fermented sludge is then pumped to the primary digesters where it joins the contents of the primary digester (thickened primary sludge and secondary WAS). The primary digester digests the solids to about 4% at about 95°F for 30 days. The sludge is dewatered and biogas captured. The biogas is used internally in the POTW as primarily energy cogeneration, secondarily for plant boilers and the excess flared off. The dewatered sludge is dumped into a conveyor that conveys the sludge into the city-owned composting facility.

The biosolids are mixed with wood waste at a ratio of three parts wood to one part biosolids and put into static aerated piles for 30 days. Perforated aeration pipes are constructed under these piles to promote temperature control and aeration to achieve pathogen reduction. The resulting compost is Class A and EQ (exceptional quality) that can be sold to contactors

and the public. The POTW generates about 26,000yd³/year, according to Mr. Connell.

2.1 NPDES Permit

The City of Missoula's NPDES permit #MT-0022594, issued by the Montana Department of Environmental Quality (MTDEQ), contains provisions for an EPA-approved Pretreatment program in Part I.E. The permit was effective on May 1, 2015, expired on April 30, 2020 and is currently administratively extended.

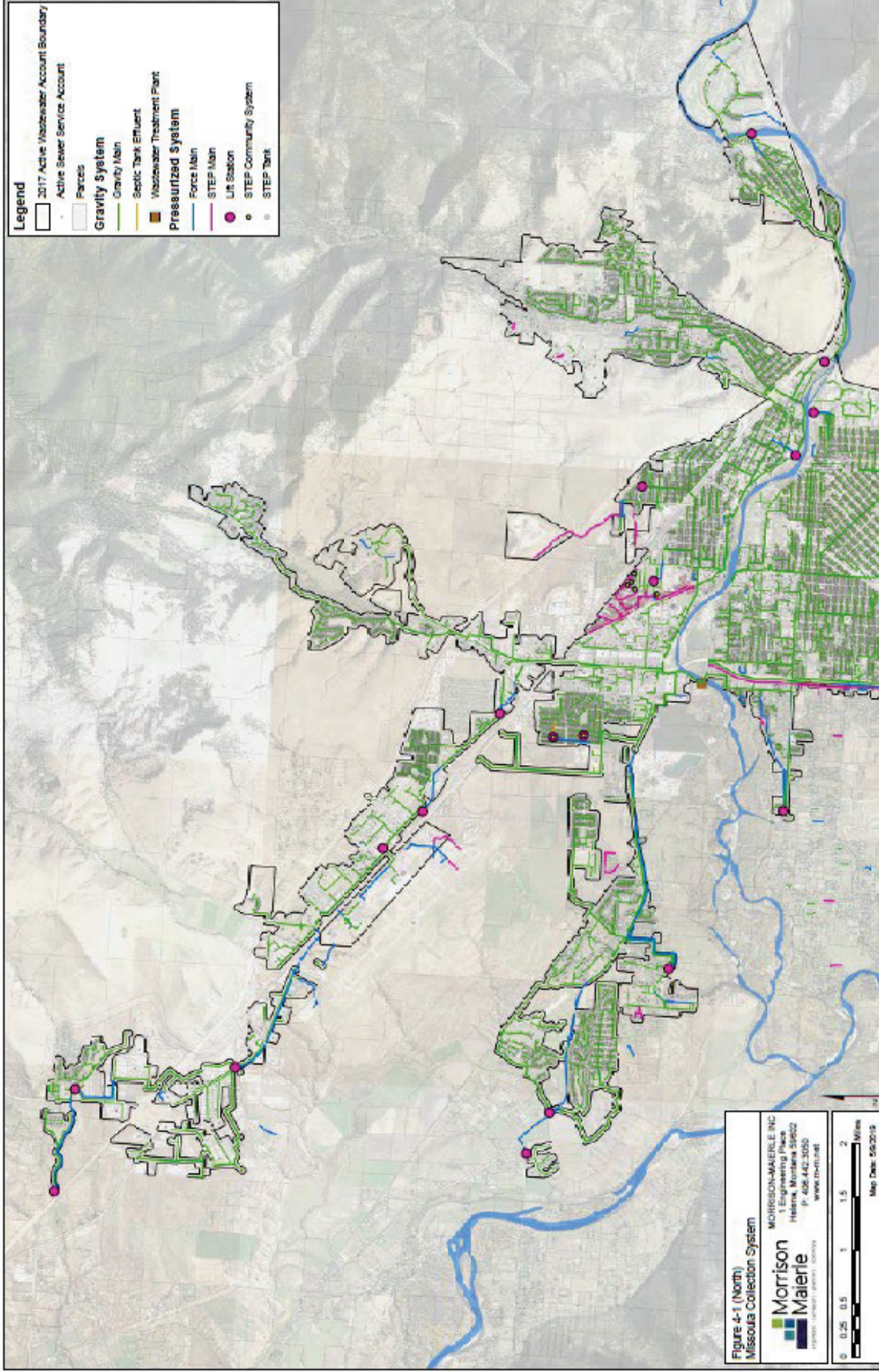


Figure 2 –City of Missoula Service Area (North)

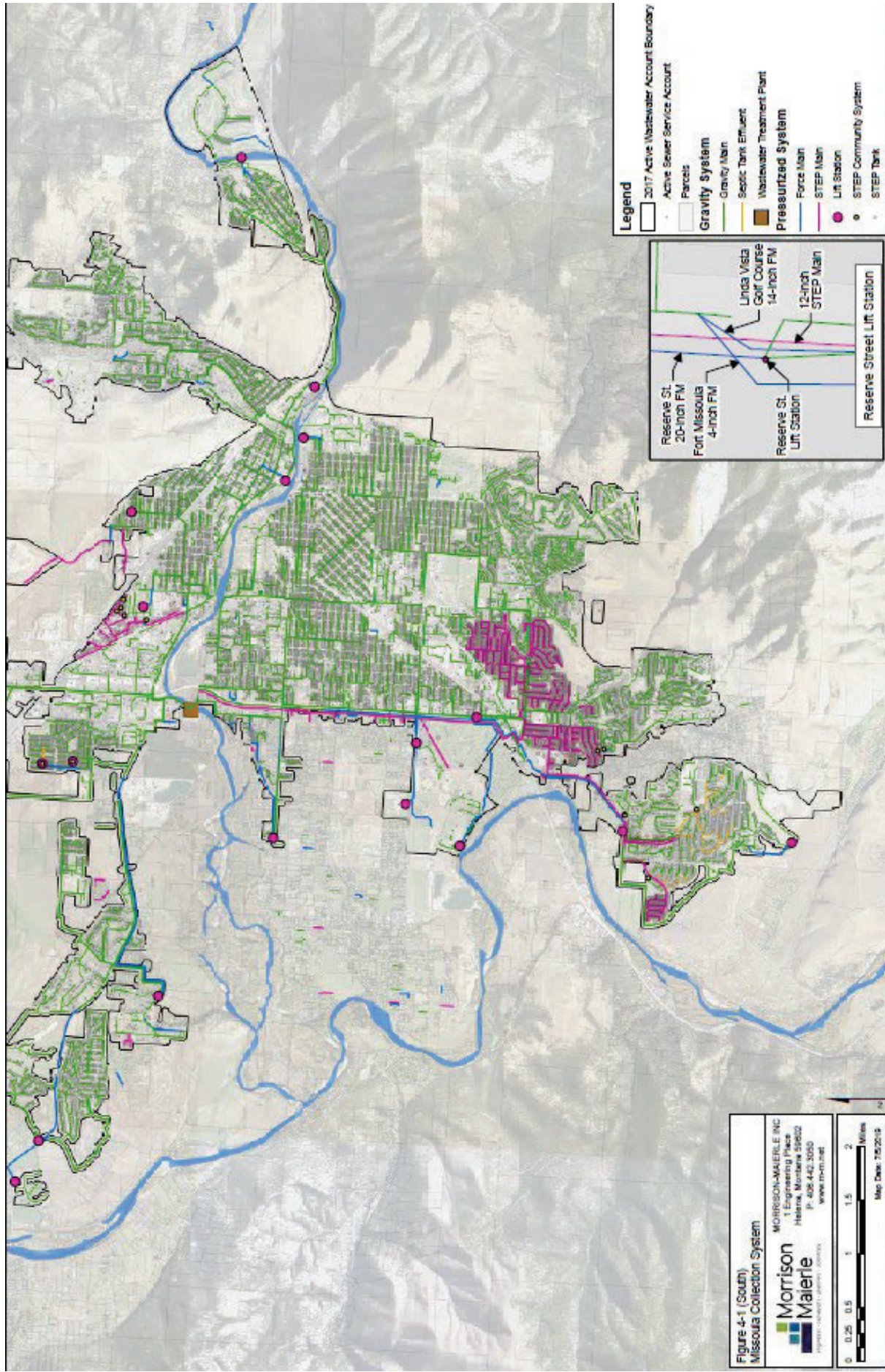


Figure 3 – City of Missoula Service Area (South)

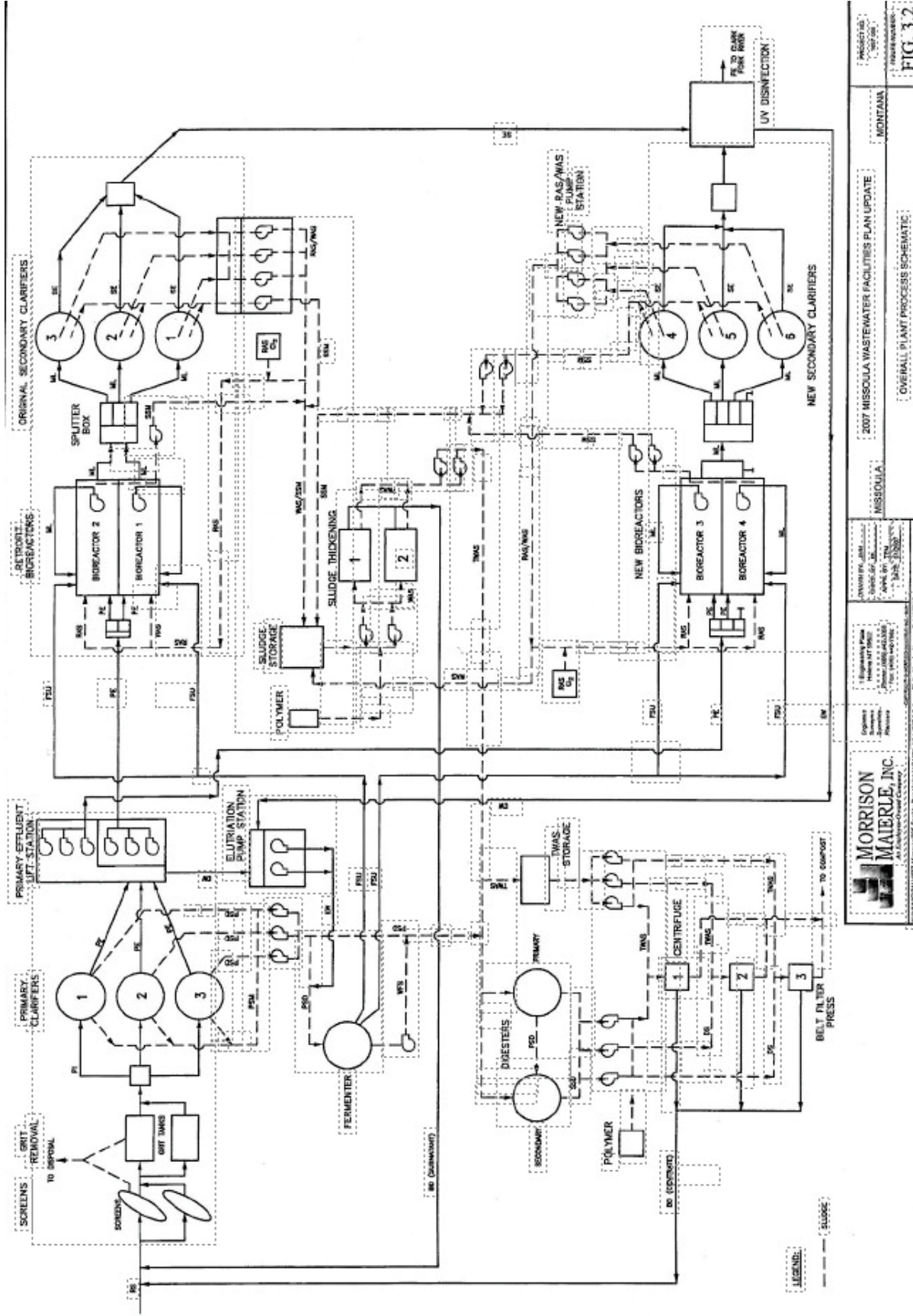


Figure 4 – City of Missoula POTW Schematic Diagram

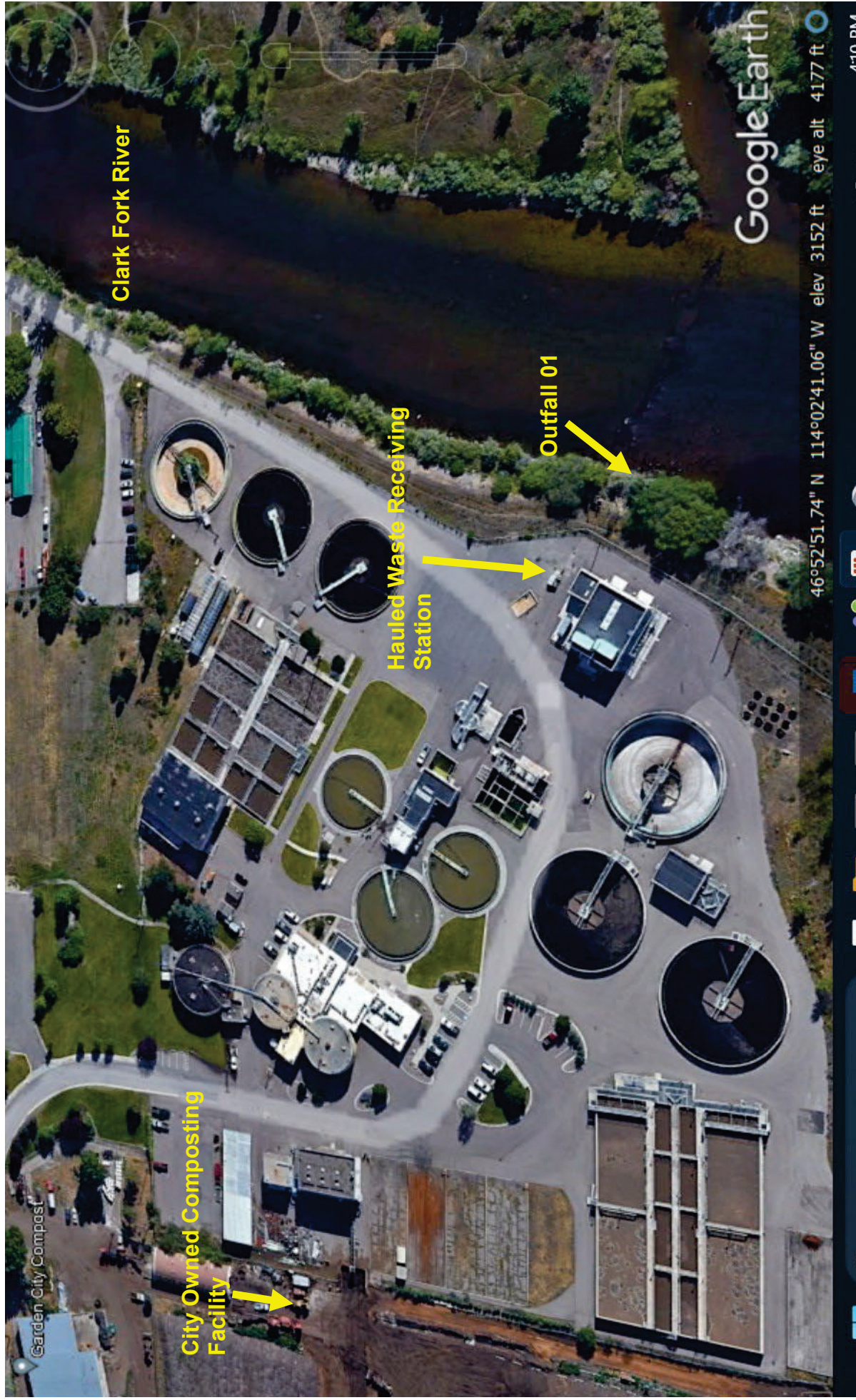


Figure 5 – City of Missoula POTW – Google Earth View

3.0 Resources

3.1 *Resources Regulatory Background*

The Pretreatment Regulations found in 40 C.F.R. § 403.8(f)(1-6) include POTW Pretreatment requirements and procedures to implement an approved Pretreatment program. These requirements and procedures include the legal authority and the implementation procedures of the Pretreatment program (permitting, inspections, sampling, industrial waste survey, receipt of IU reporting and notification, record-keeping, slug discharge control, data evaluation and enforcement for non-compliance). In addition, the Pretreatment Regulations found in 40 C.F.R. § 403.8(f)(3) state that the POTW shall have sufficient resources and qualified personnel to carry out the authorities and implementation procedures of the Pretreatment program.

A Pretreatment program, in compliance with the criteria listed in the Pretreatment Regulations, requires adequate and qualified staffing to implement the Pretreatment program in its service area. The resources required for each implementation activity depend largely on the size of the service area, number of IUs/SIUs/sector control programs, and Pretreatment program policies. A compliant program also requires a consistent funding mechanism to ensure the program is adequately funded and equipped to fully implement the program.

3.2 *Evaluation of the City's Resources and Funding*

According to the FY22 Pretreatment annual report, the City's resource commitment to the Pretreatment program is 0.8 FTE. Based on information gathered during the audit, the City splits its 0.8 FTE between the Pretreatment Coordinator and two laboratory staff. The two laboratory staff conduct sampling of the SIUs, including self-monitoring for the majority of the SIUs. The Pretreatment Coordinator as the current commitment of 0.4 FTE implements all programmatic activities such as the industrial user inventory/characterization, permitting or BMP sector control, field activities such as inspections, the dental amalgam program, oversight of the SIU sampling, trucked/hailed waste program, receipt of compliance reports/notices, compliance evaluation and enforcement. The Pretreatment Coordinator devotes 0.6 FTE to non-Pretreatment duties such as management of the laboratory, sewer billing, and NPDES reporting. The Pretreatment Coordinator reports to the Facilities Superintendent, who reports to the Public Works Director's office. The Public Works Director reports to the Chief Administrative Officer who reports to the Mayor. All program modifications to the Pretreatment program must be approved by the City Council, according to the City's administrative procedures.

The City is funded by the Wastewater Enterprise Fund, based on user fees and has a separate line item in the wastewater treatment plant's budget. The City did not report a Pretreatment budget in the FY22 Annual Report. Based on information gathered during the audit, the lab/Pretreatment budget expenditures from 07/01/2022 through 06/30/2023 was \$416,524.44, however, the majority of these expenditures appears to be personnel salaries/compensation and lab costs. The EPA could not determine the Pretreatment program budget and therefore, if the program is appropriately funded. The Pretreatment program has a dedicated transit van for field activities and appears to possess appropriate

field equipment such as automatic samplers, manhole hooks, grab sampling equipment and portable meters.

Based on EPA's review of the City's implementation of its Pretreatment program, it does not appear that the City's current resources, including qualified personnel and budget are adequate to implement all programmatic activities of the Pretreatment program, as required in 40 C.F.R. § 403.8(f)(3). During the EPA's evaluation of the City's Pretreatment program, there were significant areas of concern with the City's implementation of the Pretreatment program that are documented in the following sections of the audit report. This appears to be a result of a need for resources and ensuring the current personnel are trained and qualified to implement the programmatic activities of the Pretreatment program. The City is required to, at a minimum, evaluate its current staffing plan and determine the efficient use of its resources. For example, the laboratory personnel perform the required Control Authority sampling and self-monitoring for a majority of the SIUs. The EPA recommends the City evaluate requiring all SIUs to perform their own self-monitoring, as required in §§13.07.810(E) and 13.07.1030 of the municipal ordinance and devote the lab resources to other Pretreatment programmatic activities such as the IU inventory, permitting, receipt of self-monitoring reports/compliance evaluation, and enforcement or evaluate hiring a full-time FTE to implement the Pretreatment program.

3.3 Examples of Available Pretreatment Training/Resources

The EPA recommends the Pretreatment Coordinator engage in necessary training to ensure all current personnel are qualified to implement the Pretreatment program and gain implementation experience. During the Pretreatment audit, the EPA provided compliance assistance and training for facility/IU inspections and is available to help with training and outreach assistance to the Pretreatment personnel. The City is encouraged to seek out training and resources that will support its Pretreatment program implementation.

The following is not a comprehensive list of all Pretreatment related training/resources available:

- The Region 8 Pretreatment workshop provides training sessions directly related to Pretreatment implementation, updates to upcoming regulations and policies, and networking opportunities.
- The EPA provides "Pretreatment 101" webinar training designed to provide consistent national training to local and state Pretreatment programs. The webinar series is located at <https://www.epa.gov/npdes/national-pretreatment-program-training-and-webinars>. Archived presentations may be downloaded, and a schedule of future training opportunities is located at the website.
- An additional resource available is the Pretreatment Coordinators Group discussion forum, found at the following website:

<https://groups.io/g/Pretreatment/topics>

4.0 Municipal Ordinance and Intergovernmental Agreements

4.1 Legal Authority Background

40 C.F.R. § 403.8(f)(1) of the Pretreatment Regulations states:

“The POTW shall operate pursuant to legal authority enforceable in Federal, State, or local courts, which authorizes or enables the POTW to apply and to enforce the requirements of sections 307 (b) and (c), and 402(b)(8) of the Clean Water Act (Act) and any regulations implementing those sections. Such authority may be contained in a statute, ordinance, or series of contracts or joint powers agreements which the POTW is authorized to enact, enter into or implement, and which are authorized by State law.”

At a minimum, this legal authority shall enable the POTW to:

- i. Deny or condition new or increased contributions of pollutants, or changes in the nature of pollutants, to the POTW by Industrial Users where such contributions do not meet applicable Pretreatment Standards and Requirements or where such contributions would cause the POTW to violate its NPDES permit;
- ii. Require compliance with applicable Pretreatment Standards and Requirements by Industrial Users;
- iii. Control through Permit, order, or similar means, the contribution to the POTW by each Industrial User to ensure compliance with applicable Pretreatment Standards and Requirements. In the case of Industrial Users identified as significant under §403.3(v), this control shall be achieved through individual permits or equivalent individual control mechanisms issued to each such User...
- iv. Require (A) the development of a compliance schedule by each Industrial User for the installation of technology required to meet applicable Pretreatment Standards and Requirements and (B) the submission of all notices and self-monitoring reports from Industrial Users as are necessary to assess and assure compliance by Industrial Users with Pretreatment Standards and Requirements, including but not limited to the reports required in §403.12.
- v. Carry out all inspection, surveillance and monitoring procedures necessary to determine, independent of information supplied by Industrial Users, compliance or noncompliance with applicable Pretreatment Standards and Requirements by Industrial Users. Representatives of the POTW shall be authorized to enter any premises of any Industrial User in which a Discharge source or treatment system is located or in which records are required to be kept under §403.12(o) to assure compliance with Pretreatment Standards. Such authority shall be at least as extensive as the authority provided under section 308 of the Act;
- vi. (A) Obtain remedies for noncompliance by any Industrial User with any Pretreatment Standard and Requirement. All POTW's shall be able to seek injunctive relief for noncompliance by Industrial Users with Pretreatment Standards and Requirements. All POTWs shall also have authority to seek or assess

civil or criminal penalties in at least the amount of \$1,000 a day for each violation by Industrial Users of Pretreatment Standards and Requirements.

(B) Pretreatment requirements which will be enforced through the remedies set forth in paragraph (f)(1)(vi)(A) of this section, will include but not be limited to, the duty to allow or carry out inspections, entry, or monitoring activities; any rules, regulations, or orders issued by the POTW; any requirements set forth in control mechanisms issued by the POTW; or any reporting requirements imposed by the POTW or these regulations in this part. The POTW shall have authority and procedures (after informal notice to the discharger) immediately and effectively to halt or prevent any discharge of pollutants to the POTW which reasonably appears to present an imminent endangerment to the health or welfare of persons. The POTW shall also have authority and procedures (which shall include notice to the affected industrial users and an opportunity to respond) to halt or prevent any discharge to the POTW which presents or may present an endangerment to the environment, or which threatens to interfere with the operation of the POTW. The Approval Authority shall have authority to seek judicial relief and may also use administrative penalty authority when the POTW has sought a monetary penalty which the Approval Authority believes to be insufficient.

vii. Comply with the confidentiality requirements set forth in §403.14.”

The provisions in 40 C.F.R. § 403.8(f)(1)(i-vii) do not provide local Pretreatment programs with legal authority, but they do establish the minimum requirements for the local municipality to implement the Pretreatment program. A POTW’s legal authority is derived from State law. Therefore, State law must confer the minimum legal authority required by the Pretreatment Regulations on a POTW.

To apply the regulatory authority provided by State law, it is necessary for the POTW to establish local regulations to legally implement and enforce pretreatment requirements. A POTW’s legal authority is typically established in a sewer use ordinance as part of the municipality’s code, or in the case of a sanitation district, its Rules and Regulations. The EPA’s 2007 *Model Pretreatment Ordinance* provides a template for POTWs that are required to develop pretreatment programs and can be found at the following website:

https://www3.epa.gov/npdes/pubs/pretreatment_model_suo.pdf

4.2 City of Missoula Municipal Ordinance

The EPA approved the City’s Pretreatment program on September 30, 1985. According to records maintained by EPA, the City submitted updates to its legal authority or municipal ordinance in 2011. The EPA public noticed these updates on July 22, 2011 and approved on August 31, 2011.

The Pretreatment Regulations established by the City in Title 13-Public Utilities; Chapter 13.07-Wastewater Pretreatment Regulations of the municipal ordinance provide the City of Missoula (City) the framework to implement the Pretreatment Regulations in the POTW’s service area.

4.3 Inter-Jurisdictional or Governmental Agreements (IGA)

4.3.1 IGA Regulatory Background

A POTW's authority to implement and enforce its approved Pretreatment program is directly related to its regulatory jurisdiction. The POTW's authority is established in ordinance or Rules and Regulations, which are in effect for its service area. Local entities with connectors, or outside jurisdictions to the service area that contribute wastewater, must establish legally binding mechanisms to ensure that all IUs in these outside contributing jurisdictions are subject to enforceable Pretreatment standards and requirements, as required in §403.8(f)(1).

40 C.F.R. § 403.8(f)(1)(i) states, "The POTW shall operate pursuant to legal authority enforceable in Federal, State or local courts, which authorizes or enables the POTW to apply and to enforce the requirements of sections 307 (b) and (c), and 402(b)(8) of the Act and any regulations implementing those sections. *Such authority may be contained in a statute, ordinance, or series of contracts or joint powers agreements which the POTW is authorized to enact, enter into or implement, and which are authorized by State law.*" [Emphasis added]

The local entity that implements the Pretreatment program must either obtain this authority for itself through an IGA or ensure that the outside contributing jurisdiction has both the authority and the obligation to implement and enforce the Pretreatment Standards and Requirements against every IU that discharges to the POTW.

4.3.2 Evaluation of the City's IGAs with Outside Contributing Jurisdictions

According to information gathered during the audit, East Missoula, an outside contributing jurisdiction contributes non-domestic wastewater to the City's POTW. Based on the EPA's evaluation it is not apparent if there is an IGA between the City and East Missoula that delegates authority to the City to implement the Pretreatment regulations in the outside contributing jurisdiction. The City is required to either provide proof of annexation of East Missoula or an IGA to ensure the City has authority to implement the Pretreatment program in East Missoula.

5.0 Local Limits

5.1 Local Limits Regulatory Background

40 C.F.R. § 403.8(f)(4) of the Pretreatment Regulations require POTWs that are developing pretreatment programs to develop and enforce specific limits on prohibited discharges or demonstrate that the limits are not necessary. 40 C.F.R. § 403.5(c)(1) states, "Each POTW developing a POTW Pretreatment Program pursuant to §403.8 shall develop and enforce specific limits to implement the prohibitions listed in paragraphs (a)(1) and (b) of this section [*general and specific prohibitions*]. Each POTW with an approved pretreatment program shall continue to develop these limits as necessary and effectively enforce such limits." [Clarification and emphasis added].

The National Pretreatment Program consists of three types of national pretreatment standards established by regulation that apply to industrial users. These include prohibited discharge standards, categorical standards, and local limits. Prohibited discharge and categorical standards are developed by the EPA to establish nationwide Pretreatment Standards. Prohibited discharge standards, comprised of general and specific prohibitions found in 40 C.F.R. 403.5(a) and (b) of the Pretreatment Regulations, apply to all IUs regardless of the size or type of operation. Categorical standards are uniform, technology-based standards that apply to specific process wastewater discharges from industrial categories. These categorical standards are found at 40 C.F.R. Parts 405 through 471.

The EPA's promulgation of categorical standards does not relieve a POTW from its obligation to evaluate the need for and to develop local limits to meet the general and specific prohibitions in the Pretreatment Regulations. Because specific prohibitions and categorical standards provide only general protection against pass through and interference, local limits based on POTW-specific conditions may be necessary. Local limits are developed by POTWs to enforce the specific and general prohibitions, as well as any state and local regulations.

An EPA-approved Pretreatment program is required to develop local limits that are protective of the POTW, the collection system, and the POTW's site-specific standards. These site-specific standards may be NPDES permit effluent limits, biosolids limits, environmental criterion, worker health and safety standards or other local standards.

The EPA recommends that POTWs establish their local limits based on the maximum allowable headworks loading (MAHL) calculated for each pollutant of concern. The MAHL approach enables the POTW to calculate local limits considering the portion of the MAHL that is controllable (non-domestic discharges from IUs) from the uncontrollable portion (domestic sources, background concentrations, etc.). A pollutant's MAHL is determined by first calculating its Allowable Headworks Loading (AHL) for each POTW's site-specific standard or environmental criterion. Local limit development uses a mass-balance approach to determine the AHLs for a POTW based on the environmental and treatment plant criteria.

An AHL is the estimated maximum loading of a pollutant that can be received at a POTW's headworks, that should not cause a POTW to violate a treatment plant limit or environmental criterion. An AHL is developed to prevent interference or pass through. An AHL is calculated for each applicable POTW site-specific standard: pass through, sludge contamination, air quality standards, and the various forms of interference (i.e. biological treatment inhibition, sludge digestion inhibition). The AHLs for each pollutant of concern (POC) are calculated based on the various suitable environmental criteria, plant flow rates, and plant removal efficiency. After calculating a series of AHLs for each POC, the lowest AHL is chosen as the MAHL.

MAHLs estimate the maximum combined loadings that can be received at the POTW's headworks from all sources. Maximum allowable industrial loadings (MAIL), developed by the POTW, represent the amount of pollutant loadings the POTW can receive from controlled sources (i.e., industrial users, some commercial sources, and some hauled waste)

that the POTW chooses to control through local limits. Local limits can take many forms based on how MAILs are allocated by the POTW. The designation and implementation of these MAILs, including the allocation of loadings to SIUs, are left to each POTW. The POTW should provide a reasonable method of allocating the MAIL to the SIUs while ensuring the implementation procedures do not exceed the calculated MAHL. Typically, the POTWs allocate the MAIL as a uniform concentration-based or a mass limit to each SIU.

The local limits should be based on the following:

- Sampling of the service area to develop a representative data set collected for local limits (e.g., influent, effluent, biosolids, commercial, residential, industrial, trucked/hailed waste),
- Evaluation of the current POTW standards/criteria (including, but not limited to: NPDES permit limits/conditions, water quality standards, biosolids standards),
- Identification of the POTW removal efficiency and pollutant partitioning,
- Evaluation of data to ensure it is current and representative of current conditions,
- Identification of pollutants of concern,
- Calculations of loadings and determination of MAHL,
- Development of local limits and allocation methods.

5.2 Local Limits Requirements Established in the City's NPDES Permits

The City's NPDES permit issued by the MTDEQ on May 1, 2015 include local limit requirements in Part I.E.2(b).

5.3 The EPA Evaluation of the City's Local Limits

5.3.1 Technically based Local Limits

The City's local limits were initially established when the Pretreatment program was approved by the EPA on September 30, 1985 and were updated in 1996 and on August 31, 2011. The local limits are incorporated in §13.07.220(B), (C) and (D) of the municipal ordinance. The 2011 local limits were developed using SIU regulated flows located at the permitted monitoring points. As a result, the local limits are applicable to SIUs. The local limits are allocated as uniform concentration-based limits in §13.07.220(B), a mass-based maximum allowable industrial loading (MAIL) in §13.07.220(C).

Table 1 –Missoula Concentration-Based Local Limits

Pollutant	Symbol	MAIL (lbs/day)
Arsenic, Total	As	0.574

Pollutant	Symbol	MAIL (lbs/day)
Cadmium, Total	Cd	0.032
Chromium, Total	Cr	0.316
Copper, Total	Cu	0.680
Lead, Total	Pb	0.359
Mercury, Total	Hg	0.003
Molybdenum, Total	Mo	0.342
Nickel, Total	Ni	1.321
Selenium, Total	Se	0.192
Silver, Total	Ag	0.800
Zinc, Total	Zn	1.356

Table 2 – Missoula Maximum Allowable Industrial Loadings

Pollutant	Symbol	MAIL (lbs/day)
Arsenic, Total	As	2.718
Cadmium, Total	Cd	0.153
Chromium, Total	Cr	1.497
Copper, Total	Cu	3.218
Lead, Total	Pb	1.701
Mercury, Total	Hg	0.014
Molybdenum, Total	Mo	1.617

Pollutant	Symbol	MAIL (lbs/day)
Nickel, Total	Ni	6.251
Selenium, Total	Se	0.909
Silver, Total	Ag	3.787
Zinc, Total	Zn	6.414

The City also developed mass allocation to the commercial sector of the service are in §13.07.220(B).

Table 3 – Missoula Maximum Allowable Commercial Loading

Pollutant	Symbol	MAIL (lbs/day)
Arsenic, Total	As	0.906
Cadmium, Total	Cd	0.051
Chromium, Total	Cr	0.499
Copper, Total	Cu	1.073
Lead, Total	Pb	0.567
Mercury, Total	Hg	0.005
Molybdenum, Total	Mo	0.539
Nickel, Total	Ni	2.084
Selenium, Total	Se	0.303
Silver, Total	Ag	1.262

Pollutant	Symbol	MAIL (lbs/day)
Zinc, Total	Zn	2.138

5.3.2 Numeric Adopted Limits

The City has also adopted ordinance limits in §13.07.220(B), not specifically based on a technical evaluation based on applicable standards.

- Oil and Grease (polar n-Hexane Extractable Material-HEM) – 100 mg/L
- BTEX – 0.750 mg/L
- Benzene – 0.050 mg/L
- Upper pH limit of 12.0 – found in §13.07.200

The EPA recommends the City evaluate these numeric ordinance limits that are not technically based on site-specific conditions and standards to ensure the limits have an underlying basis for incorporation into the City’s ordinance and are enforceable. A basis for adoption for these numeric ordinance limits may be contained in EPA or other scientific reports, collection system observations, studies performed in other POTWs, etc. The EPA will provide the Treatability of Oil and Grease Discharged to POTWs Study - EPA 440--1-75-066, April 1975, and the Model NPDES Permit for Discharges Resulting from the Cleanup of Gasoline Released from UST, June 1989, for the City to evaluate as a basis for the adoption of the oil/grease and BTEX/benzene numeric ordinance limits.

5.3.3 Dilution Prohibition

The City has incorporated a prohibition on dilution in §13.07.240 of the municipal ordinance to ensure the IUs are appropriately managing their regulated wastestreams to meet compliance with an applicable Pretreatment Standard or Requirement:

“No User shall ever increase the use of process water, or in any way attempt to dilute a discharge, as a partial or complete substitute for adequate treatment to achieve compliance with a discharge limitation unless expressly authorized by an applicable Pretreatment Standard or Requirement. The Superintendent or designee may impose mass limitations on users who are using dilution to meet applicable Pretreatment Standards or Requirements or in other cases when the imposition of mass limitations is appropriate.”

The dilution prohibition language in §13.07.240 meets the requirement in 40 C.F.R. §403.6(d) of the Pretreatment Regulations.

5.4 Local Limits Technical Evaluation-Regulatory Background

40 C.F.R. § 122.44(j)(2)(ii) of the NPDES regulations require POTWs to provide a written technical evaluation of the need to revise local limits following permit issuance or

reissuance. The technical evaluation is a detailed re-evaluation of data, criteria, conditions, and assumptions on which local limits are based to determine whether any significant changes affecting the local limits have occurred. Chapter 7 of the *Local Limits Development Guidance Manual*, EPA-833-R-04-002A, July 2004 provides guidance on completing the technical evaluation of local limits.

The Annual Pretreatment Reports submitted to the EPA provide the POTW with an opportunity to perform reviews for exceedances of the established MAHL for the POCs, on an annual basis. The POTW compares both the maximum and average influent data for the reporting year against the MAHL to determine if there were any exceedances. In addition, the POTW is required to report biosolids data to determine if there were any changes or concerns with the biosolids loadings. An exceedance of the established MAHL may be indicative of a change in the service area, changes to the POTW operations or changes to domestic or non-domestic loadings and may indicate a need to recalculate the local limits. However, the annual review may not have addressed conditions that can change over time, such as operating conditions, environmental criteria/standards, data, or assumptions that may make local limits no longer appropriate, protective or legally defensible.

As a follow-up to MAHL exceedances listed on the annual report and as required during a permit reissuance, a POTW should compare its current conditions and requirements with those that existed when the local limits were developed. The EPA recommends that POTWs determine if re-calculating existing local limits, or developing MAHLs for new pollutants of concern, is necessary in response to the following criteria:

1. Removal Efficiencies
 - a. Modification to the POTW or new POTW brought online.
 - b. Changes in POTW processes or operations that have affected the POTW removal efficiencies.
2. Total POTW or IU Loading
 - a. Significant changes to flow or loadings to the POTW, due to significant residential or domestic growth.
 - b. Significant changes to loadings to the POTW due to new IUs, changes in loadings at existing IUs or significant growth in the service area.
 - c. Significant changes in loadings from SIUs in the service area.
3. Limiting Criteria
 - a. New or revised NPDES permit limits.
 - b. New or revised biosolids standards.
 - c. Changes in EPA or State Criteria (acute and chronic water quality standards for the receiving waters, reuse water quality criteria) at the time of local limit development to existing criteria.
4. Sludge Characteristics or Method of Disposal
 - a. Changes in loadings to biosolids.
 - b. Changes in biosolids disposal methods.
5. Background Concentrations of Pollutants in Receiving Water

5.5 Technical Evaluation of the City's Local Limits

The NPDES permit issued by the MTDEQ expired on April 30, 2020 and is currently administratively extended. Based on conversations with the MTDEQ, the City's permit is on hold pending the resolution of the narrative nutrient standards. The reissued permit will require a technical evaluation of the City's 2011 local limits to incorporate current data, current standards, current POTW removal efficiencies due to construction or rehab updates, growth in the service area and changes in SIU flow. The City will be required to submit the technical evaluation to the EPA, as a condition of the reissued NPDES permit and as required by 40 C.F.R. 122.44(j)(2)(ii).

5.6 Permit or Site-Specific Limits

Local municipalities implementing the Pretreatment program should have the ability to establish site or permit-specific limits as deemed necessary to be protective of the POTW. This is a beneficial authority because situations or projects may occur in the service area that the municipality may want to provide control to protect the POTW. However, the current limits in the ordinance may not address the pollutant of concern.

The EPA considers the development of any local limit, whether codified in the municipal ordinance/rules and regulations or developed on a site-specific situation (i.e., permits-specific limit) to be a program modification under 40 C.F.R. §403.18 (53 FR 40579, Final Rule, General Pretreatment Regulations for Existing and New Sources, October 17, 1988). The development of any local limit is required to follow the approval and public notice provisions, both at the local level and by submitting to the EPA.

40 C.F.R. §403.5(c)(3) of the Pretreatment Regulations states, "Specific effluent limits shall not be developed and enforced without individual notice to persons or groups who have requested such notice and an opportunity to respond." The EPA recommends that POTWs conduct public participation in the local limits process (whether codified in the municipal ordinances/rules and regulations or new limits developed in a permit) as openly as possible. This may involve notifying the SIUs/IUs and other affected parties of the proposed limits or announcing a 30-day public comment period. This would allow sufficient time for the public to participate, which is a fundamental goal of the Clean Water Act in Section 101(e).

The City has established the ability to develop site or permit-specific limits in §13.07.230 of its municipal ordinance:

"The City reserves the right to establish, by ordinance or in individual wastewater discharge permits, more stringent Standards or Requirements on discharges to the POTW consistent with the purpose of this ordinance."

Based on the EPA's review of the Pretreatment records, the City has not established site-specific limits in the SIU permits.

6.0 Pretreatment Operating Procedures

6.1 Regulatory Background

40 C.F.R. §403.8(f)(2) of the Pretreatment Regulations states, “The POTW shall *develop and implement* procedures to ensure compliance with the requirements of a Pretreatment Program.” [*emphasis added*] The Pretreatment Regulations identify these minimum procedures in 40 C.F.R. §403.8(f)(2)(i-viii) to include the following **implementation** activities, summarized below:

- Identify and locate all possible IUs that might be subject to the Pretreatment program,
- Obtain information describing the character and volume of wastes discharged by IUs,
- Notify IUs of all applicable Pretreatment standards and other applicable State or Federal standards or requirements,
- Review self-monitoring reports and other notices submitted by IUs,
- Randomly sample and analyze effluents from IUs,
- Evaluate whether each SIU needs a slug discharge control plan,
- Investigate instances of noncompliance with Pretreatment standards and requirements,
- Comply with public participation requirements.

The requirements listed in 40 C.F.R. §403.8(f)(2) include the **development** of procedures. Adequate and updated standard operating procedures (SOPs) provide the following benefits to a Pretreatment program:

- Develop the baseline knowledge of the Pretreatment Regulations and establish the framework for program implementation,
- Adequately implement the authorities established in the municipal ordinance and ensure consistency in program implementation,
- Retain institutional and historical knowledge developed within the POTW’s program, and
- Provide a valuable training resource for new or inexperienced staff members.

Ultimately, the benefits of valid SOPs to the Pretreatment program are increased efficiency, along with improved data comparability, credibility, and legal defensibility. In addition, the development of written SOPs and templates allow the EPA to determine if the procedures adequately implement the legal authority developed in the municipal ordinance/rules and regulations as required in 40 C.F.R. §403.8(f):

“A POTW Pretreatment program must be based on the following legal authority and include the following procedures. These authorities and procedures shall at all times be fully and effectively exercised and implemented.”

6.2 Standard Operating Procedures (SOPs)

EPA evaluated the City's procedures and templates during the audit to ensure these meet the requirements listed in 40 C.F.R. § 403.8(f)(2). As previously discussed, developing SOPs are beneficial for the City's Pretreatment program but most importantly, to ensure adequate implementation of the authorities established in the municipal ordinance and ensure consistency in program implementation. EPA considers the Industrial User Inventory and Characterization, Sampling Plan/QA-QC, and the Enforcement Response Plan to be priority and required SOPs to ensure consistent implementation of the City's legal authority. EPA evaluated these priority SOPs and provided comments in the following sections within this audit report:

- Industrial User Inventory and Characterization Procedures (*discussed in §7.0*),
- Sampling Plan, Site-Specific Sampling Protocol, Quality Assurance and Quality Control (*discussed in §10.0*), and
- Enforcement Response Plan and Data Compliance Evaluation (*discussed in §11.0*).

EPA recommends the City evaluate the need to develop Pretreatment procedures, as necessary.

6.3 Templates

Templates and checklists are also critical to a Pretreatment program to ensure consistent and appropriate implementation of the Pretreatment regulations. The City has developed a permit application for discharging facilities and an SIU permit template. The permit application appears to provide adequate information and data for the City to develop an appropriate control mechanism. The evaluation of the permit template is included in §8.4 of this audit report.

6.4 Records and Data Management

6.4.1 Regulatory Background

The recordkeeping requirements of the Pretreatment program are established in 40 C.F.R. §403.12(o)(1-3):

“(1) Any Industrial User and POTW subject to the reporting requirements established in this section shall maintain records of all information resulting from any monitoring activities required by this section, including documentation associated with Best Management Practices. Such records shall include for all samples:

- (i) The date, exact place, method, and time of sampling and the names of the person or persons taking the samples.
- (ii) The dates analyses were performed.
- (iii) Who performed the analyses.
- (iv) The analytical techniques/methods use; and
- (v) The results of such analyses.

(2) Any Industrial User or POTW subject to the reporting requirements established in this section (including documentation associated with Best Management Practices) shall be required to retain for a minimum of 3 years, any records of monitoring activities and results (whether or not such monitoring activities are required by this section) and shall make such records available for inspection and copying by the Director and the Regional Administrator (and POTW in the case of an Industrial User). This period of retention shall be extended during the course of any unresolved litigation regarding the Industrial User or POTW or when requested by the Director or the Regional Administrator.

(3) Any POTW to which reports are submitted by an Industrial User pursuant to paragraphs (b), [baseline monitoring reports] (d), [90-day compliance reports] (e), [categorical industrial user monitoring reports] and (h) [significant industrial user monitoring reports] of this section shall retain such reports for a minimum of 3 years and shall make such reports available for inspection and copying by the Director and the Regional Administrator. This period of retention shall be extended during the course of any unresolved litigation regarding the discharge of pollutants by the Industrial User or the operation of the POTW Pretreatment Program or when requested by the Director or the Regional Administrator.”

6.4.2 Recordkeeping and Data Management

Based on information gathered during the audit, the SIU and IU Pretreatment records are located in the Pretreatment Coordinator’s office and are maintained for at least three years. The SIUs are chronologically organized and the IUs on the industrial user inventory may include records such as building permit, survey, inspection reports, hazardous waste notifications, slug plans, as necessary.

6.5 *Receipt of Discharge Monitoring Reports and Notifications*

The Pretreatment regulations in 40 C.F.R. §403.8(f)(2)(vii) require a POTW to “Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices required under §403.12 [IU compliance reports], or indicated by analysis, inspection, and surveillance activities [control authority monitoring].” This requires the POTW to ensure adequate receipt and tracking of self-monitoring reports and notifications, have procedures to evaluate the data and information contained within these reports and notices, and determine compliance with the Pretreatment standards (e.g., permit limits and conditions).

Based on the EPA’s review of the Pretreatment records, it appears that the City is allowing SIUs to submit the self-monitoring compliance reports electronically. The Pretreatment Regulations at 40 C.F.R. § 403.8(g) states that “A POTW that chooses to receive electronic documents must satisfy the requirements of 40 CFR part 3—(Electronic reporting).”

EPA’s Cross-Media Electronic Reporting Rule (CROMERR) provides the legal framework for electronic reporting under EPA’s regulatory programs. The Rule sets performance-based, technology-neutral system standards and provides a streamlined, uniform process for Agency review and approval of electronic reporting. The CROMERR program ensures the enforceability of regulatory information collected electronically by

EPA and EPA's state, tribal and local government partners by focusing on the following processes:

- Criteria for establishing a copy of record.
- Integrity of the electronic document.
- Validity of the electronic signature.
- Determination of the identity of the individual uniquely entitled to use a signature device; and
- Opportunity to review and repudiate the copy of record.

The City is not certified under CROMMER and the integrity of these electronically received reports or notices are not established and therefore, the enforceability is not ensured. The City is required to ensure the reports and notices required under the Pretreatment program are received hard copy with a wet signature until the City applies for and receives certification under CROMMER. The City may allow electronic copies of the required reports or notices to be submitted as a courtesy copy but these must be followed up by a hard copy with a wet signature.

Based on the EPA's review of the Pretreatment records, the City receives and date stamps the date of receipt for these reports and notifications, however, as documented in section 8.4 – Specific Permit Findings, the date stamp and evaluation of received date is not consistent. In addition, it does not appear that compliance evaluation of the required reports and notices is completed on a consistent basis.

6.6 Management of Confidential Records

40 C.F.R. § 403.14 of the Pretreatment Regulations establishes the public availability of the Pretreatment records and the provisions to establish confidential business information (CBI). The City has incorporated the public availability and confidentiality requirements in §13.04.380(D) of the municipal ordinance:

“Information and data on a User obtained from reports, surveys, wastewater discharge permit applications, individual wastewater discharge permits, and monitoring programs, and from the Superintendent's or designee's inspection and sampling activities, shall be available to the public without restriction, unless the User specifically requests, and is able to demonstrate to the satisfaction of the Superintendent or designee, that the release of such information would divulge information, processes, or methods of production entitled to protection as trade secrets under applicable State law. Any such request must be asserted at the time of submission of the information or data. When requested and demonstrated by the User furnishing a report that such information should be held confidential, the portions of a report which might disclose trade secrets or secret processes shall not be made available for inspection by the public, but shall be made available immediately upon request to governmental agencies for uses related to the NPDES program or pretreatment program, and in enforcement proceedings involving the person furnishing the report. Wastewater constituents and characteristics and other effluent data, as defined at 40 CFR 2.302 shall not be recognized as confidential information and shall be available to the public without restriction.”

According to information gathered during the audit, the City has not received confidential business information.

7.0 Industrial User Inventory and Characterization

7.1 Regulatory Background

The Pretreatment Regulations state in 40 C.F.R. § 403.8(f)(2)(i-iii) that a POTW shall develop and implement procedures to ensure compliance with requirements of a Pretreatment Program. [These requirements are summarized after the regulation language in **bold** and *italics* font].

- i. “Identify and locate all possible Industrial Users which might be subject to the POTW Pretreatment Program. Any compilation, index or inventory of Industrial Users made under this paragraph shall be made available to the Regional Administrator or Director upon request.” ***This requires a POTW to develop and maintain an inventory of IUs in the service area.***
- ii. “Identify the character and volume of pollutants contributed to the POTW by the Industrial Users identified under paragraph (f)(2)(i) of this section. This information shall be made available to the Regional Administrator or Director upon request.” ***This requires a POTW to characterize the IUs in the inventory of the service area.***
- iii. “Notify Industrial Users identified under paragraph (f)(2)(i) of this section, of applicable Pretreatment Standards and any applicable requirements under sections 204(b) and 405 of the Act and subtitles C and D of the Resource Conservation and Recovery Act. Within 30 days of approval pursuant to 40 C.F.R. 403.8(f)(6), of a list of significant industrial users, notify each significant industrial user of its status as such and of all requirements applicable to it as a result of such status.” ***These procedures must include the notification of IUs of applicable Pretreatment Standards and other applicable requirements.***

The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(6) state, “The POTW shall prepare and maintain a list of its non-domestic or Industrial Users meeting the criteria in §403.3(v)(1). The list shall identify the criteria in §403.3(v)(1) applicable to each Industrial User and, where applicable, shall also indicate whether the POTW has made a determination pursuant to §403.3(v)(2) that such Industrial User should not be considered a Significant Industrial User. The initial list shall be submitted to the Approval Authority pursuant to §403.9 or as a non-substantial modification pursuant to §403.18(d).”

Approved Pretreatment programs are required by the Pretreatment Regulations to understand their service area and outside contributing jurisdictions, by developing and maintaining an inventory of IUs. In addition, the Pretreatment Regulations require a Pretreatment program to characterize the IUs listed on the inventory and notify the IU of their status under the Pretreatment program. For example, the following characterizations may apply to an IU, based on information received from questionnaires, drive-by or facility inspections:

- The IU is not characterized as significant, based on volume and characteristic of

- the discharged wastewater.
- The IU is characterized as significant and issued a permit.
- The IU is not characterized as significant, but loadings need to be controlled using BMPs in a source control program.
- The IU is generating wastewaters that are significant but is characterized as a zero-discharging facility.

The **Industrial Waste Inventory and Characterization** or industrial waste survey (IWS)/IU inventory are an important component to an effective Pretreatment program because this is a POTW's first exposure to the IUs, allows the POTW to determine if an IU is significant, notify the IU of its status under the Pretreatment regulations, and determine the appropriate type of control mechanisms for these facilities to protect the POTW and collection system.

7.2 Industrial User Identification and Characterization Procedure

40 C.F.R. §403.8(f)(2) of the Pretreatment Regulations require the City to “develop and implement procedures” that “enable the POTW” to comply with these Pretreatment Program requirements. The City has developed an Industrial Waste Survey standard operating procedure (SOP) that describes identification and location of IUs within the POTW's service area. The City participates in the business development and the building department online platform to incorporate the IU survey into the business license process. This provides the City the ability to evaluate IUs and provide notification of Pretreatment requirements. However, the Industrial Waste Survey SOP needs to describe how the City characterizes existing IUs based on their unit operations/chemical storage and handling/generation and discharge of process wastewater and notify these IUs of applicable Pretreatment Standards, as required in 40 C.F.R. § 403.8(f)(2)(i-iii).

As discussed in the audit, the EPA recommends the City collaborate with the Fire Department because they are in the facilities in the service area and may provide additional information regarding potential for significant process/wastewater generation or spill/slug potential in the service area.

7.3 Industrial User Database of the City's Service Area

The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(i-iii) require the City to identify and locate all IUs in its service area, identify the character and volume of pollutants contributed by these IUs based on current information, and notify these IUs of applicable Pretreatment Standards and Requirements. Based on the EPA's review of the Pretreatment records, the City has not developed a current inventory of IUs in its service area. This is a significant failure to implement the Pretreatment Regulations. The City is required to develop a current inventory of IUs in the service area, characterize these IUs and notify them of applicable Pretreatment Standards. The EPA recommends the City begin the development of the IU inventory by compiling information gathered in existing surveys and IU inspections. The IU Inventory once developed needs to be maintained to ensure it is up to date and current.

The City is required to characterize wastestreams from the following IUs in the POTW's service area and provide notification of applicable Pretreatment Standards, as required in 40 C.F.R. § 403.8(f)(2)(i-iii). The City is required to provide the inspection report and determination of applicable Pretreatment Standards as a follow up to this audit report.

- CM Manufacturing – 6333 Butler Creek
- Vorteqe 105 North Jackson St, #6
- Metalworks of Montana 3635 West Broadway
- Thatcher Company 3200 Raser Drive

The EPA recommends the City identify IUs or sectors of IUs that have the potential to impact the POTW and update their information more frequently. Priority IUs or IU sectors should include machine shops or metal working IUs because these IUs may change their process to include unit operations subject to the Metal Finishing Categorical Pretreatment Standards found in 40 CFR 433.

The EPA provides “Pretreatment 101” webinar training, and a training for “Industrial User Inventory and Characterization Procedures,” provided in September 2010, is archived at the following website:

<https://www.epa.gov/npdes/national-pretreatment-program-events-training-and-publications#pretreat101>

8.0 Control Mechanism (Permit) Evaluation and Permit Specific Issues

8.1 Regulatory Background

POTWs are required to issue control mechanisms to IUs identified through IU Inventory and Characterization procedures as SIUs. Individual permits or general control mechanisms authorize the discharge of wastewater to a POTW upon condition that the discharger complies with the permit limitations and conditions. An SIU permit is effective for only a limited period and should be revocable by the issuing authority at any time for just cause. In addition, the POTW's legal authority will typically include a provision that forbids the discharge of industrial wastewater from a SIU without a current permit.

The Pretreatment Regulations establish the required permit conditions in 40 C.F.R. § 403.8(f)(1)(iii)(B)(1-6) that include the following minimum elements:

1. Statement of duration (in no case more than five years);
2. Statement of non-transferability without, at a minimum, prior notification to the POTW and provision of a copy of the existing control mechanism to the new owner or operator;
3. Effluent limits, including Best Management Practices, based on applicable general Pretreatment Standards, categorical Pretreatment Standards, local limits, and State and local law;
4. Self-monitoring, sampling, reporting, notification and recordkeeping requirements, including an identification of the pollutants to be monitored, sampling location,

- sampling frequency, and sample type, based on the applicable general Pretreatment Standards, categorical Pretreatment Standards, local limits, and State and local law;
- 5. Statement of applicable civil and criminal penalties for violation of Pretreatment Standards and requirements, and any applicable compliance schedule. Such schedules may not extend the compliance date beyond applicable federal deadlines;
- 6. Requirements to control Slug Discharges, if determined by the POTW to be necessary.

The reporting and notification requirements in permit condition #4 above are found in 40 C.F.R. § 403.12 of the Pretreatment Regulations and include the following:

- Baseline Monitoring Reports – 403.12(b)
- Compliance Schedule Progress Reports – 403.12(c)
- 90-Day Compliance Reports – 403.12(d)
- CIU Periodic Compliance Reports – 403.12(e)
- Notice of Potential Problems, including Slug Loading – 403.12(f)
- Notification of Changes Affecting Slug Discharge Potential – 403.8(f)(2)(vi)
- 24-Hour Non-Compliance Notification – 403.12(g)
- SIU Periodic Compliance Reports – 403.12(h)
- Notification of Changed Discharge – 403.12(j)
- Notification of Hazardous Waste Discharge – 403.12(p)
- Notification of Bypass – 403.17

Under general principles of administrative law, permit applicants and other interested parties may challenge the POTW's permit decisions, including the permit limitations and conditions and the POTW's authority to issue the permit. The POTW must ensure that it has the requisite legal authority to impose Pretreatment Standards and Requirements in SIU permits and that it exercises its authority in a consistent and non-arbitrary manner. The local ordinance must clearly provide the POTW with the following authorities to support the permit requirements found in 40 C.F.R. § 403.8(f)(1)(iii):

- Authority to regulate all Industrial Users contributing wastewater to the POTW.
- Authority to require and issue permits, orders, or other control mechanisms, including:
 - Authority to require Industrial Users to submit all data that the POTW deems relevant to permit decisions and provisions for public access to data.
 - Authority to enter, inspect, and sample to verify information supplied by the Industrial User as well as to assess the Industrial User's compliance status.
 - Authority to incorporate local limits, including BMPs (if applicable).
 - Authority to incorporate federal and state Pretreatment Standards and Requirements.
 - Authority to require self-monitoring, record keeping, reporting, and notifications by the permittee.
 - Authority to develop other appropriate permit conditions.
- Authority to enforce sewer use ordinance and discharge permit violations.
- Authority to require the development of a slug discharge control plan.

The POTW is required to establish the legal authority to require an IU to complete and file a permit application, with current information, to receive an initial or reissued permit. A permit application enables the POTW to obtain the information necessary to characterize the facility, to evaluate the quality and quantity of wastewater discharged, or projected to be discharged for a new facility, and to determine the applicable Pretreatment Standards and controls. The permit application serves as the formal request from the IU to discharge to the POTW and is required to be signed by a responsible corporate officer of the IU, as defined in 40 C.F.R. § 403.12(l) of the Pretreatment Regulations. In addition to the permit application, the POTW should evaluate, if available, historic IU effluent data, compliance reports, previous inspection reports, Safety Data Sheets, etc.

Throughout the permit drafting process, the POTW should carefully and thoroughly document each step in a permit rationale or statement of basis. A statement of basis is a document that provides a justification of the permit conditions and limits based on a characterization of the IU, its wastewater discharge, and the applicable Pretreatment Standards and Requirements. The statement of basis should include a description of the facility's production, process(es), wastewater generation/management, and discharge locations to adequately characterize the facility. The statement of basis should also identify the appropriate Federal, State, and Local Pretreatment Standards, based on the IU's characterization; and should provide justification for permit conditions and requirements, such as pollutants of concern, monitoring/reporting frequencies, representative sampling types, notification requirements, slug discharge control, operation and maintenance requirements, etc.

The statement of basis facilitates defending any challenges that the permit terms and conditions were developed arbitrarily or capriciously and provides the required documentation in the permit record of any relief from otherwise applicable requirements (i.e., pollutants not expected to be present, equivalent limits, decisions on general control mechanisms, decisions on Non-Significant Categorical Industrial User (NSCIU) classification, and decisions on reduced monitoring requirements). In addition, the statement of basis can serve as a resident document to preserve institutional knowledge and continuity for new or different staff members.

The EPA developed an IU Permitting Guidance Manual, 833-R-12-0001A in September 2012. This guidance manual supports the implementation of the permit conditions found in 40 C.F. R. § 403.8(f)(1)(iii)(B)(1-6) of the Pretreatment Regulations. The guidance manual is intended to provide both new and experienced permit writers with conceptual support and specific examples to strengthen their permit development expertise. The guidance manual references technical guidance developed by the EPA regarding local limits, enforcing Pretreatment Standards and Requirements, controlling hauled waste, information regarding compliance inspections and sampling, and BMPs.

The IU Permitting Guidance Manual can be found at the following website:

https://www.epa.gov/sites/production/files/2015-10/documents/industrial_user_permitting_manual_full.pdf

8.2 *The EPA's Evaluation of the City's Permitting Legal Authority*

EPA evaluated the City's municipal ordinance to ensure it provides an adequate framework to require permit coverage, to deny or condition non-domestic wastewater contributions and to establish adequate permit conditions.

- Section 13.07.610 – establishes the requirement for SIUs to obtain a wastewater discharge permit.
- Section 13.07.640 – contains the permit application contents.
- Section 13.07.660 – establishes the authority for the City to deny or conditions wastewaters discharged to the public sewers.
- Sections 13.07.810 and 13.07.820 – establishes the permit conditions to prevent Passthrough or Interference and to protect the POTW, worker health and safety, biosolids and the receiving stream water quality.

8.3 *Permit Template Overview*

The City has developed a permit template to use when developing SIU permits in the service area. The EPA evaluated the City's permit template to ensure it incorporates the required permit conditions found in 40 C.F.R. § 403.8(f)(1)(iii)(B)(1-6) of the Pretreatment required Regulations and Section 13.07.810 and 13.07.820 of the City's municipal ordinance.

Based on the EPA's evaluation, the SIU permit template complies with the permit conditions found in the Pretreatment Regulations and incorporated in the City's municipal ordinance, with the following exceptions. (Note: The EPA's evaluation of the City's permit template is included in the *Missoula Permit Template Review.docx* and the resulting comments/edits are embedded in permit template in *Missoula Industrial Discharge Permit-EPA.pdf*; both are included as enclosures to the audit report.) The permit template needs to be updated to include the following required provisions and notification requirements:

1. The requirement to conduct representative sampling, as required in 40 C.F.R. § 403.12(g)(3) is not incorporated in the permit template.
2. The following notifications required in 40 C.F.R. § 403.12 are not incorporated as notification requirements in the permit template:
 - a. Notification of discharge of hazardous waste - 40 C.F.R. § 403.12(p)
 - b. Upset provisions - 40 C.F.R. § 403.16.
 - c. Bypass provisions - 40 C.F.R. § 403.17.

8.4 *Specific Permit Record Findings*

The City has identified 16 IUs in the service area that is determined to be significant industrial users (SIU) and that have been issued permits under the Pretreatment program. Findings from the EPA's review of the Pretreatment records, including the facility inspection report, statement of basis, permit, compliance evaluation, enforcement records and applicable correspondence are listed below:

8.4.1 Permit records Overview

1. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(ii) require the City to “Identify the character and volume of pollutants contributed to the POTW.” The SIU inspection reports do not adequately characterize the IUs or capture current conditions at the SIUs and need more detail regarding the SIU’s chemical storage/handling/transfer, process/unit operations, wastestream generation from these unit operations, wastestream management or wastewater treatment, sampling procedures to provide a current characterization, including an evaluation of slug discharge potential and process or treatment plant changes. This information is important to capture current conditions and determine if control such as an SIU permit or BMPs are necessary or if modifications to existing control mechanism or control plans such as slug discharge control plans or spill plans are necessary.
 - a. The EPA provided training to the City for IU inspections and information gathering during the audit. As discussed during the training, The EPA is including the Region 8 facility inspection report form as an enclosure to this audit report for the City to evaluate.
 - b. The City should gather digital photos during SIU inspections to provide current photos of areas relevant to the Pretreatment permit, including but not limited to floor drains, unit operations, raw material/chemical storage, applicable chemical handling equipment, wastestreams, treatment. These digital photos should be integrated into the facility’s inspection report.
2. The Pretreatment Regulations require in 40 C.F.R. § 403.8(f)(2)(iii) that a POTW shall notify Industrial Users of applicable Pretreatment Standards. Based on the EPA’s review of the Pretreatment records, it does not appear that the City is providing the SIU a follow-up letter after the inspection or a copy of the inspection report to notify the IU of their status under the Pretreatment program. The City needs to provide follow-up after an inspection to provide notification to the SIU or IU of applicable Pretreatment Standards.
3. Fact Sheets/Permit Rationales: The City should ensure its fact sheets adequately capture current conditions at the SIUs, identifies applicable Pretreatment Standards and justifies permit conditions, including the most stringent permit limits based on an evaluation of all Pretreatment Standards, representative monitoring type/frequencies based on the SIU’s wastewater discharge and recent compliance history, slug discharge/spill potential, reporting frequency and reportable data, TOMP requirement, requirement for slug discharge control plan based on current conditions.
4. The Pretreatment Regulations at 40 CFR 403.8(f)(2)(v) require the City to inspect each SIU at least once per year. 40 C.F.R. § 403.8(f)(2)(ii) requires the City to “Identify the character and volume of pollutants contributed to the POTW” and 40 C.F.R. § 403.8(f)(2)(vii) establishes the standard of evidence collection during sampling or inspection activities:
 - a. “Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices required under §403.12, or indicated by analysis, inspection, and surveillance activities

described in paragraph (f)(2)(v) of this section. Sample taking and analysis and the collection of other information shall be performed with sufficient care to produce evidence admissible in enforcement proceedings or in judicial actions.”

- b. Based on the EPA’s review of the Pretreatment records, the City did not inspect a significant number of SIUs, including the ten permitted breweries in 2022. This is a significant failure to implement the Pretreatment program.

8.4.2 American Eagle Instruments

1. The facility inspection reports generated for American Eagle Instruments need to include more detail, as described in §8.4.1(1) of this audit report.
2. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(1)(iii) require the City to “Control through Permit, order, or similar means, the contribution to the POTW by each Industrial User to ensure compliance with applicable Pretreatment Standards and Requirements.” Based on the EPA’s evaluation of the American Eagle Instruments permit, the permit needs to be updated for the following required permit conditions:
 - a. Part 4(H) requires notification of the discharge of hazardous waste for all pollutants, including permit-limited pollutants. However, the hazardous waste notification requirement in 40 C.F.R. §403.12(p) do not apply to pollutants already reported under the self-monitoring requirements of 40 CFR 403.12 (b) BMR, (d), 90-day compliance report and (e) self-monitoring reports. The permit needs to be updated to exempt pollutants already reported in these reports.
 - b. The Pretreatment Regulations at 40 C.F.R. § 403.12(g)(3)state that “The required reports must be based upon data obtained through appropriate sampling and analysis performed during the period covered by the report, which data are representative of conditions occurring during the reporting period.” The permit does not require representative sampling and needs to be updated to incorporate this permit requirements.
 - c. The EPA recommends the City provide the upper and lower pH limits in the Summary of Discharge Limits table.
3. American Eagle electronically submitted SIU self-monitoring reports as the primary method of delivery. As discussed in section 6.5 of this audit report. the Pretreatment Regulations at 40 C.F.R. § 403.8(g) states that “A POTW that chooses to receive electronic documents must satisfy the requirements of 40 CFR part 3— (Electronic reporting).” The City is not certified under CROMMER and the integrity of these electronically received reports or notices are not established and therefore, the enforceability is not ensured. The City is required to ensure the reports and notices required under the Pretreatment program are received hard copy with a wet signature until the City applies for and receives certification under CROMMER. The City may allow electronic copies of the required reports or notices to be submitted as a courtesy copy but these must be followed up by a hard

copy with a wet signature.

4. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(iv) require the City to “Receive and analyze self-monitoring reports and other notices submitted by Industrial Users.” The SIU self-monitoring reports reviewed by the EPA do not have date received stamps and the EPA was not able to determine if the reports were received within the due date required by the permit. It appears that instead of date stamping the received compliance reports, the City maintains a permit tracking checklist to track received dates of all compliance reports. The City did not initially provide the permit tracking checklist for the EPA to review but did provide it during the audit. The EPA recommends the City consistently date stamp the self-monitoring reports as the primary documentation on date received.
5. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(vi) require the City to “Evaluate whether each such Significant Industrial User needs a plan or other action to control Slug Discharges. For purposes of this subsection, a Slug Discharge is any Discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch Discharge, which has a reasonable potential to cause Interference or Pass Through, or in any other way violate the POTW’s regulations, local limits or Permit conditions. Significant Industrial Users are required to notify the POTW immediately of any changes at its facility affecting potential for a Slug Discharge. If the POTW decides that a slug control plan is needed, the plan shall contain, at a minimum, the following elements:
 - a. Description of discharge practices, including non-routine batch Discharges.
 - b. Description of stored chemicals.
 - c. Procedures for immediately notifying the POTW of Slug Discharges, including any Discharge that would violate a prohibition under § 403.5(b) with procedures for follow-up written notification within five days.
 - d. If necessary, procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site run-off, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents), and/or measures and equipment for emergency response.
 - e. The EPA performed a facility inspection on September 26, 2023. Based on the observations of the facility inspection, the current Slug Discharge Control Plan dated August 2017 needs to be updated to include the City’s current local limits. In addition, the facility does not discharge rinsewaters and acid chemical tanks to the sewer. The slug discharge control plan needs to be updated to describe the current discharge practices and operator training to ensure these electropolishing wastestreams are not accidentally discharged to the sanitary sewer.

8.4.3 Kettlehouse North

1. The Pretreatment Regulations require the City to “Randomly sample and analyze the effluent from Industrial Users and conduct surveillance activities in order to identify, independent of information supplied by Industrial Users, occasional and

continuing noncompliance with Pretreatment Standards. Inspect and sample the effluent from each Significant Industrial User at least once a year.” The City did not inspect Kettlehouse North in 2022. This is a significant failure to implement the Pretreatment Program.

2. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(vii) require the City to “Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices.” In addition, the Pretreatment Regulations at 40 C.F.R. § 403.8(f)(5)(iv) require the City to develop an ERP to “Adequately reflect the POTW's primary responsibility to enforce all applicable pretreatment requirements and standards.” Based on the EPA’s review of the Pretreatment records for Kettlehouse North, the SIU has a history of significant pH violations. It does not appear that the City evaluated these reports for compliance because there are no records for enforcement action records for the following violations:
 - a. 1st Quarter-2022 – pH meter not operating all quarter.
 - b. 2nd Quarter-2022 – 3,494 pH violations below 5.0.
 - c. 3rd Quarter-2022 – 425 pH violations below 5.0.
 - d. 4th Quarter-2022 – 2,503 pH violations below 5.0.
 - e. 1st Quarter-2023 – 86 pH violations below 5.0.
3. Because the facility is no longer conducting business at this location, the City is not required to follow up on these violations with enforcement actions, in accordance with its ERP. However, this is reflective on the City’s failure to adequately investigate significant instances of non-compliance with Pretreatment Standards and Requirements.

8.4.4 Big Sky Brewery

1. The Pretreatment Regulations at 40 CFR 403.8(f)(2)(v) require the City to inspect each SIU at least once per year. Based on the EPA’s review of the Pretreatment records, the City did not inspect the Big Sky brewery in 2022. In addition, none of the ten breweries permitted as SIUs were inspected by the City in 2022. This is a significant failure to implement the Pretreatment program.
2. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(vii) require the City to “Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices.” In addition, the Pretreatment Regulations at 40 C.F.R. § 403.8(f)(5)(iv) require the City to develop an ERP to “Adequately reflect the POTW's primary responsibility to enforce all applicable pretreatment requirements and standards.”
 - a. The 2nd Quarter-2022 compliance report was submitted on 08/01/2022, past the permit due date of 07/31/2022. There is no documentation for enforcement for this permit violation. The City needs to provide an enforcement response for this permit violation, according to its ERP.
 - b. The 4th Quarter-2022 compliance report submitted on 02/03/2023, past the permit due date of 01/31/2023. There is no documentation for enforcement

for this permit violation. The City needs to provide an enforcement response for this permit violation, according to its ERP.

8.4.5 JR Daily's Premium Meats LLC

1. The facility inspection reports generated for JR Daily's Premium Meats LLC need to include more detail, as described in §8.4.1(1) of this audit report.
2. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(vii) require the City to "Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices." In addition, the Pretreatment Regulations at 40 C.F.R. § 403.8(f)(5)(iv) require the City to develop an ERP to "Adequately reflect the POTW's primary responsibility to enforce all applicable pretreatment requirements and standards."
 - a. The SIU has not submitted its 1st Quarter-2023 compliance report, which was due on 04/30/2023. The report is greater than 45-days overdue, which constitutes SNC. The Control Authority needs to provide an enforcement response for this permit violation, in accordance with its ERP. In addition, the City needs to public notice the SIU for meeting the SNC criteria for late reporting as listed in the Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(viii)(F) and incorporated in the municipal ordinance in 13.07.1240.
 - b. The SIU did not submit a renewal application a minimum of 90 days prior to permit expiration date of 08/01/2023. Although, the City issued a notice of violation on 09/11/2023 for the failure to provide a permit renewal application and discharging with a valid permit. In addition, the failure to submit a permit renewal application constitutes SNC. The City needs to public notice the SIU for meeting the SNC criteria for late reporting as listed in the Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(viii)(F) and incorporated in the municipal ordinance in 13.07.1240.
 - i. As a result, the JR Daily's Premium Meats LLC permit is expired and has not been administratively extended by the City. The SIU is currently discharging without a permit. The City needs to provide a status update to the EPA on when a permit application is received and the permit is renewed.
3. The EPA performed a facility inspection on September 27, 2023. Based on the observations of the facility inspection, there were no corrective action items.

8.4.6 Draughtworks Brewing

1. The Pretreatment Regulations at 40 CFR 403.8(f)(2)(v) require the City to inspect each SIU at least once per year. Based on the EPA's review of the Pretreatment records, the City did not inspect Draughtworks Brewing in 2022. In addition, none of the ten breweries permitted as SIUs were inspected by the City in 2022. This is a significant failure to implement the Pretreatment program.

2. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(vii) require the City to “Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices.” In addition, the Pretreatment Regulations at 40 C.F.R. § 403.8(f)(5)(iv) require the City to develop an ERP to “Adequately reflect the POTW's primary responsibility to enforce all applicable pretreatment requirements and standards.” Based on the EPA’s review of the Pretreatment records for Draughtworks Brewing, the SIU has a history of significant pH violations. It does not appear that the City evaluated these reports for compliance because there are no records for enforcement action records for the following violations:
 - a. 2nd Quarter-2022 – 242 pH violations.
 - b. 3rd Quarter-2022 – 36 pH violations.
 - c. 4th Quarter-2022 – 22 pH violations.
 - d. 1st Quarter-2023 – 6 pH violations.
 - e. 2nd Quarter-2023 – 10 pH violations.
3. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(vii) require the City to “Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices.” In addition, the Pretreatment Regulations at 40 C.F.R. § 403.8(f)(5)(iv) require the City to develop an ERP to “Adequately reflect the POTW's primary responsibility to enforce all applicable pretreatment requirements and standards.”
 - a. The SIU submitted its 3rd Quarter-2022 compliance report on 11/04/22, past the due date of 10/31/22. The City needs to provide an enforcement response for this permit violation, in accordance with its ERP.
 - b. The SIU dated and submitted its 4th Quarter-2022 compliance report on 01/23/23; however, the report states it is for 4Q-2023. The City needs to ensure this compliance report is corrected and resubmitted.
 - c. The SIU submitted 2022 and 2023 quarterly reports without a signature as required in Part 3, Section A.3 of the permit. The City needs to ensure Draughtworks Brewing submits an appropriate signature of the certification statement for all quarterly compliance reports submitted in 2022 and 2023..
 - d. The SIU did not complete quarterly sampling for Q1-2023, as required in Part 2, Section A of the permit. The Control Authority needs to provide an enforcement response for this permit violation, in accordance with its ERP.
4. The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(vi) require the City to “Evaluate whether each such Significant Industrial User needs a plan or other action to control Slug Discharges. For purposes of this subsection, a Slug Discharge is any Discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch Discharge, which has a reasonable potential to cause Interference or Pass Through, or in any other way violate the POTW's regulations, local limits or Permit conditions. Significant Industrial Users

are required to notify the POTW immediately of any changes at its facility affecting potential for a Slug Discharge. If the POTW decides that a slug control plan is needed, the plan shall contain, at a minimum, the following elements:

- a. Description of discharge practices, including non-routine batch Discharges.
- b. Description of stored chemicals.
- c. Procedures for immediately notifying the POTW of Slug Discharges, including any Discharge that would violate a prohibition under § 403.5(b) with procedures for follow-up written notification within five days.
- d. If necessary, procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site run-off, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents), and/or measures and equipment for emergency response.
- e. The SIU's slug discharge control plan dated 2012 does not include a description of discharge practices as required in Part 4, Section A.1 of the permit. The City needs to require the SIU to update the slug discharge control plan to provide a description of current discharge practices.

9.0 Significant Industrial User Facility Inspections

9.1 Regulatory Background

The General Pretreatment Regulations at 40 C.F.R. § 403.8(f)(1)(v) states that the POTW shall have the legal authority to:

“Carry out all inspection, surveillance and monitoring procedures necessary to determine, independent of information supplied by Industrial Users, compliance or noncompliance with applicable Pretreatment Standards and Requirements by Industrial Users. Representatives of the POTW shall be authorized to enter any premises of any Industrial User in which a Discharge source or treatment system is located or in which records are required to be kept under §403.12(o) to assure compliance with Pretreatment Standards. Such authority shall be at least as extensive as the authority provided under section 308 of the Act;”

40 C.F.R. § 403.8(f)(2)(v) of the Pretreatment Regulations requires the POTW to inspect its SIUs at least once per year. 40 C.F.R. § 403.8(f)(2)(ii) require the City to “Identify the character and volume of pollutants contributed to the POTW.” 40 C.F.R. § 403.8(f)(2)(vii) establishes the standard of evidence collection during sampling or inspection activities:

“Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices required under §403.12, or indicated by analysis, inspection, and surveillance activities described in paragraph (f)(2)(v) of this section. Sample taking and analysis and the collection of other information shall be performed with sufficient care to produce evidence admissible in enforcement proceedings or in judicial actions.”

Typically, an inspector is the only representative from the POTW that regularly appears at the IU's facility and significantly represents the POTW's role as a responsible public agency, observing the actions and evaluating the performance of the regulated industry.

9.2 Right of Entry

The City has established the authority for right of entry in §13.07.1200 of the municipal ordinance:

“The Superintendent or designee shall have the right to enter the premises of any User, carry out inspections and monitoring procedures, to determine, independent of information supplied by the Industrial Users, whether the User is complying with all requirements of this ordinance and any individual wastewater discharge permit or order issued hereunder. Users shall allow the Superintendent or designee ready access to all parts of the premises for the purposes of inspection, sampling, records examination and copying, and the performance of any additional duties.

Where a User has security measures in force which require proper identification and clearance before entry into its premises, the User shall make necessary arrangements with its security guards so that, upon presentation of suitable identification, the Superintendent or designee shall be permitted to enter without delay for the purposes of performing specific responsibilities.

The Superintendent or designee shall have the right to set up on the User's property, or require installation of, such devices as are necessary to conduct sampling and/or metering of the User's operations.

1. The Superintendent or designee may require the User, at the User's expense, to install monitoring equipment as necessary.
2. The facility's sampling and monitoring equipment shall be maintained at all times in a safe and proper operating condition by the User at its own expense.
3. All devices used to measure wastewater flow and quality shall be calibrated at a frequency in accordance with manufacturers' specifications to ensure their accuracy, unless a waiver is obtained from, or an alternative method specified by, the Superintendent or designee.
4. The location of the monitoring facility shall provide ample room in or near the monitoring facility to allow accurate sampling and preparation of samples and analysis. Whether constructed on public or private property, the monitoring facilities shall be provided in accordance with the Supervisor's requirements and all applicable local construction standards and specifications, and such facilities shall be constructed and maintained in such manner so as to enable the Superintendent or designee to perform independent monitoring activities.

Any temporary or permanent obstruction to safe and easy access to the facility to be inspected and/or sampled shall be promptly removed by the User at the written or verbal

request of the Superintendent or designee and shall not be replaced. The costs of clearing such access shall be borne by the User. Unreasonable delays in allowing the Superintendent or designee access to the User's premises shall be a violation of this ordinance."

The municipal ordinance adequately establishes the right of entry authority for the City, as required in 40 C.F.R. § 403.8(f)(1)(v) of the Pretreatment Regulations.

9.3 Facility Inspection Records – Regulatory Background

40 C.F.R. § 403.8(f)(2)(vii) of the Pretreatment Regulations requires the POTW to meet the criterion for evidence collection "with sufficient care to produce evidence admissible in enforcement proceedings or in judicial actions." This is performed during facility inspections by adequate documentation in the inspection report of the observations, surveillance, inspections, sampling performed, and analysis gathered during facility inspections. A complete and well-developed inspection report that provides a current characterization of the facility will benefit the POTW's Pretreatment program for programmatic decisions such as categorical determinations, slug discharge/spill potential, changes at the facility that may affect the current permit conditions, sampling frequencies, etc.

As discussed in §2.11.2 of the *Industrial User Inspection and Sampling Manual for POTWs*, EPA-831B17001, January 2017, the inspection report generated from the facility inspections should accomplish the following three objectives: 1) organize and coordinate all information in a comprehensive, usable manner for use by the POTW's compliance personnel; 2) identify areas that may require follow-up activity; and 3) provide significant background information on the facility that can be reviewed prior to conducting subsequent inspections at the facility. The quality of this documentation will, to a large degree, determine how effective these follow-up activities will be at the facility. The information in the inspection report must be presented in a clear, concise, and well-organized manner.

The Industrial User Inspection and Sampling Manual for POTWs describes the information necessary to characterize a facility in §§2.10.3 and 2.12. The manual also discusses the records to review at a facility to help determine the facility's compliance in §2.10.8. It is important for Pretreatment programs to capture the following information during facility inspections to characterize the facility, and document facility changes to ensure the SIU's permit addresses current conditions:

- Chemical storage areas, including potential spill concerns during chemical receiving and transfer/handling.
- Process tanks or processing areas – detailed descriptions of the process including tank contents, capacities.
- Wastestream generation from the process areas and disposal/discharge practices – frequency of discharge rinse water tanks, whether spent chemical solutions tanks discharged to the POTW or hauled off site, proximity to floor/trench drains, slug discharge control and spill containment measures, etc.
- Wastestream management (treatment, recycling, hauling off site, evaporation, etc.).
- Waste treatment system.

- Wastestream or hazardous waste storage areas, including potential spill concerns.
- Discharge monitoring points.
 - Evaluation of the sampling/monitoring protocols to determine if these are appropriate to provide representative data of the wastewaters regulated by the permit.

A facility inspection of a permitted SIU should include a review of relevant records used to support compliance with the permit conditions and that may not be reported in the self-monitoring compliance reports such as pH and continuous flow monitoring records, tank change out logs, analytical reports, waste manifests, operation and maintenance logs, etc. A detailed facility inspection report with descriptions of tank contents, capacities, generated wastestreams, plumbing, and management of the wastestreams will benefit the POTW to establish the baseline for the year and to determine if any changes will impact the permit conditions/limits or associated documents such as the slug discharge control plan, spill plan, treatment system operation manual or sampling protocol.

During the Pretreatment audit, the EPA discussed inspection procedures with the City, including EPA's procedures. The EPA performs facility inspections by gathering verbal information in an opening conference, then performing a walkthrough to visually confirm the information gathered during the opening interview. The EPA structures its information gathering by following the raw materials/chemical supply through the unit operations and ultimately to the finished product or service. A closing conference is performed to gather follow-up information, review records, and to provide preliminary conclusions to the facility.

9.4 Evaluation of the City's Inspection Reports/Records

The EPA evaluated the inspection reports and other records related to the facility inspection for the SIU annual facility inspection. As discussed in § 8.4.1(1) of this audit report, the SIU inspection reports provide minimal characterization of the facility and needs to be improved to include information regarding the facility's chemical storage/handling, process, (sources, flow volume and types of discharges) wastewater generation, slug discharge potential, waste treatment methods, sampling procedures, and review of records in the annual inspection report.

In addition, the City should gather digital photos and incorporate into the facility inspection report to supplement the narrative information and help capture current conditions.

9.5 Notification of Applicable Pretreatment Standards

The Pretreatment Regulations require in 40 C.F.R. § 403.8(f)(2)(iii) that a POTW shall notify Industrial Users of applicable Pretreatment Standards. As discussed in § 8.4.1(2) of this audit report, it does not appear that the City is providing the SIU a follow-up letter after the inspection or a copy of the inspection report to notify the IU of their status under the Pretreatment program. The City needs to provide follow-up after an inspection to provide notification to the SIU or IU of applicable Pretreatment Standards.

9.6 Facility Inspections

During the audit, the EPA and the City inspected the American Eagle Instruments on September 26, 2023 and JR Daily's Premium Meats LLC on September 27, 2023. The inspection reports were submitted to the facilities October 11, 2023 and October 16, 2023, and are included in this audit report as an enclosure. Areas of concern during the facility inspection are provided in the facility inspection reports.

10.0 Control Authority Compliance Monitoring

10.1 Regulatory Background

40 C.F.R. § 403.8(f)(1)(v) of the Pretreatment Regulations requires the POTW to have the legal authority to "Carry out all inspection, surveillance, and monitoring procedures necessary to determine, independent of information supplied by Industrial Users, compliance or noncompliance with applicable Pretreatment Standards and requirements." Further, 40 C.F.R. § 403.8(f)(2)(v) require a POTW to "Randomly sample and analyze the effluent from Industrial Users and conduct surveillance activities in order to identify, independent of information supplied by Industrial Users, occasional and continuing noncompliance with Pretreatment Standards. Inspect and sample the effluent from each Significant Industrial User at least once a year."

The standard to which POTWs are held for purposes of evidence collection during a Control Authority monitoring event is outlined in 40 C.F.R. § 403.8(f)(2)(vii): "Sample taking and analysis and the collection of other information shall be performed with sufficient care to produce evidence which is admissible in enforcement proceedings or judicial actions."

In addition, a POTW is required to ensure the Control Authority monitoring events are based on representative conditions at the monitoring point, to ensure that these sampling events are legally defensible and of the same quality as required for self-monitoring events. 40 C.F.R. § 403.12(g)(3) of the Pretreatment Regulations require, "The reports ... must be based upon data obtained through appropriate sampling and analysis performed during the period covered by the report, which data are representative of conditions occurring during the reporting period."

An enforceable sample must be representative of the nature and character of the discharges during the reporting period and is required to be representative in composition to that in the larger volume of wastewater being discharged. A POTW is required to implement a Control Authority monitoring program that meets the compliance monitoring requirements of the Pretreatment Regulations, provides representative data for compliance determinations, and that would be legally defensible in court, if such an enforcement action is taken by the POTW. In addition, representative and legally defensible data helps the POTW support other program objectives such as local limits evaluation, and permit development or reissuance.

10.2 Sampling Plan and Protocols

As required in 40 C.F.R. § 403.8(f)(2), the POTW shall “develop and implement procedures to ensure compliance with the requirements of a Pretreatment Program.” The development and implementation of a sampling plan or procedures ensures the POTW is appropriately and consistently performing sampling or monitoring events, as well as providing enforceable data that is representative of the discharge conditions at the facility. The sampling plan should include the following:

- purpose and objective of the sampling program,
- specific sampling protocols at each facility sampling location to ensure representative sampling, and
- appropriate QA/QC procedures to ensure legally defensible data.

10.2.1 Site-Specific Sampling Protocols

The sampling protocols must include specific procedures used at each facility to ensure adequate and representative sampling protocols. The development of the sampling protocols will ensure the sampling events are performed in accordance with appropriate standards and procedures and produce quality data that is legally defensible.

At a minimum, the specific sampling protocols at each sampling location should include the following:

- Sampling locations – should include all monitoring points included in the SIU’s permit, including the use of digital photos for each monitoring point.
- Type of sample – the POTW is required to ensure the sampling event is representative of the SIU’s discharge, as required by 40 C.F.R. §403.12(g)(3). The type of sample will be dependent on the parameter to be sampled and discharge characteristics. The type of sample could include specifications for use of automatic samplers (including programming to provide representative sampling) or manual sampling techniques.
- Type of Flow Measurement – if applicable
- Parameters for Analysis – based on the SIU’s permit
- Sample Volume
- Type of Sample Containers
- Sample Preservation Techniques
- Sample Identification and Chain of Custody Procedures
- QA/QC Procedures

10.2.2 Quality Assurance/Quality Control (QA/QC)

QA and QC are tools which are necessary in a sampling program to maintain a level of quality, such as legally defensible data, in the measurement, documentation, and interpretation of sampling data. The QA/QC procedures are used to obtain data that are both precise (degree of closeness between two or more samples) and accurate (degree of closeness between the results obtained from the sample analysis and the true value that

should have been obtained). Proper implementation of QA/QC procedures will result in an increase in the POTW's confidence in the validity of the reported analytical data.

The QA/QC procedures used to ensure data collected is valid and legally defensible include, but are not limited to the following:

- equipment maintenance/calibration,
- proper sampling bottles, proper sampling techniques that are adequate and representative of the discharge from the facility,
- field blanks, equipment blanks, method blanks, standards, blind duplicates, and
- ensuring sampling personnel are adequately trained.

10.3 The EPA Evaluation of the City's Control Authority Monitoring

10.3.1 SOPs

The City has developed a sampling plan SIU sampling in the service area. The sampling plans provide a description of the general sampling procedures, equipment, sampling handling during a sampling event. The City needs to update its sampling plan to include SIU-specific sampling protocols for each SIU to ensure consistent sampling that is representative for the production day at each SIU. The City should incorporate digital photos in the SIU-specific sampling protocols. For example, this will ensure the correct manhole at American Eagle's interceptors are accessed for sampling at the SIU. In addition, the City needs to incorporate QA/QC into each IU sampling plan such as equipment blanks, trip blanks, sample duplicates, matrix spikes, control standards to ensure the sampling and analytical techniques are in control and compliance with 40 CFR 136.

10.3.2 Control Authority Monitoring

The laboratory personnel from the City sample the permitted SIUs at least once per year, as required in 40 C.F.R. § 403.8(f)(2)(v). Based on information gathered during the audit, the City calibrates its pH meter on a monthly frequency. The pH meter needs to be calibrated prior to every sampling event to ensure the pH monitoring is performed with sufficient care to produce evidence, which is admissible in enforcement proceedings or judicial actions, as required in 40 C.F.R. § 403.8(f)(2)(vii).

11.0 Enforcement

11.1 Regulatory Background

The EPA establishes the regulatory requirement to develop and implement an Enforcement Response Plan (ERP) in 40 C.F.R. § 403.8(f)(5)(i-iv) of the Pretreatment Regulations. The regulations state:

“The POTW shall develop and implement an enforcement response plan. This plan shall contain detailed procedures indicating how a POTW will investigate and respond to instances of industrial user noncompliance. The plan shall, at a minimum:

- (i) Describe how the POTW will investigate instances of noncompliance.

- (ii) Describe the types of escalating enforcement responses the POTW will take in response to all anticipated types of industrial user violations and the time periods within which responses will take place.
- (iii) Identify (by title) the official(s) responsible for each type of response.
- (iv) Adequately reflect the POTW's primary responsibility to enforce all applicable pretreatment requirements and standards.”

The development and implementation of an ERP is an important component of an effective Pretreatment Program. Although a successful Pretreatment program should provide outreach to facilities in the service area regarding the applicability of the Pretreatment Standards and compliance with these standards, in many situations, enforcement is the necessary driving force that makes the Pretreatment program functional.

The ERP establishes a framework for POTWs to formalize procedures for investigating and responding to instances of IU noncompliance and to ensure that POTWs enforce against IUs objectively, consistently, and equitably. A well-developed ERP should help the POTW decide what resources are needed to enforce the Pretreatment Standards/Requirements and assist in dealing with IU violations. In addition, the ERP will provide notice to the IUs regarding the POTW’s responsibility to respond to violations of Pretreatment Standards/Requirements.

11.2 Enforcement Legal Authority

The EPA evaluated the City’s enforcement authority and remedies found in its municipal ordinance.

1. ERP incorporated into the ordinance in §13.07.1630
2. Civil penalties established in §13.07.1610.
3. Criminal penalties established in §13.07.1620.
4. Injunctive relief provisions established in §13.07.1600.
5. Notice of violations authority established in §13. 07.1400.
6. Administrative orders authority established in §13. 07.1430.
7. Administrative penalty authority established in §13. 07.1450.
8. Cease and Desist authority established in §13. 07.1440.
9. Show Cause Hearing authority established in §13. 07.1420.
10. Termination of Discharge provisions established in §13. 07.1450.
11. Publication of IUs in significant noncompliance in §13.07.1240.

11.3 Enforcement Response Plan

The City submitted its ERP to the EPA for review, prior to the audit. Based on the EPA’s review, the ERP needs to be updated to meet the requirements established in the Pretreatment regulations at 40 C.F.R. § 403.8(f)(5)(i-iv) and incorporated in Chapter 13.07 of the City’s municipal ordinance. (Note: the EPA’s review of the City’s ERP and the EPA’s embedded comments in the City’s ERP are included as enclosures to the audit report).

Describe how the POTW will investigate instances of noncompliance

- Provide a summary of the methods the City utilizes to investigate IU noncompliance:
 - IU Inventory/Inspection Procedures
 - Permitting
 - Self-monitoring notification
 - Control Authority monitoring
 - Compliance evaluation and SNC procedures

Enforcement Response Guide:

The following anticipated types of violations are either absent or need to be modified:

- Reporting violations or deficiencies/late reports – the ERP provides a 5-day grace period for late reports that is not incorporated into the municipal ordinance. The ERP needs to be modified to eliminate the 5-day grace period.
- Data Falsification
- Failure to notify (24-hour, slug/potential problems, changed discharges, hazardous waste, upset, bypass) – modify to include all notifications required under 40 C.F.R. 403.12 of the Pretreatment Regulations.
- Refusal of Entry
- Sector Control Programs
- Trucked and Hauled Waste

The following enforcement remedies for SNC criteria listed in the City's municipal ordinance at §13.07.1240 need to be established in the ERP:

- Chronic violations of wastewater discharge limits, defined here as those in which sixty-six percent (66%) or more of all the measurements taken for the same pollutant parameter taken during a six- (6-) month period exceed (by any magnitude) a numeric Pretreatment Standard or Requirement, including Instantaneous Limits as defined in Chapter 13.07 Article II MMC.
- Technical Review Criteria (TRC) violations, defined here as those in which thirty-three percent (33%) or more of wastewater measurements taken for each pollutant parameter during a six- (6-) month period equals or exceeds the product of the numeric Pretreatment Standard or Requirement including Instantaneous Limits, as defined by Chapter 13.07 Article II MMC multiplied by the applicable criteria (1.4 for BOD, TSS, fats, oils and grease, and 1.2 for all other pollutants except pH).
- Any other violation of a Pretreatment Standard or Requirement as defined by 40 CFR 403.3(l) that the POTW determines has caused Interference or Pass Through (including endangering the health of POTW personnel or the general public).
- Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or to the environment or has resulted in the POTW's exercise of its emergency authority .
- Failure to meet, within 90 days after the schedule date, a compliance schedule milestone contained in a local control mechanism or enforcement order for starting

- construction, completing construction, or attaining final compliance.
- Failure to accurately report non-compliance.
- Any other violation or group of violations, which may include a violation of Best Management Practices, which the POTW determines will adversely affect the operation or implementation of the local Pretreatment program.

11.4 Compliance Evaluation

The Pretreatment Regulations at 40 C.F.R. § 403.8(f)(2)(vii) require the City to “Investigate instances of noncompliance with Pretreatment Standards and Requirements, as indicated in the reports and notices.” In addition, the Pretreatment Regulations at 40 C.F.R. § 403.8(f)(5)(iv) require the City to develop an ERP to “Adequately reflect the POTW’s primary responsibility to enforce all applicable pretreatment requirements and standards.”

Based on EPA’s review of the SIU Pretreatment records described in §8.4.2 through §8.4.6 of this audit report, it does not appear that the City consistently evaluates the self-monitoring reports for compliance and identifies permit violations. The EPA discovered permit violations, including significantly late reports, unsigned compliance reports by SIUs and significant pH violations for the breweries that do not appear to be identified by the City. In addition, enforcement responses were not taken for the permit violations. The City is failing to implement to perform compliance evaluation of reports and notices required by the Pretreatment program and the SIU permits.

11.5 SNC Calculations and Public Participation

40 C.F.R. § 403.8(f)(2)(viii) of the Pretreatment Regulations require a POTW to comply with the public participation requirements in the enforcement of National Pretreatment Standards. These procedures shall include a provision for at least annual public notification in a newspaper of general circulation, that provides meaningful public notice within the jurisdictions served by the POTW, of IUs which, at any time during the previous 12 months, were in SNC with applicable Pretreatment requirements. The SNC determinations are both calculation of numeric Pretreatment Standards, as listed in 40 C.F.R. § 403.8(f)(2)(viii)(A-D) and determination of violations of the narrative Pretreatment Standards, as listed in 40 C.F.R. § 403.8(f)(2)(viii)(E-H). The City has established these SNC criteria in §13.04.273(1-8) of the City’s municipal ordinance.

Based on EPA’s review of the Pretreatment records, it does not appear that the City is calculating numeric SNC and determining narrative SNC based on identified violations. Based on the EPA’s review of the Pretreatment records identified in §8.4.2 through §8.4.6 of this audit report, the City is required to determine SNC criteria for identified permit violations.

12.0 Trucked and Hauled Waste

12.1 Regulatory Background

Many POTWs accept trucked and hauled wastes in addition to receiving wastes through

the collection system. As stated in 40 C.F.R. § 403.1(b)(1), pollutants from nondomestic sources that are transported to the POTW by truck or rail are also subject to the Pretreatment Regulations. They may also be subject to categorical Pretreatment Standards. Therefore, hauled wastes from CIUs or hauled waste that otherwise qualifies the discharger as an IU must be regulated in accordance with the requirements of the Pretreatment Regulations, including any applicable requirements for permitting and inspecting the generating facility. Hauled wastes, like wastes received through the collection system, have the potential to negatively affect the POTW, making regulatory control of the wastes necessary.

Most wastewaters hauled or trucked to a POTW are domestic septage, typically from homes outside the POTW's service area, but compatible in nature. Because such discharges are predominantly compatible wastes, treatment at a POTW is the most appropriate disposal method. The biosolids regulations at 40 C.F.R. § 503.9(f) define domestic septage as the liquid or solid material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or similar system that holds only domestic sewage. Domestic septage does not include liquid or solid material removed from any system that receives either commercial wastewater or industrial wastewater, and it does not include grease removed from a restaurant grease trap.

The POTW cannot know for certain the nature and concentration of the trucked wastes and the impact on the POTW without implementing some type of control or surveillance program. Unlike discharges from IUs directly connected to the POTW, the makeup of a load of hauled waste is virtually unknown without some type of monitoring, be it visual or analytical.

Even compatible loads of domestic septage can cause problems for a POTW due to high strength or discharge rate. Domestic septage can be partially digested, higher in metals concentrations than normal domestic wastes, or contain small amounts of household contaminants (e.g., cleaners). Similarly, disinfectants used in portable toilets have the potential to affect POTW operations.

Receipt of hauled hazardous waste (as defined in Resource Conservation and Recovery Act (RCRA)) might not only affect POTW operations but also could subject the POTW to additional reporting requirements. The Domestic Sewage Exclusion, specified in 40 C.F.R. § 261.4(a)(1)(ii), provides that hazardous wastes mixed with domestic sewage and under control of the Pretreatment program are exempt from the RCRA waste regulations. However, hazardous wastes received by truck or rail (or dedicated pipe) at the treatment plant are not exempt from the regulations. POTWs that accept hazardous wastes from those sources are subject to *permit by rule* status under RCRA [40 C.F.R. § 270.60(c)] provided that certain requirements are met. The POTW must be in compliance with all its NPDES permit requirements and the waste must comply with all federal, state, and local pretreatment requirements.

12.2 Legal Authority

The City has adopted the Federal specific discharge prohibitions for trucked and hauled wastes found in 40 C.F.R. § 403.5(b)(8) of the Pretreatment Regulations. This is incorporated by the City in §13.07.200 of the municipal ordinance:

“Trucked or hauled pollutants, except at discharge points designated by the Superintendent or designee in accordance with Chapter 13.17.”

The municipal ordinance at Chapter 13.17 establishes general provisions, permitting, transporter, reporting, and disposal requirements for owners of waste hauling companies operating in the City’s service area and outlying county.

12.3 Trucked and Hauled Waste Disposal Location and Control Mechanisms

According to information gathered during the audit, the City accepts domestic/septic waste and restaurant grease. However, the City is not currently accepting trucked/hauled waste from out of the county because it is cleaning its anaerobic digester. The City currently has eleven companies transporting domestic, septic and restaurant waste to the disposal station. The City requires a permit application and a City license, proof of insurance and proof of a license issued from the MTDEQ, prior to issuing a hauled waste permit.

The POTW’s septic disposal station (see Figure 5) is operational from 8 a.m. to 4 p.m. daily and each truck owned by the permitted waste haulers are assigned a code to access the septic station disposal valve. The waste haulers are required to provide a manifest that lists the source(s) of the waste, type of waste and volume. The waste truck driver connects the truck’s disposal hose to a 3-inch cam lock pipe fitting and discharges the truck’s contents to the disposal station. The disposal station leads to the POTW’s headworks.

The current POTW disposal station is located next to a storm drain (Figure 6) and because of these concerns, the City is considering moving the disposal station to a constructed discharge basin that is bermed with concrete. (Figure 7)

Based on information gathered during the audit and a POTW walkthrough, it appears that the City has adequate control of the trucked and hauled waste program. The acceptance of these wastes by the City provides a significant benefit to the community and its residents. The EPA acknowledges the City’s resource commitment to provide this beneficial service to the community. The EPA also recommends the City conduct routine sampling of the hauled waste to ensure the City can accept the loadings from the hauled waste. In addition, the hauled waste loading data is necessary when the City updates its local limits.



Figure 6 – Missoula Septage Receiving Station



Figure 7 –Proposed location of new Septage Receiving Station

13.0 Best Management Practices – Sector Control Programs

13.1 Regulatory Background

BMPs are defined in 40 C.F.R. § 403.3(e) as “schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to implement the prohibitions listed in 40 C.F.R. § 403.5(a)(1) [General Prohibitions] and (b) [Specific Prohibitions]. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.”

40 C.F.R. § 403.5(c)(4) states, “POTWs may develop Best Management Practices (BMPs) to implement paragraphs (c)(1) [develop limits to implement the general/specific prohibitions] and (c)(2) [develop and enforce specific effluent limits for industrial users that contribute pollutants that may result in Interference and Pass-Through] of this section. Such BMPs shall be considered local limits and Pretreatment Standards for the purposes of this part and section 307(d) of the Act.” The regulations establish that BMPs are enforceable Pretreatment Standards.

13.2 Authority in Municipal Ordinance

The City established the authority to implement BMPs in its municipal ordinance as follows:

- BMP definition in §13.04.0207.040(D).
- BMPs are established as Pretreatment Standards in §13.07.040(FF).
- BMPS established as a SIU reporting requirement in §13.07.1030.
- BMPs established as a permit condition in §13.07.810(C).
- BMP recordkeeping requirements in §13.07.1110.
- BMPs established as an SNC criterion in §13.07.1240.
- The BMP requirements for sector control programs are established in §13.07.260(A)(1).

13.3 Dental Amalgam Rule Requirements – 40 C.F.R. Part 441

The Dental Amalgam Rule, found in 40 C.F.R. Part 441, was promulgated as a final rule with new source dental facilities required to be in compliance with the Pretreatment Standards as of July 14, 2017, and existing source dental facilities required to be in compliance as of June 14, 2020. Compliance with the rule requires the installation of an ISO1143 amalgam separator or equivalent device, and compliance with the following two BMPs:

- Prohibition on the use of oxidizing or chlorine-containing line cleaners; and
- Ensuring all amalgam process wastewater including chair-side traps, screens, vacuum pump filters, dental tools, cuspidors or collection devices are treated through the amalgam separator.

In addition, the new and existing dental facilities are required in 40 C.F.R. § 441.50 of the Dental Amalgam Rule to provide a report that characterizes the dental facility and certifies compliance. The new source dental facilities are required to be in compliance upon discharge and submit a one-time compliance report within 90 days of startup.

The City has identified 26 dental facilities in its industrial waste survey and these dental facilities submitted one-time amalgam compliance reports, as required by the Dental Amalgam Rule. Based on the EPA's review of these one-time compliance reports, it does not appear that the City has evaluated these reports for compliance. Table 4 identifies the deficiencies in the one-time compliance reports. The City is required to ensure the one-time compliance reports are complete and the information submitted in the reports comply with Dental Amalgam Rule requirements.

Table 4 – Deficiencies Identified in the One-Time Compliance Reports submitted by the Dental Facilities

Dental Facility	Section of Form	Deficiency
Meng Dentistry	Section C	Description of the practices employed by the facility to ensure proper operation and maintenance in accordance with §441.30 or §441.40.
	Section D	Best Management Practice certification that indicates certification the BMPs identified in the form are being implemented as specified in §441.30(b) or §441.40, and will continue to be implemented.
Mark Meser, DMD, PLLC	Section C	Description of the practices employed by the facility to ensure proper operation and maintenance in accordance with §441.30 or §441.40.
Kevin A. Miltko, DDS	Section C	Description of the practices employed by the facility to ensure proper operation and maintenance in accordance with §441.30 or §441.40.
Neighborhood Dental	Section C	Description of the practices employed by the facility to ensure proper operation and maintenance in accordance with §441.30 or §441.40.
Partnership Health Center – Creamery Clinic	Section C	Certification that the amalgam separator (or equivalent device) is designed and will be

		operated and maintained to meet the requirements of with §441.30 or §441.40.
Partnership Health Center – Lowell School Satellite Clinic	Section C	Certification that the amalgam separator (or equivalent device) is designed and will be operated and maintained to meet the requirements of with §441.30 or §441.40.
Partnership Health Center – Missoula Food Bank Satellite Clinic	Section C	Certification that the amalgam separator (or equivalent device) is designed and will be operated and maintained to meet the requirements of with §441.30 or §441.40.
Partnership Health Center – Seeley Lake Satellite Clinic	Section C	Certification that the amalgam separator (or equivalent device) is designed and will be operated and maintained to meet the requirements of with §441.30 or §441.40.
Partnership Health Center – Superior Satellite Clinic	Section C	Certification that the amalgam separator (or equivalent device) is designed and will be operated and maintained to meet the requirements of with §441.30 or §441.40.
Ronald F. Rosser, DDS, PC	Section C	Certification that the amalgam separator (or equivalent device) is designed and will be operated and maintained to meet the requirements of with §441.30 or §441.40. Also, a description of the practices employed by the facility to ensure proper operation and maintenance in accordance with §441.30 or §441.40.
	Section D	Best Management Practice certification that indicates certification the BMPs identified in the form are being implemented as specified in §441.30(b) or §441.40 and will continue to be implemented.
Sapphire Dental Group, PC	Section B	Description of amalgam separator or equivalent device, including the number of chairs for each device.
3 Rivers Pediatric Dentistry	Section A	Description of the facility.
	Section B	Description of amalgam separator or equivalent device, including the number of chairs for each device.
	Section C	Description of the practices employed by the facility to ensure proper operation and

		maintenance in accordance with §441.30 or §441.40.
	Section D	Best Management Practice certification that indicates certification the BMPs identified in the form are being implemented as specified in §441.30(b) or §441.40 and will continue to be implemented.

14.0 PFAS Roadmap and Implementation

Harmful per- and poly-fluoroalkyl substances (PFAS) are an urgent public health and environmental issue facing communities across the United States. PFAS have been manufactured and used in a variety of industries in the United States and around the globe since the 1940s, and they are still being used today. Because of the duration and breadth of use, PFAS can be found in surface water, groundwater, soil, and air—from remote rural areas to densely-populated urban centers. A growing body of scientific evidence shows that exposure at certain levels to specific PFAS can adversely impact human health and other living things. Despite these concerns, PFAS are still used in a wide range of consumer products and industrial applications. Every level of government—federal, Tribal, state, and local—needs to exercise increased and sustained leadership to accelerate progress to clean up PFAS contamination, prevent new contamination, and make game-changing breakthroughs in the scientific understanding of PFAS.

14.1 2021 EPA PFAS Strategic Roadmap

On October 18, 2021, the EPA developed the **Agency’s PFAS Strategic Roadmap** — laying out a whole-of-agency approach to addressing PFAS. The roadmap sets timelines by which EPA plans to take specific actions and commits to policies designed to safeguard public health, protect the environment, and hold polluters accountable. The PFAS Strategic Roadmap may be found at the following link: <https://www.epa.gov/pfas/pfas-strategic-roadmap-epas-commitments-action-2021-2024>

The EPA’s integrated approach to PFAS is focused on three central directives:

1. **Research.** Invest in research, development, and innovation to increase understanding of PFAS exposures and toxicities, human health and ecological effects, and effective interventions that incorporate the best available science.
2. **Restrict.** Pursue a comprehensive approach to proactively prevent PFAS from entering air, land, and water at levels that can adversely impact human health and the environment.
3. **Remediate.** Broaden and accelerate the cleanup of PFAS contamination to protect human health and ecological systems.

The EPA’s approach is shaped by the unique challenges to addressing PFAS contamination. The EPA cannot solve the problem of “forever chemicals” by tackling one route of exposure or one use at a time. Rather, the EPA understood that it needed to take a

lifecycle approach to PFAS to make meaningful progress. PFAS pollution is not a legacy issue—these chemicals remain in use in U.S. commerce.

The risks posed by PFAS demand that the Agency attack the problem on multiple fronts at the same time. In the 2021 PFAS Roadmap, the EPA is leveraging the full range of statutory authorities to confront the human health and ecological risks of PFAS:

- Water – Clean Act (CWA)
- Solid Waste – Resource Conservation and Recovery Act (RCRA)
- Land – Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- Air – Clean Air Act (CAA)
- Chemical Safety and Pollution Prevention – Toxic Substances Control Act (TSCA)

For purposes of this audit, the EPA is addressing the initiatives used in the Office of Water under the Safe Drinking Water Act, the Clean Water Act, the NPDES Permitting program and associated programs under the NPDES regulatory umbrella. The specific PFAS Roadmap commitments and updates may be found at the following link: <https://www.epa.gov/pfas/pfas-strategic-roadmap-epas-commitments-action-2021-2024#ow>

14.1.1 Office of Water

14.1.1.1 Undertake nationwide monitoring for PFAS in drinking water

The Safe Drinking Water Act (SDWA) establishes a data-driven and risk-based process to assess drinking water contaminants of emerging concern. Under SDWA, EPA requires water systems to conduct sampling for unregulated contaminants every five years. The fifth Unregulated Contaminant Monitoring Rule (UCMR 5) was published on December 27, 2021. UCMR 5 requires sample collection for 30 chemical contaminants between 2023 and 2025 from drinking water systems using analytical methods developed by EPA and consensus organizations. This action provides EPA and other interested parties with scientifically valid data on the national occurrence of these contaminants in drinking water. Going forward, EPA will continue to prioritize additional PFAS for inclusion in UCMR 6 and beyond, as techniques to measure these additional substances in drinking water are developed and validated.

14.1.1.2 Establish a national primary drinking water regulation for PFOA and PFOS

Under the SDWA, EPA has the authority to set enforceable National Primary Drinking Water Regulations (NPDWRs) for drinking water contaminants and require monitoring of public water supplies. To date, EPA has regulated more than 90 drinking water contaminants but has not established national drinking water regulations for any PFAS. In March 2021, EPA published the Fourth Regulatory Determinations, including a final determination to regulate Perfluorooctanoic acid (PFOA) and Perfluorooctane sulfonic acid (PFOS) in drinking water.

On March 14, 2023, EPA announced the proposed National Primary Drinking Water Regulation (NPDWR) for six PFAS including perfluorooctanoic acid (PFOA),

perfluorooctane sulfonic acid (PFOS), perfluorononanoic acid (PFNA), hexafluoropropylene oxide dimer acid (HFPO-DA, commonly known as GenX Chemicals), perfluorohexane sulfonic acid (PFHxS), and perfluorobutane sulfonic acid (PFBS). The proposed PFAS NPDWR does not require any actions until it is finalized. EPA anticipates finalizing the regulation by the end of 2023. EPA expects that if fully implemented, the rule will prevent thousands of deaths and reduce tens of thousands of serious PFAS-attributable illnesses.

14.1.1.3 Publish the final toxicity assessment for GenX and five additional PFAS

On June 15, 2022, EPA issued final health advisories (HAs) for these two per- and polyfluoroalkyl substances (PFAS): 1) hexafluoropropylene oxide (HFPO) dimer acid and its ammonium salt (referred to as “GenX chemicals”); and 2) perfluorobutane sulfonic acid and its potassium salt (PFBS). In chemical and product manufacturing, GenX chemicals are considered a replacement for perfluorooctanoic acid (PFOA), and PFBS is considered a replacement for perfluorooctane sulfonic acid (PFOS). GenX chemicals have been found in surface water, groundwater, drinking water, rainwater, and air emissions. GenX chemicals are known to impact human health and ecosystems. Scientists have observed liver and kidney toxicity, immune effects, hematological effects, reproductive and developmental effects, and cancer in animals exposed to GenX chemicals.

The Office of Research and Development is also currently developing toxicity assessments for five other PFAS—PFBA, PFHxA, PFHxS, PFNA, and PFDA.

14.1.1.4 Publish health advisories for GenX and PFBS Expected Spring 2022

PFAS contamination has impacted drinking water quality across the country, including in underserved rural areas and communities of color. SDWA authorizes EPA to develop non-enforceable and non-regulatory drinking water health advisories to help Tribes, states, and local governments inform the public and determine whether local actions are needed to address public health impacts in these communities. Health advisories offer a margin of protection by defining a level of drinking water concentration at or below which lifetime exposure is not anticipated to lead to adverse health effects. They include information on health effects, analytical methodologies, and treatment technologies and are designed to protect all lifestages.

On June 15, 2022, EPA issued interim updated drinking water health advisories for PFOA and PFOS that replace those EPA issued in 2016. In addition, EPA published health advisories for GenX and PFBS chemicals. These updated health advisories levels, which are based on new science, will remain in place until EPA establishes a National Primary Drinking Water Regulation. (As identified above the proposed National Primary Drinking Water Regulations were proposed on March 14, 2023.

14.1.1.5 Restrict PFAS discharges from industrial sources through a multi-faceted Effluent Limitations Guidelines program

Effluent Limitations Guidelines (ELGs) are a powerful tool to limit pollutants from entering the nation’s waters. ELGs establish national technology-based regulatory limits on the level of specified pollutants in wastewater discharged into surface waters and into municipal sewage treatment facilities. EPA has been conducting a PFAS multi-industry

study to inform the extent and nature of PFAS discharges. Based on this study, EPA is taking a proactive approach to restrict PFAS discharges from multiple industrial categories. EPA plans to make significant progress in its ELG regulatory work by the end of 2024. EPA has established timelines for action—whether it is data collection or rulemaking—on the nine industrial categories in the proposed PFAS Action Act of 2021, as well as other industrial categories such as landfills. EPA’s multi-faceted approach entails:

- Undertake rulemaking to restrict PFAS discharges from industrial categories where EPA has the data to do so, including the guidelines for organic chemicals, plastics and synthetic fibers (OCPSF), metal finishing, and electroplating. Proposed rule is expected in Summer 2023 for OCPSF and Summer 2024 for metal finishing and electroplating.
- Launch detailed studies on facilities where EPA has preliminary data on PFAS discharges, but the data are currently insufficient to support a potential rulemaking. These include electrical and electronic components, textile mills, and landfills. EPA expects these studies to be complete by Fall 2022 to inform decision making about a future rulemaking by the end of 2022.
- Initiate data reviews for industrial categories for which there is little known information on PFAS discharges, including leather tanning and finishing, plastics molding and forming, and paint formulating. EPA expects to complete these data reviews by Winter 2023 to inform whether there are sufficient data to initiate a potential rulemaking.
- Monitor industrial categories where the phaseout of PFAS is projected by 2024, including pulp, paper, paperboard, and airports. The results of this monitoring, and whether future regulatory action is needed, will be addressed in the Final ELG Plan 15 in Fall 2022.

14.1.1.6 Leverage NPDES permitting to reduce PFAS discharges to waterways

The National Pollutant Discharge Elimination System (NPDES) program interfaces with many pathways by which PFAS travel and are released into the environment and ultimately impact people and water quality.

On December 5, 2022, the EPA issued the **Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs Memo** to the U.S. States to proactively use existing NPDES authorities to reduce discharges of PFAS at the source and obtain more comprehensive information through monitoring on the sources of PFAS and quantity of PFAS discharged by these sources. This memorandum provides EPA’s guidance to states and updates the April 28, 2022 guidance to EPA Regions for addressing PFAS discharges when they are authorized to administer the NPDES permitting program or Pretreatment program. The memo provides the following recommendations for POTW NPDES permits and Pretreatment programs:

- POTW NPDES Permits:
 - Quarterly Effluent, Influent and biosolids monitoring using EPA Method 1633
 - Recommended biosolids assessment, based on biosolids monitoring and a PFAS source reduction for IUs in the POTW’s service area, if necessary

- Public notice of downstream drinking systems that are potentially affected by the POTW effluent when the POTW's NPDES permit is renewed or issued.
- Pretreatment Programs:
 - Source Identification: Update IU inventory to include PFAS sources
 - Source Control: Utilize BMPS and pollution prevention to address PFAS discharges to the POTW
 - Update IU permits to required quarterly PFAS monitoring
 - Develop IU BMPS or local limits for PFAS, where authority exists through the NPDES permit limits or PFAS ELG promulgation.

14.1.1.7 Publish multi-laboratory validated analytical method for 40 PFAS

In September 2021, EPA (in collaboration with the Department of Defense) published a single-laboratory validated method to detect PFAS. The method can measure up to 40 specific PFAS compounds in eight environmental matrices (including wastewater, surface water and biosolids) and has numerous applications, including NPDES compliance monitoring. EPA and DOD are continuing this collaboration to complete a multi-laboratory validation of the method. In response to stakeholder requests to update the method with multi-laboratory validation data as soon as practical, the EPA is releasing multiple revisions of the draft method. These revisions (past, present, and future) are outlined below. It should be noted that none of these revisions significantly changed (or are anticipated to change) the procedure.

- August 2021: EPA posted the initial draft of Method 1633 at this website using the data from the single laboratory validation.
- June 2022: Second draft of Method 1633 included clarification on several issues that the laboratories participating in the multi-laboratory validation thought were vague or confusing.
- December 2022: Third draft of Method 1633 included some multi-laboratory validation data for the wastewater matrix, which added required QC criteria for the wastewater matrix. This revision had some additional clarifications and flexibilities that were responsive to formal comments received from multiple parties.
- July 2023: Fourth draft of Method 1633 incorporates the QC acceptance criteria for all aqueous matrices (surface water, ground water, and wastewater), derived from the multi-lab validation study. A multi-laboratory validation study report (published by DoD) is available below that summarizes the results of the multi-laboratory study for these aqueous matrices.
- Anticipated 2023: the Final version of Method 1633 will include the QC acceptance for all eight environmental matrices (wastewater, surface water, groundwater, soil, biosolids, sediment, landfill leachate, and fish tissue), derived from the multi-lab validation study. A second multi-laboratory validation study report will be made available that summarizes the results for the solid matrices and the landfill leachate matrix.

In addition, on April 8, 2022, the EPA published a new *Adsorbable Organic Fluorine (AOF)* method 1621 that can broadly screen for the presence of PFAS in water at the part

per billion level. The new AOF Method 1621 provides an aggregate measurement of chemical substances that contain carbon-fluorine bonds. PFAS are a common source of organofluorines in wastewater. This new method is especially useful for understanding the presence and forms of PFAS in wastewater when used in conjunction with methods that target individual PFAS. EPA's Draft Method 1621 has successfully completed single laboratory validation.

14.1.1.8 Publish updates to PFAS analytical methods to monitor drinking water

Expected Fall 2024 SDWA requires EPA to use scientifically robust and validated analytical methods to assess the occurrence of contaminants of emerging concern, such as an unidentified or newly detected PFAS chemical. EPA will update and validate analytical methods to monitor additional PFAS. First, EPA will review reports of PFAS of concern and seek to procure certified reference standards that are essential for accurate and selective quantitation of emerging PFAS of concern in drinking water samples. EPA will evaluate analytical methods previously published for monitoring PFAS in drinking water (EPA Methods 533 and 537.1) to determine the efficacy of expanding the established target PFAS analyte list to include any emerging PFAS. Upon conclusion of this evaluation, EPA will complete multi-laboratory validation studies and peer review and publish updated EPA PFAS analytical methods for drinking water, making them available to support future drinking water monitoring programs.

14.1.1.9 Publish final recommended ambient water quality criteria for PFAS

Tribes and states use EPA recommended water quality criteria to develop water quality standards to protect and restore waters, issue permits to control PFAS discharges, and assess the cumulative impact of PFAS pollution on local communities. On April 28, 2022, the EPA published proposed national recommended ambient water quality criteria for PFAS to protect aquatic life.

EPA is proposing the first Clean Water Act aquatic life criteria for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS)—two of the most well-studied chemicals in this group. The criteria are intended to protect aquatic life in the United States from short-term and long-term toxic effects of PFOA and PFOS. Following the comment period, EPA intends to issue final PFOA and PFOS recommended criteria, considering public comments and any new toxicity data. States and Tribes may consider adopting the final criteria into their water quality standards or can adopt other scientifically defensible criteria that are based on local or site-specific conditions.

14.1.1.10 Monitor fish tissue for PFAS from the nation's lakes and evaluate human biomarkers for PFAS

States and Tribes have highlighted fish tissue data in lakes as a critical information need. Food and water consumption are important pathways of PFAS exposure, and PFAS can accumulate in fish tissue. In fact, EPA monitoring to date shows the presence of PFAS, at varying levels, in approximately 100 percent of fish tested in the Great Lakes and large rivers. In Summer 2022, EPA will collect fish tissue in the National Lakes Assessment for the first national study of PFAS in fish tissue in U.S. lakes. This will provide a better understanding of where PFAS fish tissue contamination is occurring, which PFAS are involved, and the severity of the problem. The new data will complement EPA's analyses

of PFAS in fish tissue and allow EPA to better understand unique impacts on subsistence fishers, who may eat fish from contaminated waterbodies in higher quantities. EPA's preliminary analysis on whether concentrations of certain PFAS compounds in human blood could be associated with eating fish using the Centers for Disease Control and Prevention's National Health and Nutrition Examination Survey (NHANES) data found a positive correlation. Completing this analysis will help make clear the importance of the fish consumption pathway for protecting communities. EPA will continue to pursue collaboration with Tribal and federal partners to investigate this issue of mutual interest.

14.1.1.11 Finalize list of PFAS for use in fish advisory programs

EPA will publish a list of PFAS for state and Tribal fish advisory programs that are either known or thought to be in samples of edible freshwater fish in high occurrence nationwide. This list will serve as guidance to state and Tribal fish tissue monitoring and advisory programs so that they know which PFAS to monitor and how to set fish advisories for PFAS that have human health impacts via fish consumption. This information will encourage more robust data collection from fish advisory programs and promote consistency of fish tissue PFAS monitoring results in EPA's publicly accessible Water Quality Portal. By issuing advisories for PFAS, state and Tribal programs can provide high-risk populations, including communities and individuals who depend on subsistence fishing, with more information about how to protect their health.

14.1.1.12 Finalize risk assessment for PFOA and PFOS in biosolids

Biosolids, or sewage sludge, from wastewater treatment facilities can sometimes contain PFAS. When spread on agricultural fields, the PFAS can contaminate crops and livestock. The CWA authorizes EPA to set pollutant limits and monitoring and reporting requirements for contaminants in biosolids if sufficient scientific evidence shows that there is potential harm to human health or the environment. A risk assessment is key to determining the potential harm associated with human exposure to chemicals. EPA will complete the risk assessment for PFOA and PFOS in biosolids by Winter 2024. The risk assessment will serve as the basis for determining whether regulation of PFOA and PFOS in biosolids is appropriate. If EPA determines that a regulation is appropriate, biosolids standards would improve the protection of public health and wildlife health from health effects resulting from exposure to biosolids containing PFOA and PFOS.

14.2 Impact of the NPDES Initiatives on the City's Pretreatment Program

The analytical tools, rules, procedures, and methods developed by the EPA in the PFAS Strategic Roadmap and identified in §§14.1.1.1 through 14.1.1.12 are currently recommendations to identify and control non-domestic or IU sources in a POTW's service area. The requirement to control IUs will occur either when the EPA promulgates categorical Pretreatment Standards for specific IU sectors such as OCPSF, Metal Finishers or other future rulemakings, as identified in §14.1.1.5 or when the NPDES State adopts the EPA National Water Quality Criteria for PFAS and PFOS, identified in §14.1.1.9 as State water quality standards and begin implementing these as NPDES permit limits. However, EPA recommends the City evaluate these recommendations and determine proactive measures to identify PFAS non-domestic sources in its service area and determine appropriate level of control or compliance assistance.