
APPENDICES

APPENDIX A
CAR WASH INDUSTRIAL WASTE
DISCHARGE PERMIT (DRAFT)

**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

James Michael Freeze

[REDACTED]
Yreka, CA 96097

RE: Issuance of Industrial User Permit to James Michael Freeze for proposed Car Wash Facility by the City of Mt. Shasta.
Permit No. IWD-2019-01.

Dear Mr. Freeze:

Your application for an industrial user pretreatment permit has been reviewed and processed in accordance with Mt. Shasta Municipal Code (MSMC) 13.56.270.

The enclosed draft permit number IWD-2019-01 covers the wastewater discharged from the proposed Car Wash Facility at APN's 057-801-040, 160 into the City of Mt. Shasta sewer system. All discharges from this facility and actions and reports relating to them must be in accordance with the terms and conditions of this permit. Prior to discharge to the City sewer system, the permittee shall comply with the Compliance Schedule outlined in Table 4.

By:



Bruce Pope, City of Mt. Shasta City Manager

Issued this ## day of Month, 20##

Permit No. IWD-2019-01
INDUSTRIAL USER PERMIT

In accordance with the provisions of MSMC 13.56.270

Facility Address:
Proposed Car Wash Facility
APN's 057-801-040, 160
Mt. Shasta, CA 96067

Mailing Address:
James Michael Freeze
[REDACTED]
Yreka, CA 96097

is hereby authorized to discharge industrial wastewater from the above-identified facility and through the outfall identified herein into the City of Mt. Shasta sewer system in accordance with the conditions set forth in this permit. Compliance with this permit does not relieve the permittee of its obligation to comply with any or all applicable pretreatment regulations, standards, or requirements under local, state, and federal laws, including any such regulations, standards, requirements, or laws that might become effective during the term of this permit.

Noncompliance with any term or condition of this permit will constitute a violation of the City of Mt. Shasta sewer use ordinance.

This permit will become effective **Month ##, 20##** and will expire at midnight January 31, 2023.

If the permittee wishes to continue to discharge after the expiration date of this permit, an application must be filed for a renewal permit in accordance with the requirements of MSMC 13.56.090, a minimum of 90 days before the expiration date.

By:



Bruce Pope, City of Mt. Shasta City Manager

Issued this **##** day of **Month, 20##**

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INDUSTRIAL WASTE DISCHARGE PERMIT

PART 1 – EFFLUENT LIMITATIONS

- A. During the period of **Month ##, 20##** to January 31, 2023, the permittee is authorized to discharge effluent from its pre-treatment facility to the City of Mt. Shasta sewer system from the outfalls listed below. Refer to Figure 1 provided in PART 7 – FACT SHEET.

Table 1 – Outfall Summary

Outfall	Description
001	Outfall 001 is located in a proposed two-way cleanout east of the proposed wastewater pre-treatment facility and sampling point before discharge to the existing sanitary sewer, located along Ski Village Drive and Road No. 2M16.

Note: Sampling locations for the outfall are described in Table 5 – Sample Point Summary.

- B. Discharge from Outfall 001 must not exceed effluent limitations. Refer to Table 2. Effluent from Outfall 001 consists of wastewater from the three-compartment wastewater pre-treatment tank facility, which receives wastewater from three self-service and one automatic car wash bays. Wastewater will include cleaning compounds and detergents used for cleaning vehicles. The treatment system is a three-compartment buried concrete tank that will remove settleable solids as well as oils and greases. Approximately half of the wastewater will be treated and reused, using strainers, centrifuge separation, bag filtration, and ozone oxidation. Outfall 001 is treated by the three-compartment wastewater pretreatment facility. The facility is considered a non-categorical wastewater and must comply with local limits (MSMC 13.56.030 & 13.56.320).
- C. The permittee has provided plans for a future self-storage facility adjacent to the planned car wash facility. The future self-storage facility includes an office and restroom. This facility is not considered an industrial user and will be required to install a separate sewer lateral.

Table 2 – Local Effluent Limitations

Parameter	Units	Daily Maximum ¹		Monthly Average		Limitation Basis
		Concentration	Lbs/Day	Concentration	Lbs/Day	
BOD	[mg/L]	500	100	200	40	WWTP Design Criteria
TSS	[mg/L]	350	70	290	58	WWTP Design Criteria
Arsenic (T)	[µg/L]	17.6	n/a	n/a	n/a	Technology Based
Cadmium (T)	[µg/L]	45.9	n/a	n/a	n/a	Technology Based
Chromium (T)	[µg/L]	100	n/a	n/a	n/a	WWTP Design Criteria
Copper (T)	[µg/L]	293.8	n/a	n/a	n/a	NPDES Limit
Cyanide (T)	[µg/L]	37.7	n/a	n/a	n/a	WWTP Design Criteria
Lead (T)	[µg/L]	100	n/a	n/a	n/a	Technology Based
Mercury (T)	[µg/L]	7.8	n/a	n/a	n/a	CTR Chronic Limit
Nickel (T)	[µg/L]	172.1	n/a	n/a	n/a	Technology Based
Zinc (T)	[µg/L]	40.9	n/a	n/a	n/a	WWTP Design Criteria
pH (Min. – Max.)	[S.U.]	6.5 – 8.5	n/a	n/a	n/a	NPDES Limit
TKN as N	[mg/L as N]	40	8.01	n/a	n/a	WWTP Design Criteria
UVT (Min.)	[%]	55%	n/a	n/a	n/a	WWTP Design Criteria
Flow (Total industrial flow)	[GPD]	1,200	n/a	n/a	n/a	Request by Discharger

Note:

¹ Refer to PART 7 – FACT SHEET, EXAMPLE CALCULATIONS for effluent limitation calculations.

- D. In accordance with the USEPA's recommendations and the City of Mt. Shasta's Municipal Code, the permittee must not discharge wastewater containing any of the following substances from any of the outfalls:
- a. Fats, oil, or greases of animal or vegetable origin in concentrations that will tend to cause adverse effects on the City of Mt. Shasta Wastewater Treatment Plant;
 - b. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin, in amounts that will cause interference or pass through;
 - c. Pollutants that create a fire or explosive hazard in the Publicly Owned Treatment Works (POTW), including but not limited to waste streams with a closed-cup flashpoint of less than 140 degrees Fahrenheit (60 degrees Celsius) using the methods specified at 40 CFR 261.21
 - d. Wastewater that has a temperature greater than 120 degrees Fahrenheit (49 degrees Celsius) or will inhibit biological activity in the treatment plant resulting in interference, but in no case wastewater that causes the temperature at the introduction into the treatment plant to exceed 104 degrees Fahrenheit (40 degrees Celsius);
 - e. Solids or viscous substances in amounts that will cause obstruction of flow in the POTW, resulting in interference [but in no case solids greater than 3/8 inch(es) in any dimension];
 - f. Pollutants, including oxygen-demanding pollutants (e.g., BOD), released in a discharge at a flow rate and/or concentration that, singly or by interaction with other pollutants, will cause interference with the POTW. For the purpose of this section, the term *interference* has the same definition as that in the City of Mt. Shasta ordinance MSMC 13.56.030(C)(5);
 - g. Wastewater having a pH of less than 6.5 or more than 8.5, or otherwise causing corrosive structural damage to the POTW or equipment;
 - h. Pollutants that result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that might cause acute worker health and safety problems;
 - i. Noxious or malodorous liquids, gases, solids, or other wastewater that, either singly or by interaction with other wastes, are sufficient to create a public nuisance or hazard to life, or to prevent entry into the sewers for maintenance or repair;
 - j. Sludges, screenings, or other residues from the pretreatment of industrial wastes;
 - k. Any substance that could affect the treatment plant's effluent and cause violation of the National Pollutant Discharge Elimination System permit requirements;
 - l. Any substance that would cause the treatment plant to be in noncompliance with sludge use, recycle or disposal criteria pursuant to guidelines or regulations developed under section 405 of the Clean Water Act, the Solid Waste Disposal Act, the Clean Air Act, the Toxic Substances Control Act, or other regulations or criteria for sludge management and disposal as required by the state;
 - m. Wastewater that imparts color that cannot be removed by the treatment process, such as dye wastes and vegetable tanning solutions that consequently imparts color to the treatment plant's effluent, thereby violating the City of Mt. Shasta Wastewater Treatment Plant National Pollutant Discharge Elimination System permit;
 - n. Medical wastes, except as specifically authorized by the Public Works Director in a permit;
 - o. Stormwater, surface water, groundwater, artesian well water, roof runoff, subsurface drainage, swimming pool drainage, condensate, deionized water, noncontact cooling water, and unpolluted wastewater, unless specifically authorized by the Public Works Director.
 - p. Wastewater causing, alone or in conjunction with other sources, the treatment plant's

effluent to fail toxicity test;

- q. Detergents, surface-active agents, or other substances that might cause excessive foaming in the POTW;
 - r. Wastewater containing any radioactive wastes or isotopes except in compliance with applicable state or federal regulations; or
- E. All discharges must comply with all other applicable laws, regulations, standards, and requirements contained in MSMC 13.56.320(B) & (C) and any applicable state and federal pretreatment laws, regulations, standards, and requirements, including any such laws, regulations, standards, or requirements that might become effective during the term of this permit.

PART 2 – MONITORING REQUIREMENTS

- A. All samples must be collected, preserved, and analyzed in accordance with the procedures established in 40 CFR Part 136 and amendments.
- B. From the period beginning on the effective date of the permit until January 31, 2023, the permittee must monitor Outfall 001 when discharging to the City sewer for the following parameters, at the indicated frequency:

Table 3 – Sample Point 001 Monitoring Requirements

Sample Parameter (units)	Measurement Location	Frequency	Sample Type
Flow (gpd) ¹	Industrial sewer discharge magnetic flow meter	Continuous	Meter
Copper (µg/L)	Sample Point 001	1/month	Grab
Zinc (µg/L)	Sample Point 001	1/month	Grab

Notes:

¹ Daily flows are to be recorded from the permittee's flow meter.

* At the City's discretion, monitoring frequency may be extended to quarterly or annually, if measured concentrations are consistently below effluent limits.

PART 3 – REPORTING REQUIREMENTS

A. Monitoring Reports

1. Monitoring results obtained must be summarized and reported on an Industrial User Monitoring Report Form.
2. Reports for parameters with a continuous monitoring frequency must be submitted monthly. The reports are due within 25 days after the end of each calendar month.
3. Reports for parameters with monthly monitoring frequency must be submitted within 25 days after each reporting period. The reporting periods are January - June and July - December.
4. All monitoring reports must indicate the nature and concentration of all pollutants in the effluent for which sampling and analysis were performed during the reporting period preceding the submission of each report, including measured maximum and average daily flows.

B. Certification Statements

The permittee is required to sign and submit the following certification statements with each monthly monitoring report. The permittee is required to sign and submit the following certification statement with all monitoring reports:

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

- C. If the permittee monitors any pollutant more frequently than required by this permit, using test procedures prescribed in 40 CFR Part 136 or amendments thereto, or otherwise approved by the U.S. Environmental Protection Agency (EPA) or as specified in this permit, the results of such monitoring must be included in any calculations of actual daily maximum or monthly average pollutant discharge, and results must be reported in the monthly report submitted to the City of Mt. Shasta. Such an increased monitoring frequency must also be indicated in the monthly report.

D. Automatic Resampling

If the results of the permittee’s wastewater analysis indicate that a violation of this permit has occurred, the permittee must do the following:

1. Inform the City of Mt. Shasta of the violation within 24 hours, and
2. Repeat the sampling and pollutant analysis and submit, in writing, the results of this second analysis within 30 days of becoming aware of the first violation.

E. Accidental Discharge Report

1. The permittee must notify the City of Mt. Shasta immediately upon the occurrence of spills, including accidental discharges, discharges of a non-routine, episodic nature, a noncustomary batch discharge, slug loads or slug discharges that might cause potential problems for the POTW or spills that might enter the public sewer. During normal business hours, the City of Mt. Shasta should be notified by telephone at (530) 926-7510. At all

other times, the City of Mt. Shasta should be notified by telephone at (530) 926-7540. The notification must include location of discharge; date and time of discharge; type of waste, including concentration and volume; and corrective actions taken. The permittee's notification of accidental releases in accordance with this section does not relieve it of other reporting requirements that arise under local, state, or federal laws.

2. Within 5 days following an accidental discharge, the permittee shall submit to the City of Mt. Shasta a detailed written report. The report must specify the following:
 - a. Description and cause of the upset, slug load, or accidental discharge; the cause thereof; and the impact on the permittee's compliance status. The description should also include location of discharge and type, concentration, and volume of waste.
 - b. Duration of noncompliance, including exact dates and times of noncompliance and, if the noncompliance is continuing, the time by which compliance is reasonably expected to occur.
 - c. All steps taken or to be taken to reduce, eliminate, and/or prevent recurrence of such an upset, slug load, accidental discharge, or other conditions of noncompliance.

F. Notification of the Discharge of Hazardous Waste

This permit does not authorize permittee to discharge hazardous waste to the POTW. In the event of unauthorized discharge of hazardous waste to the POTW, accidental or otherwise, the permittee is subject to the following additional requirements:

- a. Any permittee who begins discharging hazardous waste must notify, in writing, the POTW, the EPA Regional Waste Management Division Director, and state hazardous waste authorities of any discharge into the POTW of a substance that, if otherwise disposed of, would be a hazardous waste under 40 CFR Part 261. Such notification must include the name of the hazardous waste as set forth in 40 CFR Part 261, the EPA hazardous waste number, and the type of discharge (continuous, batch, or other). If the permittee discharges more than 100 kilograms of such waste per calendar month to the POTW, the notification also must contain the following information to the extent such information is known and readily available to the permittee: an identification of the hazardous constituents contained in the wastes, an estimation of the mass and concentration of such constituents in the waste stream discharged during that calendar month, and an estimation of the mass of constituents in the waste stream expected to be discharged during the following 12 months. All notifications must take place no later than 180 days after the discharge begins. Any notification under this paragraph must be submitted only once for each hazardous waste discharged. However, notifications of changed conditions must be submitted. The notification requirement in this section does not apply to pollutants already reported by permittee subject to non-categorical pretreatment standards.
- b. Dischargers are exempt from the requirements of paragraph a above, during a calendar month in which they discharge no more than 15 kilograms of hazardous wastes, unless the wastes are acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e). Discharge of more than 15 kilograms of nonacute hazardous wastes in a calendar month, or of any quantity of acute hazardous wastes as specified in 40 CFR 261.30(d) and 261.33(e), requires a one-time notification. Subsequent months during which the permittee discharges more than such quantities of any hazardous waste do not require additional notification.

- c. If any new regulations are made under Section 3001 of Resource Conservation and Recovery Act identifying additional characteristics of hazardous waste or listing any additional substance as a hazardous waste, the permittee must notify the City of Mt. Shasta, the EPA Regional Waste Management Waste Division Director, and state hazardous waste authorities of the discharge of such substance within 90 days of the effective date of such regulations.
 - d. If any notification is made under this section, the permittee must certify that it has a program in place to reduce the volume and toxicity of hazardous wastes generated to the degree it has determined to be economically practical.
 - e. This provision does not create a right to discharge any substance not otherwise permitted to be discharged by this ordinance, a permit issued under the ordinance, or any applicable federal or state law.
- G. All reports required by this permit must be submitted to the City of Mt. Shasta at the following address:

City of Mt. Shasta
Attention: Rod Bryan, Public Works Director
305 N. Mt. Shasta Boulevard
Mt. Shasta, CA 96067

Email: rbryan@mtshastaca.gov

PART 4 – SLUG DISCHARGE CONTROL REQUIREMENTS

Not applicable.

PART 5 – SPECIAL CONDITIONS**A. ADDITIONAL/SPECIAL MONITORING REQUIREMENTS**

None.

B. COMPLIANCE SCHEDULE

1. The permittee must accomplish the following tasks in the designated time period:

Table 4 – Compliance Schedule

Event	Deadline
1. Install three-compartment grease and grit trap wastewater pre-treatment tank	Prior to discharge to the City sewer
2. Install industrial lateral flow meter	Prior to discharge to the City sewer
3. Request and undergo an inspection by the City to verify all required improvements are in place and demonstrate to the City's satisfaction that improvements are in good working order.	Prior to discharge to the City sewer

2. Compliance Schedule Reporting

Prior to the deadline shown in Table 4, the permittee must submit to the City of Mt. Shasta a report including, at a minimum, whether it complied with the increment of progress to be met on such date and, if not, the date on which it expects to comply with the increment of progress, the reasons for delay, and the steps being taken to return the project to the schedule established.

PART 6 – STANDARD CONDITIONS**A. GENERAL CONDITIONS AND DEFINITIONS****1. Severability**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, will not be affected thereby and will continue in full force and effect.

2. Duty to Comply

The permittee must comply with all conditions of this permit. Failure to comply with the requirements of this permit may be grounds for administrative action, or enforcement proceedings including civil or criminal penalties, injunctive relief, and summary abatements.

3. Duty to Mitigate

The permittee must take all reasonable steps to maintain or correct any adverse impact to the public treatment plant or the environment resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

4. Permit Modification

The City of Mt. Shasta may modify the permit for good cause, including but not limited to, the following reasons:

- a. To incorporate requirements set forth in a new NPDES permit issued for the POTW by the Regional Water Quality Control Board;
- b. To incorporate any new or revised federal, state, or local pretreatment standards or requirements;
- c. To address significant alterations or additions to the permittee's operation, processes, or wastewater volume or character since the time of the individual wastewater discharge permit issuance;
- d. A change in any process or discharge condition in either the Industrial User or the POTW that requires either a temporary or permanent reduction or elimination of the authorized discharge;
- e. Information indicating that the permitted discharge poses a threat to the Control Authority's collection and treatment systems, POTW personnel or the receiving waters;
- f. Violation of any terms or conditions of the permit;
- g. Misrepresentation or failure to disclose fully all relevant facts in the permit application or in any required reporting;
- h. Revision of or a grant of variance from such categorical standards pursuant to 40 CFR 403.13;
- i. To correct typographical or other errors in the permit;
- j. To reflect transfer of the facility ownership and/or operation to a new owner or operator; or
- k. Upon request of the permittee, provided such request does not create a violation of any applicable requirements, standards, laws, or rules and regulations.

The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

5. Permit Termination

In general, this permit's expiration coincides with the City's NPDES permit, which regulates treated wastewater discharge. In addition, this permit may be terminated prior to its expiration for the following reasons:

- a. Failure to notify the City of Mt. Shasta of significant changes to the wastewater before the changed discharge;
- b. Failure to provide prior notification to the City of Mt. Shasta of changed conditions;
- c. Misrepresentation or failure to fully disclose all relevant facts in the wastewater discharge permit application;
- d. Falsifying self-monitoring reports or certification statements;
- e. Tampering with monitoring equipment;
- f. Refusing to allow timely access to the facility premises and records;
- g. Failure to meet effluent limitations;
- h. Failure to pay fines;
- i. Failure to pay sewer charges;
- j. Failure to meet compliance schedules;
- k. Failure to submit monitoring reports or the wastewater discharge permit application;
- l. Failure to provide advance notice of the transfer of business ownership of a permitted facility; or
- m. Violation of any Pretreatment Standard or Requirement including required best management practices, or any terms of the wastewater discharge permit or the sewer use ordinance.

6. Property Rights

The issuance of this permit does not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any violation of federal, state, or local laws or regulations.

7. Limitation on Permit Transfer

Permits may be reassigned or transferred to a new owner or operator with prior approval of the Public Works Director and the following items occur:

- a. The permittee must give at least 120 days advance notice to Public Works Director.
- b. The notice to Public Works Director must include a written certification by the new owner or operator that does the following:
 - (i) States that the new owner or operator has no immediate intent to change the facility's operations and processes;
 - (ii) Identifies the specific date on which the transfer is to occur; and
 - (iii) Acknowledges full responsibility for complying with the existing permit.
- c. Public Works Director approves the permit transfer.

8. Duty to Reapply

The permittee must apply for permit reissuance by submitting a complete permit application, in accordance with MSMC 13.56.270 a minimum of 90 days before the expiration of the existing permit.

9. Continuation of Expired Permits

An expired permit will continue to be effective and enforceable until the permit is reissued if:

- a) The permittee has submitted a complete permit application at least 90 days prior to the expiration date of the user's existing permit.
- b) The failure to reissue the permit, prior to expiration of the previous permit, is not due to any act or failure to act on the part of the permittee.

10. Dilution

A permittee must not ever increase the use of potable or 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 Public Works Director may impose mass limitations on permittees who are using dilution to meet applicable Pretreatment Standards or Requirements, or in other cases when the imposition of mass limitations is appropriate.

11. Definitions

- a) *Composite Sample* – A sample that is collected over time, formed either by continuous sampling or by mixing discrete samples. The sample may be composited either as a time composite sample composed of discrete sample aliquots collected in one container at constant time intervals providing representative samples irrespective of stream flow; or as a flow proportional composite sample collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increases while maintaining a constant time interval between the aliquots.
- b) *Day* – 24-hour calendar day
- c) *Daily Maximum* – The arithmetic average of all effluent samples for a pollutant collected during a calendar day.
- d) *Daily Maximum Limit* – The maximum allowable discharge limit of a pollutant during a calendar day. Where daily maximum limits are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where daily maximum limits are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day.
- e) *Grab Sample* – An individual sample collected in less than 15 minutes, without regard for flow or time.
- f) *Instantaneous Maximum Concentration* – The maximum limit allowable concentration of a pollutant determined from the analysis of any discrete or composited sample collected independent of the industrial flow rate and the duration of the sampling event.
- g) *Cooling Water*
 - i. Uncontaminated – Water used for cooling purposes only that has no direct contact with any raw material, intermediate, or final product and that does not contain a level of contaminants detectably higher than that of the intake water.

- ii. Contaminated – Water used for cooling purposes only that might become contaminated either through the use of water treatment chemicals used for corrosion inhibitors or biocides, or by direct contact with process materials or wastewater.
- h) *Monthly Average* – The arithmetic mean of the values for effluent samples collected during a calendar month or specified 30-day period (as opposed to a rolling 30-day window).
- i) *Weekly Average* – The arithmetic mean of the values for effluent samples collected over a period of 7 consecutive days.
- j) *Bi-Weekly* – Once every other week.
- k) *Bi-Monthly* – Once every other month.
- l) *Upset* – An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee, excluding such factors as operational error, improperly designed or inadequate treatment facilities, or improper operation and maintenance or lack thereof.
- m) *Bypass* – The intentional diversion of wastes from any portion of a treatment facility.

12. Compliance with Applicable Pretreatment Standards and Requirements

Compliance with this permit does not relieve the permittee from its obligations regarding compliance with any and all applicable local, state and federal Pretreatment Standards and requirements including any such standards or requirements that might become effective during the term of this permit.

B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance

The permittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes the following: effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

2. Duty to Halt or Reduce Activity

Upon reduction of efficiency of operation, or loss or failure of all or part of the treatment facility, the permittee must, to the extent necessary to maintain compliance with its permit, control its production or discharges (or both) until operation of the treatment facility is restored or an alternative method of treatment is provided. Such a requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced. It will not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with this permit.

3. Bypass of Treatment Facilities

Bypass is prohibited:

- a) Unless the bypass is unavoidable to prevent loss of life or personal injury.
- b) Unless there were no feasible alternatives, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment

downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance.

- c) The permittee may allow bypass to occur if it does not cause effluent limitations to be exceeded but only if it is also for essential maintenance to assure efficient operation.
- d) Notification of bypass
 - (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it must submit prior written notice at least 10 days before the date of the bypass to the City of Mt. Shasta.
 - (2) Unanticipated bypass. The permittee must notify the City of Mt. Shasta within 24 hours from the time it becomes aware of an unanticipated bypass and submit a written notice to the POTW within 5 days. This report must specify:
 - (i) A description of the bypass, and its cause, including its duration with exact dates and times;
 - (ii) Whether the bypass has been corrected and if the bypass has not been corrected, the anticipated time it is expected to continue; and
 - (iii) The steps being taken or to be taken to reduce, eliminate, and prevent a reoccurrence of the bypass.

In the event of a bypass, the permittee shall perform effluent monitoring in accordance with PART 5 – SPECIAL CONDITIONS, A. ADDITIONAL/SPECIAL MONITORING REQUIREMENTS.

4. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters must be disposed of in accordance with section 405 of the Clean Water Act and Subtitles C and D of the Resource Conservation and Recovery Act.

C. MONITORING AND RECORDS

1. Representative Sampling

Samples and measurements taken as required herein must be representative of the volume and nature of the monitored discharge. All samples must be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. All equipment used for sampling and analysis must be routinely calibrated, inspected, and maintained to ensure their accuracy. Monitoring points must not be changed without notification to and the approval of the City of Mt. Shasta.

2. Flow Measurements

Continuous flow measurement is required under this permit. As such, the appropriate flow measurement devices and methods consistent with approved scientific practices must be selected and used to ensure the accuracy and reliability of measurement of the volume of monitored discharges. The devices must be installed, calibrated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. The devices selected must be capable of measuring flows with a maximum deviation of less than 10 percent from true discharge rates throughout the range of expected discharge volumes. The device shall be calibrated annually starting one year from the date the device is first put in service.

3. Analytical Methods to Demonstrate Continued Compliance

All sampling and analysis required by this permit must be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto, otherwise approved by EPA, or as specified in this permit.

4. Cost Recovery by City

The permittee shall reimburse the City for costs incurred by the City to review, monitor, and verify the permittee's monitoring reports. The City will invoice the permittee showing the time spent and the cost incurred by the City or the City's consultants. Invoice amounts shall be paid by the permittee within fifteen (15) days of being invoiced. Before incurring costs in excess of five thousand dollars (\$5,000.00) for a single invoice, the City will first consult with the permittee to discuss the need and amount of costs to be incurred.

5. Inspection and Entry

The permittee must allow the City of Mt. Shasta, or an authorized representative or federal and state personnel, upon the presentation of proper identification, to do the following during normal business hours Monday through Friday (8:00AM to 5:00 PM PST) or anytime the industrial discharge is being utilized:

- a) Enter the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
- b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit;
- d) Sample or monitor, for the purposes of assuring permit compliance, any substances or parameters at any location; and
- e) Inspect any production, manufacturing, fabricating, or storage area where pollutants, regulated under the permit, could originate, be stored, or be discharged to the sewer system.

6. Retention of Records

- a) The permittee must retain records of all monitoring information including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit and records of all data used to complete the application for this permit for a period of at least 3 years from the date of the sample, measurement, report, or application.

This period may be extended by request of the City of Mt. Shasta at any time.

- b) The permittee must retain and preserve all records that pertain to matters that are the subject of special orders or any other enforcement or litigation activities brought by the City of Mt. Shasta until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired.

7. Record Contents

Records of sampling and analyses must include the following:

- a) The date, exact place, time, and methods of sampling or measurements, and sample preservation techniques or procedures;
- b) Who performed the sampling or measurement;
- c) The date(s) analyses were performed;
- d) Who performed the analyses;
- e) The analytical techniques or methods used; and
- f) The results of such analyses.

8. Falsifying Information

Knowingly making any false statement on any report or other document required by this permit or knowingly rendering any monitoring device or method inaccurate is a crime and may result in the imposition of criminal sanction or civil penalties or both.

D. ADDITIONAL REPORTING REQUIREMENTS**1. Planned Changes**

The permittee must give notice to the City of Mt. Shasta 90 days before any facility expansion, volume increase, or process modifications that results in new or substantially increased discharges or a change in the nature of the discharge.

2. Anticipated Noncompliance

The permittee must give advance notice to the City of Mt. Shasta of any planned changes in the permitted facility or activity that could result in noncompliance with permit requirements.

3. Automatic Resampling

See PART 3 – REPORTING REQUIREMENTS, Item D.

4. Duty to Provide Information

The permittee must furnish to the City of Mt. Shasta within 15 days any information that the City of Mt. Shasta may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee must also, upon request, furnish to the City of Mt. Shasta with digital copies (e.g., Word, Excel, txt, csv, etc.) of any records required to be kept by this permit. Continuous flow monitoring of Outfall 001 is required.

5. Signatory Requirements

All applications, reports, or information submitted to the City of Mt. Shasta must contain the following certification statement and be signed as required in Sections (a), (b), (c), or (d) below.

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

submitting false information, including the possibility of fine and imprisonment for knowing violations.”

- a) By a responsible corporate officer, if the Industrial User submitting the reports is a corporation. For the purpose of this paragraph, a responsible corporate officer means either of the following:
 - (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or
 - (ii) The manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- b) By a general partner or proprietor if the Industrial User submitting the reports is a partnership or sole proprietorship, respectively.
- c) The principal executive officer or director having responsibility for the overall operation of the discharging facility if the Industrial User submitting the reports is a federal, state, or local governmental entity, or their agents.
- d) By a duly authorized representative of the individual designated in paragraph (a), (b), or (c) of this section if:
 - (i) the authorization is made in writing by the individual described in paragraph (a), (b), or (c);
 - (ii) the authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the Industrial Discharge originates, such as the position of plant manager, operator of a well, or a well field superintendent, or a position of equivalent responsibility, or having overall responsibility of environmental matters for the company; and
 - (iii) the written authorization is submitted to the City of Mt. Shasta.
- e) If an authorization under paragraph (d) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or overall responsibility for the environmental matters for the company, a new authorization satisfying the requirements of paragraph (d) of this section must be submitted to the City of Mt. Shasta before or together with any reports to be signed by an authorized representative.

6. Operating Upsets

Any permittee that experiences an upset in operations that places the permittee in a temporary state of noncompliance with the provisions of either this permit or with MSMC 13.56.320 must inform the City of Mt. Shasta within 24 hours of becoming aware of the upset at (530) 926-7510 or (530) 926-7540 after 5 p.m. Monday - Friday or weekends and holidays.

A written follow-up report of the upset must be filed by the permittee with the City of

Mt. Shasta within 5 days. The report must specify the following:

- a) Description of the upset, the cause(s) thereof, and the upset's impact on the permittee's compliance status;
- b) Duration of noncompliance, including exact dates and times of noncompliance, and if not corrected, the anticipated time the noncompliance is expected to continue; and
- c) All steps taken or to be taken to reduce, eliminate, and prevent recurrence of such an upset.

The report must also demonstrate that the treatment facility was being operated in a prudent and workmanlike manner.

A documented and verified operating upset must be an affirmative defense to any enforcement action brought against the permittee for violations attributable to the upset event.

7. Annual Publication

A list of all industrial users that were in significant noncompliance during the 12 previous months must be annually published by the City of Mt. Shasta in a newspaper of general circulation that provides meaningful public notice within the jurisdiction served by City of Mt. Shasta Wastewater Treatment Plant. Accordingly, the permittee is apprised that noncompliance with this permit may lead to an enforcement action and may result in publication of its name in an appropriate newspaper in accordance with this section.

8. Civil and Criminal Liability

Nothing in this permit may be construed to relieve the permittee from civil and/or criminal penalties for noncompliance.

A permittee who has violated, or continues to violate, any provision of the City of Mt. Shasta sewer use ordinance, a permit or order, or any other Pretreatment Standard or Requirement will be liable to the City of Mt. Shasta for a maximum civil penalty of \$6,000 per violation, per day. If a monthly or other long-term average discharge limit is in effect, penalties will accrue for each day during the period of the violation.

The City of Mt. Shasta may recover reasonable attorneys' fees, court costs, and other expenses associated with enforcement activities, including sampling and monitoring expenses, and the cost of any actual damages incurred by City of Mt. Shasta.

In determining the amount of civil liability, the Court will take into account all relevant circumstances, including the extent of harm caused by the violation, the magnitude and duration of the violation, any economic benefit gained through the permittee's violation, corrective actions by the permittee, the compliance history of the permittee, and any other factor as justice requires.

Filing a suit for civil penalties will not be a bar against, or a prerequisite for, taking any other action against the permittee.

9. Penalties for Violations of Permit Conditions

The MSMC 13.56.060 provides that any person who violates a permit condition is subject to a civil penalty of \$1,000 per day of such violation. Any person who willfully or negligently violates permit conditions is subject to criminal penalties of a fine of up to \$6,000 per day of violation, or by imprisonment for 6 months, or both. The permittee may also be subject to sanctions under state or federal law or both.

A permittee that willfully or negligently violates any provision of the City of Mt. Shasta's ordinance, permit, or any other Pretreatment Standard or Requirement will, upon conviction, be guilty of a misdemeanor, punishable by a fine of not more than \$6,000 per violation, per day, or imprisonment for not more than 6 months, or both.

A permittee that willfully or negligently introduces any substance into the POTW that causes personal injury or property damage will, upon conviction, be guilty of a misdemeanor and be subject to a penalty of \$6,000, or be subject to imprisonment for not more than 6 months, or both. This penalty will be in addition to any other cause of action for personal injury or property damage available under state law.

A permittee that knowingly makes any false statements, representations, or certifications in any application, record, report, plan, or other documentation filed, or required to be maintained, pursuant to City of Mt. Shasta ordinance, permit, order, or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required by the permit will, upon conviction, be punished by a fine of not more than \$6,000 per violation, per day, or imprisonment for not more than 6 months, or both.

If a second conviction occurs, a permittee will be punished by a fine of not more than \$6,000 per violation, per day, or imprisonment for not more than 6 months, or both.

10. Recovery of Costs Incurred

In addition to civil and criminal liability, the permittee violating any of the provisions of this permit or MSMC 13.56.320 or causing damage to or otherwise inhibiting the City of Mt. Shasta wastewater treatment and disposal system will be liable to the City of Mt. Shasta for any expense, loss, or damage caused by such violation or discharge. The City of Mt. Shasta may also recover the costs for any cleaning, repair, or replacement work caused by the violation or discharge. Refusal to pay the assessed costs will constitute a separate violation of MSMC 13.56.060.

11. Sewer Capacity Charge (Discharge Permit Fee)

Not applicable.

12. Credit to the Sewer Capacity Charge

Not applicable.

PART 7 – FACT SHEET**A. INDUSTRIAL USER INFORMATION**

No Address Available
APN: 057-801-040, 160

James Freeze
Phone (530) 643-0083

B. DESCRIPTION OF FACILITY OPERATIONS

The permittee operates a three-bay self-service and one-bay automatic car wash. Rinse water is collected and recycled through an on-site treatment system. Excess rinse water and on-site treatment system backwash is treated by a pre-treatment system. The pre-treatment system consists of a three-compartment grease and grit trap. All wastewater passes through the pre-treatment system before being discharged to the City sewer system. Refer to Figure 1.

C. SAMPLING POINT DESCRIPTION/FACILITY FLOW INFORMATION**Table 5 – Sample Point Summary**

Sample Point	Flow Per Operational Day ⁽¹⁾ [GPD]		Description ⁽²⁾
	Total	Process	
001	1,200	1,200	Sample Point 001 is located downstream of all process connections and just downstream of the proposed two-way cleanout east of the proposed wastewater pre-treatment facility, and upstream of the connection to the Ski Village Drive and Road No. 2M16 sewer main.

Note:

¹ The total industrial discharge through Outfall 001 shall not exceed 1,200 GPD at any time.

² Refer to Figure 1 – Industrial Wastewater Discharge Schematic.

Figure 1 – Industrial Wastewater Discharge Schematic

D. PROCESS UNIT OPERATION/FLOW INFORMATION**Table 6 – Process Flow Description**

Industrial Wastewater Permit	Sample Point	Process Operation Code	Process Description
IWD-2019-01	001	Drain System 1	Utilized for car wash rinse water and onsite treatment system backwash water.

E. DILUTION/AUXILIARY OPERATION/FLOW INFORMATION

Not applicable.

F. FLOW-MEASURING DEVICE

The permittee shall install magnetic flow meters in the industrial discharge line to monitor flows to the City sewer system and to use as a basis for determining monthly sewer rates.

G. PRETREATMENT UNIT OPERATIONS

Each wash bay drain inlet has a sump, which provides initial removal of grit. Water from each bay is collected in a three-compartment grease and grit trap, which provides clarification and removal of floatables.

H. POLLUTION PREVENTION/BEST MANAGEMENT PRACTICES

The industrial user will implement the following pollution prevention practice(s) and/or best management practice(s):

The facility will include grit sumps at all drain inlets and perform regular cleaning. A three-compartment grease and grit trap will be installed downstream of all industrial use wastewater connections. Both the grit sumps and grease and grit trap will be regularly pumped out to prevent grease and grit from entering the City sewer system.

I. RATIONALE FOR MONITORING LOCATIONS/SAMPLING POINTS

A single set of mass-based limits applies to this facility's discharge to the City of Mt. Shasta sewer system: Non-Categorical Pretreatment Standards and the City of Mt. Shasta's local limits. Sampling Point 001 is at the end of the regulated process. Therefore, it qualifies as a representative point to determine compliance with applicable Federal Pretreatment Standards.

J. RATIONALE FOR REPORTING REQUIREMENTS

1. Signatory Requirement

According to 40 CFR 403.12(l), periodic compliance reports must be signed by an authorized facility representative. James Freeze has designated the following person(s) as authorized facility representative(s):

Table 7 – Discharger Authorized Facility Representative List

Name	Title
James Freeze	Owner

2. Reduced Monitoring Reporting Requirements

No reduced monitoring requirements have been granted at this time.

3. Monitoring Waiver Reporting Requirements

No waiver to forego monitoring has been granted at this time.

K. RATIONALE FOR SPECIAL CONDITIONS

Not applicable.

L. RATIONALE FOR EFFLUENT LIMITATIONS/MONITORING

The permittee has proposed a car wash facility that discharges wastewater to the City sewer system. Therefore, the permittee is subject to National Prohibited Discharge Standards (40 CFR 405.5 (a) & (b)) and local limits (MSMC 13.56.030 & 13.56.320).

The proposed facility includes three coin-operated self-service car wash bays and one automatic self-service car wash bay. The facility also includes four industrial power vacuum stalls.

Site drainage, including roof drains and area drains, will be routed to the City storm drain system. Wastewater from the car wash bays will be discharged to the City sewer system and treated at the POTW.

The facility is in the planning phase; therefore, no specific effluent water quality data is available. Based on typical water quality data for similar facilities, car wash rinse water may include ozone, basic and acidic cleaning compounds, foaming agents, wax, fragrance, colored agents, as well as grit and debris from cars and roadways. The concentrations of certain compounds typically found in commercial car wash wastewater may affect the POTW's ability to comply with its discharge limitations. Furthermore, because the facility has no specific wastewater quality data, additional monitoring is required to confirm the absence of constituents that may hinder the POTW's ability to comply with its discharge limits. Certain constituents found in similar facilities' effluent may inhibit biological treatment processes at the POTW. These constituents include copper and zinc.

Based on the discharger's proposed pretreatment facility, at this time it is anticipated copper and zinc will exist at concentrations capable of negatively affecting the City's WWTP. Therefore, these constituents have discharge limitations. If the City suspects the discharge could be contributing higher than expected concentrations of other metals, discharge limitations could be imposed for those constituents at any time.

M. SLUG DISCHARGE EVALUATION

The permittee is a new discharger. As such, the City of Mt. Shasta has not conducted a slug discharge evaluation.

The City of Mt. Shasta has determined that the permittee is not required to develop and implement a slug discharge control plan.

N. EXAMPLE CALCULATIONS

Refer to Table 8 through Table 17. Effluent limit is calculated using 10 different criteria, including:

- POTW NPDES Daily and Monthly Limits
- Activated Sludge, Nitrification, and Digestion Inhibition Levels
- USEPA 503 regulations and California Total Threshold Limit Concentration (TTLC) Levels
- Chronic and Acute Water Quality Standards
- Technology Based Limit

Effluent limits are based on the lowest resulting limit for each constituent.

**TABLE 8
Effluent Limit Summary**

Parameter	Table 9 NPDES Daily Eff Limit [µg/L]	Table 10 NPDES Monthly Avg Limit [µg/L]	Table 11 A.S. Inhibition [µg/L]	Table 12 Nitrification [µg/L]	Table 13 503 Sludge Regs (dry wt basis) [µg/L]	Table 14 CA TTLC (wet wt basis) [µg/L]	Table 15 Chronic WQ Criteria [µg/L]	Table 16 Acute WQ Criteria [µg/L]	Table 17 Aerobic Dig Inhib [µg/L]	Limit [µg/L]	Min Detection Limits [µg/L]
Arsenic			40.00		71.97	5,850.91	11,279.48	751.97	17.55	17.6	3.00
Cadmium			6,669.13	71,711.10	537.11	9,181.29	7,355.27	735.53	45.91	45.9	0.50
Chromium			100.00	297.62		17,413.42	42,298.06	129,244.07	696.54	100.0	0.50
Hex. Chromium			180.00				413.58	601.57		180.0	2.00
Copper	1,001.10	293.80	793.07	293.80	20,327.23	231,301.05	27,932.01	603,282.91	389.04	293.8	1.00
Cyanide			50.00	789.47			514.50	2,176.74	37.75	37.7	1.00
Lead			100.00	625.00	321.09	7,135.25	522.20	13,577.16		100.0	3.00
Mercury			100.00	2,564.10	19.63	153.97	7.83	7.83		7.8	0.20
Nickel			1,000.00	265.96	1,084.14	34,417.11	2,962.29	26,774.53	172.09	172.1	1.00
Selenium							187.99			188.0	3.00
Silver			30.00			3,524.64	-	751.97		30.0	1.00
Zinc	2,317.76	560.90	2,711.29	40.87	39,213.39	480,940.58	32,789.96	67,931.13	634.60	40.9	2.00

**TABLE 9
Local Limits Determination Based on NPDES Daily Effluent Limits**

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE						MAXIMUM LOADING		INDUSTRIAL	
	IU Pollut. Flow [MGD] (Qind)	POTW Flow [MGD] (Qpotw)	Removal Efficiency [%] (Rpotw)	NPDES Daily Limit [µg/l] (Ccrit)	Domestic/Commercial		Allowable Headworks [lbs/day] (Lhw)	Domestic/ Commercial [lbs/day] (Ldom)	Allowable Loading [lbs/day] (Lind)	Local Limit [µg/l] (Cind)
					Conc. [µg/l] (Cdom)	Flow [MGD] (Qdom)				
Arsenic	0.0012	0.724	50	#N/A	0.0	0.7228	#N/A	0.00	#N/A	#N/A
Cadmium	0.0012	0.724	85	#N/A	0.0	0.7228	#N/A	0.00	#N/A	#N/A
Chromium	0.0012	0.724	84	#N/A	0.0	0.7228	#N/A	0.00	#N/A	#N/A
Hex. Chrom.	0.0012	0.724	0	#N/A	0.0	0.7228	#N/A	0.00	#N/A	#N/A
Copper	0.0012	0.724	84	18.5	40.5	0.7228	0.70	0.24	0.01002	1001.10
Cyanide	0.0012	0.724	62	#N/A	0.0	0.7228	#N/A	0.00	#N/A	#N/A
Lead	0.0012	0.724	82	#N/A	0.0	0.7228	#N/A	0.00	#N/A	#N/A
Mercury	0.0012	0.724	76	#N/A	0.0	0.7228	#N/A	0.00	#N/A	#N/A
Molybdenum	0.0012	0.724	28.5	#N/A	0.0	0.7228	#N/A	0.00	#N/A	#N/A
Nickel	0.0012	0.724	34	#N/A	0.0	0.7228	#N/A	0.00	#N/A	#N/A
Selenium	0.0012	0.724	0	#N/A	0.0	0.7228	#N/A	0.00	#N/A	#N/A
Silver	0.0012	0.724	83	#N/A	0.0	0.7228	#N/A	0.00	#N/A	#N/A
Zinc	0.0012	0.724	81	51.4	97.1	0.7228	1.63	0.59	0.02320	2317.76

(Qind) Industrial User total plant discharge flow in Million Gallons per Day (MGD) that contains a particular pollutant.

(Qpotw) POTW's average influent flow in MGD.

(Rpotw) Removal efficiency across POTW as percent.

(Ccrit) NPDES daily maximum permit limit for a particular pollutant in mg/l.

(Qdom) Domestic/commercial background flow in MGD.

(Cdom) Domestic/commercial background concentration for a particular pollutant in mg/l.

(Lhw) Maximum allowable headworks pollutant loading to the POTW in pounds per day (lbs/day).

(Ldom) Domestic/commercial background loading to the POTW for a particular pollutant in pounds per day (lbs/day).

(Lind) Maximum allowable industrial loading to the POTW in pounds per day.

(Cind) Industrial allowable local limit for a given pollutant in mg/l.

(SF) Safety factor as a percent.

8.34 Unit conversion factor

Lhw = $\frac{8.34 * Ccrit * Qpotw}{1 - Rpotw}$

1 - Rpotw

Allowable percent of treatment capacity utilized by permittee based on proportion of total flow (0.054 MGD/0.724 MGD x 100%/1 = 7%). Local limit includes a safety factor of 1.

TABLE 10
Local Limits Determination Based on NPDES Monthly Effluent Limits

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE						MAXIMUM LOADING		INDUSTRIAL	
	IU Pollut. Flow [MGD] (Qind)	POTW Flow [MGD] (Qpotw)	Removal Efficiency [%] (Rpotw)	NPDES Monthly Limit [µg/l] (Ccrit)	Domestic/Commercial		Allowable Headworks [lbs/day] (Lhw)	Domestic/ Commercial [lbs/day] (Ldom)	Allowable Loading [lbs/day] (Lind)	Local Limit [µg/l] (Cind)
					Conc. [µg/l] (Cdom)	Flow [MGD] (Qdom)				
Arsenic	0.0012	0.724	50	#N/A	0.0	0.72	#N/A	0.00	#N/A	#N/A
Cadmium	0.0012	0.724	85	#N/A	0.0	0.72	#N/A	0.00	#N/A	#N/A
Chromium	0.0012	0.724	84	#N/A	0.0	0.72	#N/A	0.00	#N/A	#N/A
Hex. Chrom.	0.0012	0.724	0	#N/A	0.0	0.72	#N/A	0.00	#N/A	#N/A
Copper	0.0012	0.724	84	10.00	40.5	0.72	0.38	0.24	0.00294	293.80
Cyanide	0.0012	0.724	62	#N/A	0.0	0.72	#N/A	0.00	#N/A	#N/A
Lead	0.0012	0.724	82	#N/A	0.0	0.72	#N/A	0.00	#N/A	#N/A
Mercury	0.0012	0.724	76	#N/A	0.0	0.72	#N/A	0.00	#N/A	#N/A
Molybdenum	0.0012	0.724	28.5	#N/A	0.0	0.72	#N/A	0.00	#N/A	#N/A
Nickel	0.0012	0.724	34	#N/A	0.0	0.72	#N/A	0.00	#N/A	#N/A
Selenium	0.0012	0.724	0	#N/A	0.0	0.72	#N/A	0.00	#N/A	#N/A
Silver	0.0012	0.724	83	#N/A	0.0	0.72	#N/A	0.00	#N/A	#N/A
Zinc	0.0012	0.724	81	26.40	97.1	0.72	0.84	0.59	0.00561	560.90

(Qind) Industrial User total plant discharge flow in Million Gallons per Day (MGD) that contains a particular pollutant.

(Qpotw) POTW's average influent flow in MGD.

(Rpotw) Removal efficiency across POTW as percent.

(Ccrit) NPDES monthly maximum permit limit for a particular pollutant in mg/l.

(Qdom) Domestic/commercial background flow in MGD.

(Cdom) Domestic/commercial background concentration for a particular pollutant in mg/l.

(Lhw) Maximum allowable headworks pollutant loading to the POTW in pounds per day (lbs/day).

(Ldom) Domestic/commercial background loading to the POTW for a particular pollutant in pounds per day (lbs/day).

(Lind) Maximum allowable industrial loading to the POTW in pounds per day.

(Cind) Industrial allowable local limit for a given pollutant in mg/l.

(SF) Safety factor as a percent.

8.34 Unit conversion factor

$$\text{Lhw} = \frac{8.34 * \text{Ccrit} * \text{Qpotw}}{1 - \text{Rpotw}}$$

Allowable percent of treatment capacity utilized by permittee based on proportion of total flow (0.054 MGD/0.724 MGD x 100%/1 = 7%). Local limit includes a safety factor of 1.

TABLE 11
Local Limits Determination Based on Activated Sludge Inhibition Level

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE						MAXIMUM LOADING		INDUSTRIAL	
	IU Pollut. Flow [MGD] (Qind)	POTW Flow [MGD] (Qpotw)	Removal Efficiency [%] (Rprim)	Activated Sludge Inhibition Level [µg/l] (Ccrit)	Domestic/Commercial		Allowable Headworks [lbs/day] (Lhw)	Domestic/ Commercial [lbs/day] (Ldom)	Allowable Loading [lbs/day] (Lind)	Local Limit [µg/l] (Cind)
					Conc. [µg/l] (Cdom)	Flow [MGD] (Qdom)				
Arsenic	0.0012	0.724	0	40	0.000	0.7228	0.24	0.00	0.00040	40.0
Cadmium	0.0012	0.724	0	500	0.000	0.7228	3.02	0.00	0.06674	6669.1
Chromium	0.0012	0.724	0	100	0.000	0.7228	0.60	0.00	0.00100	100.0
Hex. Chrom.	0.0012	0.724	0	180	0.000	0.7228	1.09	0.00	0.00180	180.0
Copper	0.0012	0.724	0	100	40.500	0.7228	0.60	0.24	0.00794	793.1
Cyanide	0.0012	0.724	0	50	0.000	0.7228	0.30	0.00	0.00050	50.0
Lead	0.0012	0.724	0	100	0.000	0.7228	0.60	0.00	0.00100	100.0
Mercury	0.0012	0.724	0	100	0.000	0.7228	0.60	0.00	0.00100	100.0
Molybdenum	0.0012	0.724	0	#N/A	0.000	0.7228	#N/A	0.00	#N/A	#N/A
Nickel	0.0012	0.724	0	1000	0.000	0.7228	6.04	0.00	0.01001	1000.0
Selenium	0.0012	0.724	0	#N/A	0.000	0.7228	#N/A	0.00	#N/A	#N/A
Silver	0.0012	0.724	0	30	0.000	0.7228	0.18	0.00	0.00030	30.0
Zinc	0.0012	0.724	0	300	97.100	0.7228	1.81	0.59	0.02713	2711.3

(Qind) Industrial User total plant discharge flow in Million Gallons per Day (MGD) that contains a particular pollutant.

(Qpotw) POTW's average influent flow in MGD.

(Rprim) Removal efficiency across primary treatment as percent.

(Ccrit) Activated sludge threshold inhibition level, mg/l.

(Qdom) Domestic/commercial background flow in MGD.

(Cdom) Domestic/commercial background concentration for a particular pollutant in mg/l.

(Lhw) Maximum allowable headworks pollutant loading to the POTW in pounds per day (lbs/day).

(Ldom) Domestic/commercial background loading to the POTW for a particular pollutant in pounds per day (lbs/day).

(Lind) Maximum allowable industrial loading to the POTW in pounds per day.

(Cind) Industrial allowable local limit for a given pollutant in mg/l.

(SF) Safety factor as a percent.

8.34 Unit conversion factor

Lhw = $\frac{8.34 * Ccrit * Qpotw}{1 - Rprim}$

1 - Rprim

Allowable percent of treatment capacity utilized by permittee based on proportion of total flow (0.054 MGD/0.724 MGD x 100%/1 = 7%). Local limit includes a safety factor of 1.

TABLE 12
Local Limits Determination Based on Nitrification Inhibition Level

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE					MAXIMUM LOADING		INDUSTRIAL		
	IU Pollut. Flow [MGD] (Qind)	POTW Flow [MGD] (Qpotw)	Removal Efficiency [%] (Rsec)	Nitrification Inhibition Level [µg/l] (Ccrit)	Domestic/Commercial		Allowable Headworks [lbs/day] (Lhw)	Domestic/ Commercial [lbs/day] (Ldom)	Allowable Loading [lbs/day] (Lind)	Local Limit [µg/l] (Cind)
					Conc. [µg/l] (Cdom)	Flow [MGD] (Qdom)				
Arsenic	0.0012	0.724	#N/A	#N/A	0.0	0.7228	#N/A	0.00	#N/A	#N/A
Cadmium	0.0012	0.724	7	5000	0.0	0.7228	32.46	0.00	0.71768	71711.1
Chromium	0.0012	0.724	16	250	0.0	0.7228	1.80	0.00	0.00298	297.6
Hex. Chrom.	0.0012	0.724	#N/A	250	0.0	0.7228	#N/A	0.00	#N/A	#N/A
Copper	0.0012	0.724	20	50	40.5	0.7228	0.38	0.24	0.00294	293.8
Cyanide	0.0012	0.724	62	300	0.0	0.7228	4.77	0.00	0.00790	789.5
Lead	0.0012	0.724	20	500	0.0	0.7228	3.77	0.00	0.00626	625.0
Mercury	0.0012	0.724	22	2000	0.0	0.7228	15.48	0.00	0.02566	2564.1
Molybdenum	0.0012	0.724	0	#N/A	0.0	0.7228	#N/A	0.00	#N/A	#N/A
Nickel	0.0012	0.724	6	250	0.0	0.7228	1.61	0.00	0.00266	266.0
Selenium	0.0012	0.724	#N/A	#N/A	0.0	0.7228	#N/A	0.00	#N/A	#N/A
Silver	0.0012	0.724	#N/A	250	0.0	0.7228	#N/A	0.00	#N/A	#N/A
Zinc	0.0012	0.724	20	80	97.1	0.7228	0.60	0.59	0.00041	40.9

(Qind) Industrial User total plant discharge flow in Million Gallons per Day (MGD) that contains a particular pollutant.

(Qpotw) POTW's average influent flow in MGD.

(Rsec) Removal efficiency across primary treatment and secondary treatment as percent.

(Ccrit) Nitrification threshold inhibition level, mg/l.

(Qdom) Domestic/commercial background flow in MGD.

(Cdom) Domestic/commercial background concentration for a particular pollutant in mg/l.

(Lhw) Maximum allowable headworks pollutant loading to the POTW in pounds per day (lbs/day).

(Ldom) Domestic/commercial background loading to the POTW for a particular pollutant in pounds per day (lbs/day).

(Lind) Maximum allowable industrial loading to the POTW in pounds per day.

(Cind) Industrial allowable local limit for a given pollutant in mg/l.

(SF) Safety factor as a percent.

8.34 Unit conversion factor

Lhw = $\frac{8.34 * Ccrit * Qpotw}{1 - Rsec}$

1 - Rsec

Allowable percent of treatment capacity utilized by permittee based on proportion of total flow (0.054 MGD/0.724 MGD x 100%/1 = 7%). Local limit includes a safety factor of 1.

Based on estimated removal prior to nitrification.

TABLE 13
Local Limits Determination Based on USEPA 503 Sludge Regulations

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE							MAXIMUM LOADING		INDUSTRIAL		
	IU Pollut. Flow [MGD] (Qind)	POTW Flow [MGD] (Qpotw)	Sludge Flow [MGD] (Qsldg)	Percent Solids [%] (PS)	Removal Efficiency [%] (Rpotw)	503 Sludge Criteria [mg/kg] (Cslcrit)	Domestic/Commercial Conc. [µg/l] (Cdom)	Domestic/Commercial Flow [MGD] (Qdom)	Allowable Headworks [lbs/day] (Lhw)	Domestic/Commercial [lbs/day] (Ldom)	Allowable Loading [lbs/day] (Lind)	Local Limit [µg/l] (Cind)
	Arsenic	0.0012	0.724	0.004	15.0	50	41	0.0	0.72	0.43	0.00000	0.00072
Cadmium	0.0012	0.724	0.004	15.0	85	39	0.0	0.72	0.24	0.00000	0.00538	537.1
Chromium	0.0012	0.724	0.004	15.0	84	#N/A	0.0	0.72	#N/A	0.00000	#N/A	#N/A
Hex. Chrom.	0.0012	0.724	0.004	15.0	0	#N/A	0.0	0.72	#N/A	0.00000	#N/A	#N/A
Copper	0.0012	0.724	0.004	15.0	84	1500	40.5	0.72	9.46	0.24414	0.20343	20327.2
Cyanide	0.0012	0.724	0.004	15.0	62	#N/A	0.0	0.72	#N/A	0.00000	#N/A	#N/A
Lead	0.0012	0.724	0.004	15.0	82	300	0.0	0.72	1.94	0.00000	0.00321	321.1
Mercury	0.0012	0.724	0.004	15.0	76	17	0.0	0.72	0.12	0.00000	0.00020	19.6
Molybdenum	0.0012	0.724	0.004	15.0	28.5	#N/A	0.0	0.72	#N/A	0.00000	#N/A	#N/A
Nickel	0.0012	0.724	0.004	15.0	34	420	0.0	0.72	6.55	0.00000	0.01085	1084.1
Selenium	0.0012	0.724	0.004	15.0	0	100	0.0	0.72	#DIV/0!	0.00000	#DIV/0!	#DIV/0!
Silver	0.0012	0.724	0.004	15.0	83	#N/A	0.0	0.72	#N/A	0.00000	#N/A	#N/A
Zinc	0.0012	0.724	0.004	15.0	81	2800	97.1	0.72	18.32	0.58533	0.39245	39213.4

(Qind) Industrial User total plant discharge flow in Million Gallons per Day (MGD) that contains a particular pollutant.

(Qpotw) POTW's average influent flow in MGD.

(Qsldg) Sludge flow to disposal in MGD.

(PS) Percent solids of sludge to disposal.

(Rpotw) Removal efficiency across POTW as a percent.

(Cslcrit) 503 sludge criteria in mg/kg dry sludge.

(Qdom) Domestic/commercial background flow in MGD.

(Cdom) Domestic/commercial background concentration for a particular pollutant in mg/l.

(Lhw) Maximum allowable headworks pollutant loading to the POTW in pounds per day (lbs/day).

(Ldom) Domestic/commercial background loading to the POTW for a particular pollutant in pounds per day (lbs/day).

(Lind) Maximum allowable industrial loading to the POTW in pounds per day.

(Cind) Industrial allowable local limit for a given pollutant in mg/l.

(SF) Safety factor as a percent.

8.34 Unit conversion factor

$$\text{Lhw} = \frac{8.34 * \text{Cslcrit} * (\text{PS}/100) * \text{Qsldg}}{\text{Rpotw}}$$

Allowable percent of treatment capacity utilized by permittee based on proportion of total flow (0.054 MGD/0.724 MGD x 100%/1 = 7%). Local limit includes a safety factor of 1.

TABLE 14
Local Limits Determination Based on State Sludge Criteria

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE								MAXIMUM LOADING		INDUSTRIAL	
	IU Pollut.	POTW	Sludge	Percent	Removal	State Sludge	Domestic/Commercial		Allowable Headworks [lbs/day] (Lhw)	Domestic/ Commercial [lbs/day] (Ldom)	Allowable Loading [lbs/day] (Lind)	Local Limit [µg/l] (Cind)
	Flow [MGD] (Qind)	Flow [MGD] (Qpotw)	Flow [MGD] (Qsldg)	Solids [%] (PS)	Efficiency [%] (Rpotw)	Criteria [mg/kg] (Cslcrit)	Conc. [µg/l] (Cdom)	Flow [MGD] (Qdom)				
Arsenic	0.0012	0.724	0.004	15.0	50	3333	0.0	0.72	35.329	0.00000	0.05856	5850.9
Cadmium	0.0012	0.724	0.004	15.0	85	667	0.0	0.72	4.156	0.00000	0.09189	9181.3
Chromium	0.0012	0.724	0.004	15.0	84	16667	0.0	0.72	105.145	0.00000	0.17427	17413.4
Hex. Chrom.	0.0012	0.724	0.004	15.0	0	3333	0.0	0.72	#DIV/0!	0.00000	#DIV/0!	#DIV/0!
Copper	0.0012	0.724	0.004	15.0	84	16667	40.5	0.72	105.145	0.24414	2.31486	231301.1
Cyanide	0.0012	0.724	0.004	15.0	62	#N/A	0.0	0.72	#N/A	0.00000	#N/A	#N/A
Lead	0.0012	0.724	0.004	15.0	82	6667	0.0	0.72	43.084	0.00000	0.07141	7135.3
Mercury	0.0012	0.724	0.004	15.0	76	133	0.0	0.72	0.930	0.00000	0.00154	154.0
Molybdenum	0.0012	0.724	0.004	15.0	28.5	23333	0.0	0.72	433.862	0.00000	0.71911	71853.3
Nickel	0.0012	0.724	0.004	15.0	34	13333	0.0	0.72	207.816	0.00000	0.34445	34417.1
Selenium	0.0012	0.724	0.004	15.0	0	667	0.0	0.72	#DIV/0!	0.00000	#DIV/0!	#DIV/0!
Silver	0.0012	0.724	0.004	15.0	83	3333	0.0	0.72	21.282	0.00000	0.03527	3524.6
Zinc	0.0012	0.724	0.004	15.0	81	33333	97.1	0.72	218.079	0.58533	4.81325	480940.6

(Qind) Industrial User total plant discharge flow in Million Gallons per Day (MGD) that contains a particular pollutant.

(Qpotw) POTW's average influent flow in MGD.

(Qsldg) Sludge flow to disposal in MGD.

(PS) Percent solids of sludge to disposal.

(Rpotw) Removal efficiency across POTW as a percent.

(Cslcrit) State sludge criteria in mg/kg dry sludge.

(Qdom) Domestic/commercial background flow in MGD.

(Cdom) Domestic/commercial background concentration for a particular pollutant in mg/l.

(Lhw) Maximum allowable headworks pollutant loading to the POTW in pounds per day (lbs/day).

(Ldom) Domestic/commercial background loading to the POTW for a particular pollutant in pounds per day (lbs/day).

(Lind) Maximum allowable industrial loading to the POTW in pounds per day.

(Cind) Industrial allowable local limit for a given pollutant in mg/l.

(SF) Safety factor as a percent.

8.34 Unit conversion factor

Lhw = $\frac{8.34 * Cslcrit * (PS/100) * Qsldg}{Rpotw}$

Allowable percent of treatment capacity utilized by permittee based on proportion of total flow (0.054 MGD/0.724 MGD x 100%/1 = 7%). Local limit includes a safety factor of 1.

TABLE 15
Local Limits Determination Based on Chronic Water Quality Standards

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE								MAXIMUM LOADING		INDUSTRIAL	
	IU Pollut.	POTW	Upstream	Upstream	Removal	Chronic	Domestic/Commercial		Allowable Headworks [lbs/day] (Lhw)	Domestic/Commercial [lbs/day] (Ldom)	Allowable Loading [lbs/day] (Lind)	Local Limit [µg/l] (Cind)
	Flow [MGD] (Qind)	Flow [MGD] (Qpotw)	Flow [MGD] (Qstr)	Conc. [µg/l] (Cstr)	Efficiency [%] (Rpotw)	WQS [µg/l] (Ccrit)	Conc. [µg/l] (Cdom)	Flow [MGD] (Qdom)				
Arsenic	0.0012	0.724	26.5	0.0	50	150.0	0.0	0.72	68.1	0.00000	0.11289	11279.5
Cadmium	0.0012	0.724	26.5	0.0	85	2.2	0.0	0.72	3.3	0.00000	0.07361	7355.3
Chromium	0.0012	0.724	26.5	0.0	84	180.0	0.0	0.72	255.4	0.00000	0.42332	42298.1
Hex. Chrom.	0.0012	0.724	26.5	0.0	0	11.0	0.0	0.72	2.5	0.00000	0.00414	413.6
Copper	0.0012	0.724	26.5	0.0	84	9.1	40.5	0.72	12.9	0.24414	0.27954	27932.0
Cyanide	0.0012	0.724	26.5	0.0	62	5.2	0.0	0.72	3.1	0.00000	0.00515	514.5
Lead	0.0012	0.724	26.5	0.0	82	2.5	0.0	0.72	3.2	0.00000	0.00523	522.2
Mercury	0.0012	0.724	26.5	0.0	76	0.1	0.0	0.72	0.0	0.00000	0.00008	7.8
Molybdenum	0.0012	0.724	26.5	0.0	29		0.0	0.72	-	0.00000	-	-
Nickel	0.0012	0.724	26.5	0.0	34	52.0	0.0	0.72	17.9	0.00000	0.02965	2962.3
Selenium	0.0012	0.724	26.5	0.0	0	5.0	0.0	0.72	1.1	0.00000	0.00188	188.0
Silver	0.0012	0.724	26.5	0.0	83		0.0	0.72	-	0.00000	-	-
Zinc	0.0012	0.724	26.5	0.0	81	12.9	97.1	0.72	15.4	0.58533	0.32816	32790.0

(Qind) Industrial User total plant discharge flow in Million Gallons per Day (MGD) that contains a particular pollutant.

(Qpotw) POTW's average influent flow in MGD.

(Qstr) Receiving stream (upstream) 7Q10 flow in MGD.

(Cstr) Receiving stream background level in mg/l.

(Rpotw) Removal efficiency across POTW as percent.

(Ccrit) State chronic water quality standard for a particular pollutant in mg/l.

(Qdom) Domestic/commercial background flow in MGD.

(Cdom) Domestic/commercial background concentration for a particular pollutant in mg/l.

(Lhw) Maximum allowable headworks pollutant loading to the POTW in pounds per day (lbs/day).

(Ldom) Domestic/commercial background loading to the POTW for a particular pollutant in pounds per day (lbs/day).

(Lind) Maximum allowable industrial loading to the POTW in pounds per day.

(Cind) Industrial allowable local limit for a given pollutant in mg/l.

(SF) Safety factor as a percent.

8.34 Unit conversion factor

$$\text{Lhw} = \frac{8.34 * (\text{Ccrit} * (\text{Qstr} + \text{Qpotw}) - (\text{Cstr} * \text{Qstr}))}{1 - \text{Rpotw}}$$

Allowable percent of treatment capacity utilized by permittee based on proportion of total flow (0.054 MGD/0.724 MGD x 100%/1 = 7%). Local limit includes a safety factor of 1.

**TABLE 16
Local Limits Determination Based on Acute Water Quality Standards**

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE								MAXIMUM LOADING		INDUSTRIAL	
	IU Pollut. Flow [MGD] (Qind)	POTW Flow [MGD] (Qpotw)	Upstream Flow [MGD] (Qstr)	Upstream Conc. [µg/l] (Cstr)	Removal Efficiency [%] (Rpotw)	Acute WQS [µg/l] (Ccrit)	Domestic/Commercial		Allowable Headworks [lbs/day] (Lhw)	Domestic/ Commercial [lbs/day] (Ldom)	Allowable Loading [lbs/day] (Lind)	Local Limit [µg/l] (Cind)
	Conc. [µg/l] (Cdom)	Flow [MGD] (Qdom)										
Arsenic	0.001	0.724	26.50	0.0	50	10	0.0	0.72	4.5	0.00000	0.00753	752.0
Cadmium	0.001	0.724	26.50	0.0	85	0	0.0	0.72	0.3	0.00000	0.00736	735.5
Chromium	0.001	0.724	26.50	0.0	84	550	0.0	0.72	780.4	0.00000	1.29347	129244.1
Hex. Chrom.	0.001	0.724	26.50	0.0	0	16	0.0	0.72	3.6	0.00000	0.00602	601.6
Copper	0.001	0.724	26.50	0.0	84	193	40.5	0.72	273.8	0.24414	6.03766	603282.9
Cyanide	0.001	0.724	26.50	0.0	62	22	0.0	0.72	13.1	0.00000	0.02178	2176.7
Lead	0.001	0.724	26.50	0.0	82	65	0.0	0.72	82.0	0.00000	0.13588	13577.2
Mercury	0.001	0.724	26.50	0.0	76	0	0.0	0.72	0.0	0.00000	0.00008	7.8
Molybdenum	0.001	0.724	26.50	0.0	28.5	#N/A	0.0	0.72	#N/A	0.00000	#N/A	#N/A
Nickel	0.001	0.724	26.50	0.0	34	470	0.0	0.72	161.7	0.00000	0.26796	26774.5
Selenium	0.001	0.724	26.50	0.0	0	#N/A	0.0	0.72	#N/A	0.00000	#N/A	#N/A
Silver	0.001	0.724	26.50	0.0	83	3	0.0	0.72	4.5	0.00000	0.00753	752.0
Zinc	0.001	0.724	26.50	0.0	81	26	97.1	0.72	31.3	0.58533	0.67985	67931.1

(Qind) Industrial User total plant discharge flow in Million Gallons per Day (MGD) that contains a particular pollutant.

(Qpotw) POTW's average influent flow in MGD.

(Qstr) Receiving stream (upstream) 1Q10 flow in MGD.

(Cstr) Receiving stream background level in mg/l.

(Rpotw) Removal efficiency across POTW as percent.

(Ccrit) State acute water quality standard for a particular pollutant in mg/l.

(Qdom) Domestic/commercial background flow in MGD.

(Cdom) Domestic/commercial background concentration for a particular pollutant in mg/l.

(Lhw) Maximum allowable headworks pollutant loading to the POTW in pounds per day (lbs/day).

(Ldom) Domestic/commercial background loading to the POTW for a particular pollutant in pounds per day (lbs/day).

(Lind) Maximum allowable industrial loading to the POTW in pounds per day.

(Cind) Industrial allowable local limit for a given pollutant in mg/l.

(SF) Safety factor as a percent.

8.34 Unit conversion factor

$$Lhw = \frac{8.34 * (Ccrit * (Qstr + Qpotw) - (Cstr * Qstr))}{1 - Rpotw}$$

Allowable percent of treatment capacity utilized by permittee based on proportion of total flow (0.054 MGD/0.724 MGD x 100%/1 = 7%). Local limit includes a safety factor of 1.

Arsenic, cadmium and zinc Acute WQS based on The Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region. All other Acute WQS based on 40 CFR Part 131 (California Toxics Rule).

TABLE 17
Local Limits Determination Based on Aerobic Digester Inhibition Level

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE							MAXIMUM LOADING		INDUSTRIAL	
	IU Pollut.	POTW	Sludge Flow	Removal	Anaerobic Digester	Domestic/Commercial		Allowable	Domestic/	Allowable	Local
	Flow [MGD] (Qind)	Flow [MGD] (Qpotw)	to Digester [MGD] (Qdig)	Efficiency [%] (Rpotw)	Inhibition Level ⁽¹⁾ [µg/l] (Ccrit)	Conc. [µg/l] (Cdom)	Flow [MGD] (Qdom)	Headworks [lbs/day] (Lhw)	Commercial [lbs/day] (Ldom)	Loading [lbs/day] (Lind)	Limit [µg/l] (Cind)
Arsenic	0.0012	0.724	0.004	50	1,500	0.0	0.72	0.106	0.00000	0.00018	17.6
Cadmium	0.0012	0.724	0.004	85	500	0.0	0.72	0.021	0.00000	0.00046	45.9
Chromium	0.0012	0.724	0.004	84	100,000	0.0	0.72	4.206	0.00000	0.00697	696.5
Hex. Chrom.	0.0012	0.724	0.004	0	50,000	0.0	0.72	#DIV/0!	0.00000	#DIV/0!	#DIV/0!
Copper	0.0012	0.724	0.004	84	10,000	40.5	0.72	0.421	0.24414	0.00389	389.0
Cyanide	0.0012	0.724	0.004	62	4,000	0.0	0.72	0.228	0.00000	0.00038	37.7
Lead	0.0012	0.724	0.004	82	#N/A	0.0	0.72	#N/A	0.00000	#N/A	#N/A
Mercury	0.0012	0.724	0.004	76	#N/A	0.0	0.72	#N/A	0.00000	#N/A	#N/A
Molybdenum	0.0012	0.724	0.004	28.5	#N/A	0.0	0.72	#N/A	0.00000	#N/A	#N/A
Nickel	0.0012	0.724	0.004	34	10,000	0.0	0.72	1.039	0.00000	0.00172	172.1
Selenium	0.0012	0.724	0.004	0	#N/A	0.0	0.72	#N/A	0.00000	#N/A	#N/A
Silver	0.0012	0.724	0.004	83	#N/A	0.0	0.72	#N/A	0.00000	#N/A	#N/A
Zinc	0.0012	0.724	0.004	81	20,000	97.1	0.72	0.872	0.58533	0.00635	634.6

(Qind) Industrial User total plant discharge flow in Million Gallons per Day (MGD) that contains a particular pollutant.

(Qpotw) POTW's average influent flow in MGD.

(Qdig) Sludge flow to digester in MGD.

(Rpotw) Removal efficiency across POTW as percent.

(Ccrit) Anaerobic digester threshold inhibition level in mg/l.

(Qdom) Domestic/commercial background flow in MGD.

(Cdom) Domestic/commercial background concentration for a particular pollutant in mg/l.

(Lhw) Maximum allowable headworks pollutant loading to the POTW in pounds per day (lbs/day).

(Ldom) Domestic/commercial background loading to the POTW for a particular pollutant in pounds per day (lbs/day).

(Lind) Maximum allowable industrial loading to the POTW in pounds per day.

(Cind) Industrial allowable local limit for a given pollutant in mg/l.

(SF) Safety factor as a percent.

8.34 Unit conversion factor

Lhw = $8.34 * Ccrit * Qdig$

Rpotw

Allowable percent of treatment capacity utilized by permittee based on proportion of total flow (0.054 MGD/0.724 MGD x 100%/1 = 7%). Local limit includes a safety factor of 1.

Aerobic digester inhibition levels are unavailable. Anaerobic digester inhibition concentrations are lower than aerobic concentrations. To be conservative, anaerobic digester inhibition concentrations utilized in lieu of aerobic concentrations.

TABLE 18
Effluent Limit Summary

Parameter	Table 9 NPDES Daily Eff Limit [µg/L]	Table 10 NPDES Monthly Avg Limit [µg/L]	Table 11 A.S. Inhibition [µg/L]	Table 12 Nitrification [µg/L]	Table 13 503 Sludge Regs (dry wt basis) [µg/L]	Table 14 CA TTLC (wet wt basis) [µg/L]	Table 15 Chronic WQ Criteria [µg/L]	Table 16 Acute WQ Criteria [µg/L]	Table 17 Aerobic Dig Inhib [µg/L]	Typical Technology Based Limit [µg/L]	Limit [µg/L]	Min Detection Limits [µg/L]
Arsenic			40.00		71.97	5,850.91	11,279.48	751.97	17.55	7.00	7.0	3.00
Cadmium			6,669.13	71,711.10	537.11	9,181.29	7,355.27	735.53	45.91	7.50	7.5	0.50
Chromium			100.00	297.62		17,413.42	42,298.06	129,244.07	696.54	72.00	72.0	0.50
Hex. Chromium			180.00				413.58	601.57		72.00	72.0	2.00
Copper	1,001.10	293.80	793.07	293.80	20,327.23	231,301.05	27,932.01	603,282.91	389.04	235.00	235.0	1.00
Cyanide			50.00	789.47			514.50	2,176.74	37.75	N/A#	37.7	1.00
Lead			100.00	625.00	321.09	7,135.25	522.20	13,577.16		70.00	70.0	3.00
Mercury			100.00	2,564.10	19.63	153.97	7.83	7.83		ND	7.8	0.20
Nickel			1,000.00	265.96	1,084.14	34,417.11	2,962.29	26,774.53	172.09	36.50	36.5	1.00
Selenium							187.99			N/A#	188.0	3.00
Silver			30.00			3,524.64	-	751.97		70.00	30.0	1.00
Zinc	2,317.76	560.90	2,711.29	40.87	39,213.39	480,940.58	32,789.96	67,931.13	634.60	979.00	40.9	2.00

PART 8 – REPORTING FORMS

Permit No.: IWD-2019-01
 Outfall Number : 001
 Facility Name: Proposed Car Wash Facility
 Date:

**City of Mt. Shasta
 Industrial User
 Monitoring Report Form**

Parameter	Flow [gpd]	TTO [mg/L]	BOD [mg/L]	TSS [mg/L]	Arsenic [µg/L]	Cadmium [µg/L]	Chromium [µg/L]	Copper [µg/L]	Cyanide [µg/L]	Lead [µg/L]	Mercury [µg/L]	Nickel [µg/L]	Silver [µg/L]	Zinc [µg/L]	pH [S.U.]	UVT [%]
Frequency	Continuous	1/year	1/month	1/month	1/year	1/year	1/year	1/month	1/year	1/month	1/year	1/year	1/year	1/month	1/month	1/month
Sample Date																
Maximum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly Average																

- Note:
 1) Flow at the time sample is obtained.
 2) pH of at the time sample is obtained.

 Name of Permittee and/or Company(s)

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

 Name & Title

 Signature

 Date

Permit No.: **IWD-2019-01**
 Outfall Number: **001**
 Facility Name: **Proposed Car Wash Facility**
 Date:

**City of Mt. Shasta
 Industrial User
 Non-Compliance Report Form**

1) Description of Discharge: (Include Outfall Number(s))

2) Description of non-compliance (Attach additional pages if necessary):

LIST OF EFFLUENT VIOLATIONS (If Applicable)			
Outfall Number	Non-Compliance Parameter	Result Reported (Include units)	Permit Limit (Include units)

LIST OF MONITORING/REPORTING VIOLATIONS (If Applicable)		
Outfall Number	Non-Compliance Parameter	Monitoring/Reporting Violation

3) Cause of non-compliance (Attach additional pages if necessary):

4) Period of non-compliance (Include exact date(s) and time(s) or, if not corrected, the anticipated time the non compliance is expected to continue):

5) Description of steps taken and/or being taken to reduce or eliminate the non-compliance discharge and the to prevent its recurrence (Attach additional pages if necessary):

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

 Name and Title of Responsible Official (Type or Print)

 Signature of Responsible Official

 Date

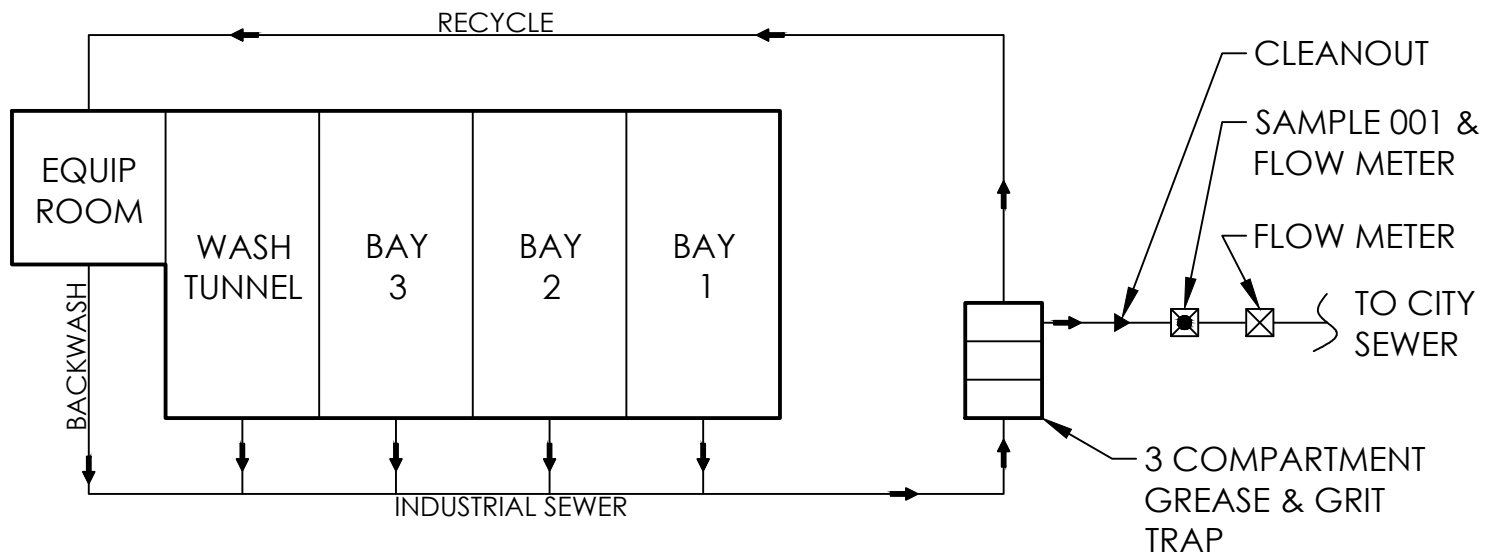


FIGURE 1
 JAMES FREEZE CAR WASH
 INDUSTRIAL WASTEWATER DISCHARGE SCHEMATIC