Official Draft Public Notice Version **October 29th, 2026**
The findings, determinations, and assertions contained in this document are not final and subject to change following the public comment period.

FACT SHEET
MANTI CITY CORPORATION
UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM (UPDES)
RENEWAL PERMIT: DISCHARGE
UPDES PERMIT NUMBER: UT0026026
MINOR MUNICIPAL

FACILITY CONTACTS

Operator Name:	Manti City Corporation
Person Name :	Jason Brown
Position:	City Manager
Phone Number:	(435) 835-2401
Person Name:	Cory Hatch
Position:	Public Works Director
Phone Number:	(435) 851-1011

Permittee Name:	Manti City Corporation (Manti City)
Facility Name:	Manti City Wastewater Treatment Facility
Mailing and Facility Address:	50 South Main Street, Suite 1 Manti, Utah 84642
Telephone:	(435) 851-1011
Actual Address:	1500 North 100 East t

DESCRIPTION OF FACILITY

The Manti City Wastewater Treatment Facility (Facility) is located at 1500 N 100 E, Manti, Sanpete County, Utah, and serves the City of Manti with the outfall located at latitude 39 ° 17' 10" N and longitude 111 ° 38' 05" W. The Facility design capacity is 0.33 million gallons per day (MGD), with a maximum design capacity of 0.97 MGD, an average five-year flow of 0.219 MGD, and a population equivalent of approximately 3,800 with 25 miles of sewer collection pipes. The Facility consists of an influent pump station, an 8-inch Parshall Flume, a flow meter, a grinder, a bar screen, and three facultative lagoon cells totaling 41.4 acres. Cell #1 is 14.1 acres, cell #2 is 13.6 acres, and cell #3 is 13.7 acres, with chlorination for effluent disinfection.

In 2011, Manti City had a Wastewater Capital Facility Plan completed and determined that a total containment lagoon would be the most cost-effective option. Manti City reconstructed the third cell in 2012 and planned to construct additional cells in the future. However, additional property is not available, and the seepage rate of the third cell is less than anticipated.

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The Facility UPDES Permit allows for discharge to the San Pitch River between October 1 and February 28 each calendar year. Currently, the Facility does not have a pipeline to the San Pitch River. The Facility holds the water in the lagoons during the winter months. During the summer, the water is piped to Manti City-owned property where it is reused to irrigate pasture. In the future, Manti City may install a pipe to discharge into the San Pitch River.

SUMMARY OF CHANGES FROM PREVIOUS PERMIT

Permit Limitations:
Flow was moved from a daily maximum to a maximum monthly average, and an oil and grease limit was added to be more consistent with other UPDES permits in the state. Total dissolved solids (TDS) limitations were updated in accordance with the wasteload analysis (WLA). Maximum monthly average limitations for ammonia and total residual chlorine (TRC) were added to this Permit. Limitations for pH were adjusted to reflect the Utah secondary standards requirements.

Monitoring:
Influent monitoring for biochemical oxygen demand (BOD_5) and total suspended solids (TSS) will be required monthly, even if discharge does not occur. TDS influent monitoring was removed to be consistent with other permits. Ammonia was changed to a composite sample to align with the Technology-Based Phosphorus Effluent Limits (TBPEL) in Utah Admin. Code R317-1-3.3E.

Reuse:
Reuse was removed from this Permit because it is in the process of being covered by an Operating Permit within the Division of Water Quality (DWQ).

DISCHARGE

DESCRIPTION OF DISCHARGE

The Facility operates as a total containment lagoon and maintains a UPDES Permit in the event that a discharge from its Facility is necessary. There was no discharge during the previous Permit cycle.

Outfall	Description of Discharge Point
001	Located at latitude 111° 37' 43" and longitude 39° 17' 24", effluent is discharged on the southwest side of the lagoon system.

RECEIVING WATERS AND STREAM CLASSIFICATION

The immediate receiving water for Outfall 001 is an unnamed ditch and then the San Pitch River. Per Utah Admin. Code R317-2-13.6(a) (Table 2.13.6.(a)), the designated beneficial uses for San Pitch River and tributaries from Gunnison Reservoir to U132 crossing and below United States Forrest Service (USFS) boundary, are: 2B, 3C, 3D, and 4.

Class 2B -- Protected for infrequent primary contact recreation. Also protected for secondary contact recreation where there is a low likelihood of ingestion of water or a low degree of bodily contact with the water. Examples include, but are not limited to, wading, hunting, and fishing.

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Class 3C -- Protected for nongame fish and other aquatic life, including the necessary aquatic organisms in their food chain.
Class 3D -- Protected for waterfowl, shore birds and other water-oriented wildlife not included in Classes 3A, 3B, or 3C, including the necessary aquatic organisms in their food chain.
Class 4 -- Protected for agricultural uses including irrigation of crops and stock watering.

TOTAL MAXIMUM DAILY LOAD (TMDL) REQUIREMENTS

The receiving water for this discharge, San Pitch River (San Pitch-3-1, UT16030004-005_01, San Pitch River and tributaries from Gunnison Reservoir to U132 crossing and below USFS boundary) is listed as impaired for Ammonia, Dissolved Oxygen, *E*. coli, and TDS according to the 2026 303(d) list. A TMDL for TDS was completed for the Middle San Pitch River (HUC #16030004) on November 18th, 2003 (UDWQ 2003). The TMDL identified a critical season of March 1 - September 30 and a TMDL target of 1,200 mg/L TDS. As a result, new discharges that were not assigned a wasteload allocation in the 2003 TMDL, and with the potential to cause or contribute to the existing impairment, are not permitted during the critical season. Discharges that occur during the non-critical season (October to February) must meet the TMDL target of less than 1,200 mg/L TDS.

BASIS FOR EFFLUENT LIMITATIONS

In accordance with regulations promulgated in 40 Code of Federal Regulations Part 122.44 and Utah Admin. Code R317-8-4.2, effluent limitations are derived from technology-based effluent limitations guidelines, Utah Secondary Treatment Standards (Utah Admin. Code R317-1-3.2) or Utah Water Quality Standards (Utah Admin. Code R317-2) as applicable. In cases where multiple limits have been developed, those that are more stringent apply. In cases where no limits or multiple limits have been developed, Best Professional Judgment (BPJ) of the permitting authority may be used where applicable. Best Professional Judgment, or BPJ, refers to a discretionary, best professional decision made by the permit writer based upon precedent, prevailing regulatory standards, or other relevant information.

Permit limits can also be derived from the WLA, which incorporates Secondary Treatment Standards, Water Quality Standards, including any applicable TMDL impairments as appropriate, Antidegradation Reviews (ADR), and designated uses into a water quality model that projects the effects of discharge concentrations on receiving water quality. Effluent limitations are those that the model demonstrates are sufficient to meet State water quality standards in the receiving waters. During this UPDES renewal permit development, a WLA and ADR were completed as appropriate and determined that this discharge will not cause a violation of water quality standards. An ADR Level I review was performed and concluded that an ADR Level II review was not required at this time since water quality will not be further lowered by the proposed activity, as per Utah Admin. Code R317-2-3.5.b.1.(b). The WLA indicates that the effluent limitations will be sufficiently protective of water quality, in order to meet State water quality standards in the receiving waters. The WLA with ADR information is attached to this Fact Sheet.

Limitations on TSS, BOD_5, *E. coli*, pH, and percent removal for BOD_5 and TSS are based on current Utah Secondary Treatment Standards, Utah Admin. Code R317-1-3.2 and R317-1-3.2.G. The percent removal reduction will continue from the previous Permit. The reduction is based on *40 CFR 133.105 Treatment Equivalent to secondary treatment,* which allows for a reduction in percent removal for waste stabilization pond facilities. The oil and grease is based on BPJ and was added to be consistent with other permits. TRC daily maximum, TDS from October through December, and daily maximum ammonia limitations have been carried over from the previous Permit pursuant to Utah Admin. Code R317-8-4.2(11). Acute ammonia controls were chosen for the maximum monthly average (chronic) because they were more stringent. Maximum monthly average TRC and TDS for January through March, and dissolved oxygen (DO) limitations are based on the water quality considerations of the San Pitch River (UAC R317-2) and were derived in the attached WLA. The Permittee is expected to be able to comply with these limitations.

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Reasonable Potential Analysis
Since January 1, 2016, DWQ has conducted reasonable potential analysis (RP) on all new and renewal applications received after that date. Following DWQ's September 10, 2015, Reasonable Potential Analysis Guidance (RP Guidance), RP for this Permit renewal was not conducted because of insufficient discharge data.

The Permit limitations are:

Parameter	**Table 1: Effluent Limitations[(a)] Discharge to Surface Water from October 1 – February 28**			
	Maximum Monthly Avg	Maximum Weekly Avg	Daily Minimum	Daily Maximum
Total Flow, MGD	0.97	--	--	--
Biochemical Oxygen Demand (BOD_5), mg/L	45	65	--	--
BOD_5 Min. % Removal	65	--	--	--
Total Suspended Solids (TSS), mg/L	45	65	--	--
TSS Min. % Removal	65	--	--	--
Dissolved Oxygen, mg/L	--	--	5.0	--
Total Ammonia (as N), mg/L				
Fall (Oct-Dec)	2.9	--	--	2.9
Winter (Jan-Feb)	2.9	--	--	2.9
Total Residual Chlorine (TRC), mg/L	0.011	--	--	0.015
E. coli, No./100mL	126	158	--	--
Total Dissolved Solids (TDS), mg/L				
Fall (Oct-Dec)	--	--	--	1,200
Winter (Jan-Feb)	--	--	--	994
Oil & Grease, mg/L	--	--	--	10.0
pH, Standard Units	--	--	6.5	9

SELF-MONITORING AND REPORTING REQUIREMENTS
The following self-monitoring requirements have changed from the previous Permit. Influent monitoring for BOD_5 and TSS will be required monthly even if discharge does not occur. TDS influent monitoring was removed. Ammonia was changed to composite sample to align with the TBPEL in Utah Admin. Code R317-1-3.3E. The Permit requires reports to be submitted monthly and annually, as applicable, on Discharge Monitoring Report (DMR) forms due 28 days after the end of the monitoring period. Effective January 1, 2017, monitoring results shall be submitted using NetDMR unless the Permittee has successfully petitioned for an exception. Lab sheets for biomonitoring, metals, and toxic organics shall be attached to the DMRs.

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Table 2: Self-Monitoring and Reporting Requirements[a]			
Parameter	Frequency	Sample Type	Units
Total Flow[b][c]	Continuous	Recorder	MGD
BOD_5[d]			
Influent	Monthly	Composite	mg/L
Effluent	Monthly	Composite	mg/L
TSS[d]			
Influent	Monthly	Composite	mg/L
Effluent	Monthly	Composite	mg/L
DO	Monthly	Grab	mg/L
Total Ammonia (as N)	Monthly	Composite	mg/L
TRC[e]	Monthly	Grab	mg/L
E. coli	Monthly	Grab	No./100mL
TDS	Monthly	Composite	mg/L
Oil & Grease[f]	When Sheen Observed	Grab	mg/L
pH	Monthly	Grab	SU
Orthophosphate (as P)	Monthly	Composite	mg/L
Total Phosphorus (as P)			
Influent	Monthly	Composite	mg/L
Effluent	Monthly	Composite	mg/L
Total Kjeldahl Nitrogen, TKN (as N)			
Influent	Monthly	Composite	mg/L
Effluent	Monthly	Composite	mg/L
Nitrate, NO3	Monthly	Composite	mg/L
Nitrite, NO2	Monthly	Composite	mg/L
Temperature	Monthly	Grab	mg/L
Metals[g]			
Influent			
Effluent			
Total Arsenic	Quarterly	Composite	mg/L
Total Cadmium	Quarterly	Composite	mg/L
Total Chromium	Quarterly	Composite	mg/L
Total Copper	Quarterly	Composite	mg/L
Total Cyanide	Quarterly	Composite	mg/L
Total Lead	Quarterly	Composite	mg/L
Total Mercury	Quarterly	Composite	mg/L
Total Nickel	Quarterly	Composite	mg/L
Total Selenium	Quarterly	Composite	mg/L
Total Silver	Quarterly	Composite	mg/L
Total Zinc	Quarterly	Composite	mg/L

Notes Tables 1 and 2

a. See Definitions, *Part VIII*, for definition of terms.
b. Flow measurements of influent/effluent volume shall be made in such a manner that the Permittee can affirmatively demonstrate that representative values are being obtained.
c. If the rate of discharge is controlled, the rate and duration of discharge shall be reported.
d. In addition to monitoring the final discharge, influent samples shall be taken and analyzed for this constituent at the same frequency as required for effluent discharge. During months where a discharge will not occur, influent samples shall be taken and analyzed at the frequency stipulated in **Table 2**.

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e. Analytical results less than 0.06 mg/l shall not be considered out of compliance with the Permit. For purposes of calculating averages and reporting on the Discharge Monitoring Report form, the following will apply:
   1) analytical values less than 0.02 mg/L shall be considered zero; and
   2) analytical values less than 0.06 mg/L and equal to or greater than 0.02 mg/L will be recorded as measured.
f. Oil and grease shall be sampled when sheen is present or visible. If no sheen is present or visible, report NA.
g. Metals are being sampled in support of the work being done for the Reasonable Potential Analysis.

Permit compliance monitoring will occur at the following locations for Outfall 001. DWQ has determined the location listed below to be representative of discharge at the Outfall location.

Outfall	Compliance Monitoring Location
001	Located at latitude 39°17'24.10" and longitude 111°38'05.32" in the new building for monitoring and controlling equipment is a sample tap for effluent compliance monitoring.

BIOSOLIDS

The State of Utah has adopted the 40 C.F.R. § 503 federal regulations for the disposal of sewage sludge (biosolids) by reference. However, since this facility is a lagoon, there is not any regular sludge production. Therefore 40 C.F.R. § 503 shall not apply at this time. In the future, if the sludge needs to be removed from the lagoons and is disposed in some way, the DWQ must be contacted prior to the removal of the sludge to ensure that all applicable state and federal regulations are met.

STORM WATER

Separate storm water Permits may be required based on the types of activities occurring on site.

Permit coverage under the Construction General Storm Water Permit (CGP) is required for any construction at the Facility which disturb an acre or more, or is part of a common plan of development or sale that is an acre or greater. A Notice of Intent (NOI) is required to obtain a construction storm water Permit prior to the period of construction.

Information on storm water Permit requirements can be found at http://stormwater.utah.gov.

PRETREATMENT REQUIREMENTS

Manti does not have an Approved POTW Pretreatment Program (Program). This is due to the flow through the plant being less than five (5) MGD and no known Significant Industrial Users.

The pretreatment requirements in the Permit assist DWQ in understanding the sources discharging to the Manti Publicly Owned Treatment Works (POTW) and determine the need for Industrial user oversight. Based on a review of the service area, certain Industrial Users may require further investigation to determine whether the facilities are Significant Industrial Users.

Manti does not need to develop a Program; however, information regarding Industrial Users discharging to the Publicly Owned Treatment Works (POTW) must be submitted as stated in Part II of the permit. This information will assist in determining the needs of DWQ to support Manti in implementing the Pretreatment

Standards and Requirements. Updates must be submitted within 60 days of any changes occurring with an existing Industrial User or a new Industrial User that begins discharging to the POTW.

Any wastewater discharged to the POTW from an Industrial User is subject to Federal, State and local regulations. Pursuant to Section 307 of the Clean Water Act, Manti and the Industrial Users discharging to the POTW shall comply with all applicable Federal General Pretreatment Regulations promulgated, found in 40 CFR 403, and the State Pretreatment Requirements found in UAC R317-8-8.

It is required that any Local Limits be submitted to DWQ for review. If Local Limits are developed, it is required that Manti perform an annual evaluation of the need to revise or develop technically based Local Limits for pollutants of concern to implement the general and specific prohibitions 40 CFR, Part 403.5(a) and Part 403.5(b). This evaluation may indicate that present Local Limits are sufficiently protective, need to be revised or should be developed.

BIOMONITORING REQUIREMENTS

A nationwide effort to control toxic discharges where effluent toxicity is an existing or potential concern is regulated in accordance with the Utah Pollutant Discharge Elimination System Permit and Enforcement Guidance Document for Whole Effluent Toxicity Control (biomonitoring), dated February 2018. Authority to require effluent biomonitoring is provided in Permit Conditions, Utah Admin. Code R317-8-4.2, Permit Provisions, Utah Admin. Code R317-8-5.3 and Water Quality Standards, Utah Admin. Code R317-2-5 and R317 -2-7.2.

The Permittee is a minor municipal facility that will be discharging an infrequent amount of effluent, in which toxicity is neither an existing concern, nor likely to be present. Based on these considerations, and the absence of receiving stream water quality monitoring data, there is no reasonable potential for toxicity in the Permittee's discharge (per State of Utah Permitting and Enforcement Guidance Document for WET Control). As such, there will be no numerical WET limitations or WET monitoring requirements in this permit. However, the permit will contain a toxicity limitation re-opener provision that allows for modification of the permit should additional information indicate the presence of toxicity in the discharge.

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PERMIT DURATION

It is recommended that this permit be effective for a duration of five (5) years.

Drafted and Reviewed by
Lindsay Cowles, Discharge Permit Writer
Daniel Griffin, Biosolids
Jennifer Robinson, Pretreatment
Lonnie Shull, Biomonitoring
Carl Adams, Storm Water
Lucy Parham, TMDL/Watershed Protection
Suzan Tahir, Wasteload Analysis/ADR
Utah Division of Water Quality, (801) 536-4300

PUBLIC NOTICE INFORMATION (to be updated after)

Began: Month Day, Year
Ended: Month Day, Year

Comments shall be received at: 195 North 1950 West
PO Box 144870
Salt Lake City, UT 84114-4870

The Public Notice of the draft permit was published on State of Utah and/or DWQ's website for at least 30 days as required.

During the public notice and comment period provided under Utah Admin. Code R317-8-6.5, any interested person may submit written comments on the draft permit and may request a public hearing, if no hearing has already been scheduled. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. All comments will be considered in making the final decision and shall be answered as provided in Utah Admin. Code R317-8-6.12.

ADDENDUM TO FACT SHEET

During finalization of the permit certain dates, spelling edits and minor language corrections were completed. Due to the nature of these changes, they are considered minor changes and the permit is not required to be re Public Noticed as provided in Utah Admin. Code R317-8-5.6(3).

Responsiveness Summary

To be determined.

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ATTACHMENT 1

Industrial Waste Survey

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Industrial Pretreatment Wastewater Survey



Do you periodically experience any of the following treatment works problems:

foam, floaties or unusual colors
plugged collection lines caused by grease, sand, flour, etc.
discharging excessive suspended solids, even in the winter
smells unusually bad
waste treatment facility doesn't seem to be treating the waste right

Perhaps the solution to a problem like one of these may lie in investigating the types and amounts of wastewater entering the sewer system from industrial users.

An industrial user (IU) is defined as a non-domestic user discharging to the waste treatment facility which meets any of the following criteria:

1. **has a lot of process wastewater (5% of the flow at the waste treatment facility or more than 25,000 gallons per work day.)**

   Examples: Food processor, dairy, slaughterhouse, industrial laundry.

2. **is subject to Federal Categorical Pretreatment Standards**;

   Examples: metal plating, cleaning or coating of metals, blueing of metals, aluminum extruding, circuit board manufacturing, tanning animal skins, pesticide formulating or packaging, and pharmaceutical manufacturing or packaging,

3. **is a concern to the POTW.**

   Examples: septage hauler, restaurant and food service, car wash, hospital, photo lab, carpet cleaner, commercial laundry.

All users of the water treatment facility are **prohibited** from making the following types of discharges:

1. A discharge which creates a fire or explosion hazard in the collection system.

2. A discharge which creates toxic gases, vapor or fumes in the collection system.

3. A discharge of solids or thick liquids which creates flow obstructions in the collection system.

4. An acidic discharge (low pH) which causes corrosive damage to the collection system.

5. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause problems in the collection system or at the waste treatment facility.

6. Waste haulers are prohibited from discharging without permission. (No midnight dumping!)

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When the solution to a sewer system problem may be found by investigating the types and amounts of wastewater entering the sewer system discharged from IUs, it's appropriate to conduct an Industrial Waste Survey.

An Industrial Waste Survey consists of:

Step 1: Identify Industrial Users

Make a list of all the commercial and industrial sewer connections.

Sources for the list:

business license, building permits, water and wastewater billing, Chamber of Commerce, newspaper, telephone book, yellow pages.

Split the list into two groups:

domestic wastewater only--no further information needed
everyone else (IUs)

Step 2: Preliminary Inspection

Go visit each IU identified on the "everybody else" list.

Fill out the **Preliminary Inspection Form** during the site visit.

Step 3: Informing the State

Please fax or send a copy of the Preliminary inspection form (both sides) to:

Jennifer Robinson

Division of Water Quality
288 North 1460 West
P.O. Box 144870
Salt Lake City, UT 84114-4870

Phone: (801) 536-4383
Fax: (801) 536-4301
E-mail: jenrobinson@utah.gov

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PRELIMINARY INSPECTION FORM

INSPECTION DATE ___ / ____ /

Name of Business **Person Contacted** _____
Address _____ **Phone Number** _____

_____

Description of Business _____

Principal product or service: _____

Raw Materials used: _____

_____

Production process is: [ ] Batch [ ] Continuous [ ] Both

Is production subject to seasonal variation? [ ] yes [ ] no
If yes, briefly describe seasonal production cycle.

_____

This facility generates the following types of wastes (check all that apply):

1. [ ] Domestic wastes (Restrooms, employee showers, etc.)
2. [ ] Cooling water, non-contact
3. [ ] Boiler/Tower blowdown
4. [ ] Cooling water, contact
5. [ ] Process
6. [ ] Equipment/Facility washdown
7. [ ] Air Pollution Control Unit
8. [ ] Storm water runoff to sewer
9. [ ] Other describe

Wastes are discharged to (check all that apply):

[ ] Sanitary sewer **[ ] Storm sewer**
[ ] Surface water **[ ] Ground water**
[ ] Waste haulers **[ ] Evaporation**
[ ] Other (describe)
Name of waste hauler(s), if used

_____

Is a grease trap installed? Yes No
Is it operational? Yes No

Does the business discharge a lot of process wastewater?

- **More than 5% of the flow to the waste treatment facility? Yes No**
- **More than 25,000 gallons per work day? Yes No**

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Does the business do any of the following:

[ ] Adhesives
[ ] Aluminum Forming
[ ] Battery Manufacturing
[ ] Copper Forming
[ ] Electric & Electronic Components
[ ] Explosives Manufacturing
[ ] Foundries
[ ] Inorganic Chemicals Mfg. or Packaging
[ ] Industrial Porcelain Ceramic Manufacturing
[ ] Iron & Steel
[ ] Metal Finishing, Coating or Cleaning
[ ] Mining
[ ] Nonferrous Metals Manufacturing
[ ] Organic Chemicals Manufacturing or Packaging
[ ] Paint & Ink Manufacturing
[ ] Pesticides Formulating or Packaging
[ ] Petroleum Refining
[ ] Pharmaceuticals Manufacturing or Packaging
[ ] Plastics Manufacturing
[ ] Rubber Manufacturing
[ ] Soaps & Detergents Manufacturing
[ ] Steam Electric Generation
[ ] Tanning Animal Skins
[ ] Textile Mills

[ ] Car Wash
[ ] Carpet Cleaner
[ ] Dairy
[ ] Food Processor
[ ] Hospital
[ ] Laundries
[ ] Photo Lab
[ ] Restaurant & Food Service
[ ] Septage Hauler
[ ] Slaughter House

Are any process changes or expansions planned during the next three years? Yes No
If yes, attach a separate sheet to this form describing the nature of planned changes or expansions.

_____
Inspector

_____
Waste Treatment Facility

Please send a copy of the preliminary inspection form (both sides) to:

Jennifer Robinson
Division of Water Quality
P. O. Box 144870
Salt Lake City, Utah 84114-4870

Phone: (801) 536-4383
Fax: (801) 536-4301
E-Mail: jenrobinson@utah.gov

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	Industrial User	Jurisdiction	SIC Codes	Categorical Standard Number	Total Average Process Flow (gpd)	Total Average Facility Flow (gpd)	Facility Description
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							

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ATTACHMENT 2

Wasteload Analysis

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Utah Division of Water Quality
Statement of Basis
ADDENDUM
Wasteload Analysis and Antidegradation Level I Review

Date: **August 20, 2026**

Prepared by: **Suzan Tahir**
Standards and Technical Services

Facility: **Manti Lagoons.**
UPDES No. UT0026026

Receiving water: **San Pitch River (2B, 3C, 3D, 4)**

This addendum summarizes the wasteload analysis that was performed to determine water quality based effluent limits (WQBEL) for this discharge. Wasteload analyses are performed to determine point source effluent limitations necessary to maintain designated beneficial uses by evaluating projected effects of discharge concentrations on in-stream water quality. The wasteload analysis also takes into account downstream designated uses (UAC R317-2-8). Projected concentrations are compared to numeric water quality standards to determine acceptability. The numeric criteria in this wasteload analysis may be modified by narrative criteria and other conditions determined by staff of the Division of Water Quality.

Facility

Manti City has a piped sewer collection system that terminates at the sewer lagoons. Wastewater from the system outflows into three cells lagoon system. The last cell (secondary cell) has the capacity to release water from the lagoons into a pipes system (Outfall #001) that currently goes into a sprinkler pivot for land application. The system also has the option to discharge to the San Pitch River if needed in the future as indicated in the original permit. The facility (Outfall 001) is capable of using gas chlorine to disinfect the effluent water if the E.coli concentration exceeds the effluent limitations.

Discharge

Outfall 001: Unnamed Ditch → San Pitch River

The mean monthly design discharge is 0.97 MGD (1.5 cfs) for the facility.

Receiving Water

The immediate receiving water for Outfall 001 is an unnamed ditch and then the San Pitch River. Per UAC R317-2-13.6(a) (Table 2.13.6.(a)), the designated beneficial uses for San Pitch River and

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tributaries from Gunnison Reservoir to U132 crossing and below USFS boundary, are; 2B, 3C, 3D, and 4.

- *Class 2B - Protected for infrequent primary contact recreation. Also protected for secondary contact recreation where there is a low likelihood of ingestion of water or a low degree of bodily contact with the water. Examples include, but are not limited to, wading, hunting, and fishing.*

- *Class 3C - Protected for nongame fish and other aquatic life, including the necessary aquatic organisms in their food chain.*

- *Class 3D - Protected for waterfowl, shore birds and other water-oriented wildlife not included in Classes 3A, 3B, or 3C, including the necessary aquatic organisms in their food chain.*

- *Class 4 - Protected for agricultural uses including irrigation of crops and stock watering.*

Critical Flows

The critical flow for the wasteload analysis is the lowest stream flow for seven consecutive days with a ten-year return frequency (7Q10). The source of flow data was the Utah Division of Water Quality's monitoring station 4946450 (San Pitch River west of Manti above Gunnison Reservoir at county road crossing) for the period 2006-2026. Due to a lack of flow records for the San Pitch River at this location, the 20th percentile of flow measurements was used to represent the critical low flow conditions for each season. Since fall season has the lowest critical flows, Fall was set as the critical season in the model.

Table 1: Seasonal critical low flow (cfs)

Season	**San Pitch River at Station 4946450 for 2006-2026**
Summer (July-September)	0.24
Fall (Oct-Dec)	**0.20**
Winter (Jan-Mar)	0.9
Spring (Apr-June)	1.0
Oct-Feb	0.24 cfs
All Seasons 20th	0.25

Ambient Water Quality Characterization

San Pitch River water quality was characterized based on samples collected from monitoring station 4946450 (San Pitch River west of Manti above Gunnison Reservoir at county road crossing) for the period 2006-2026.

Effluent Characterization

To model effluent characterization for the non-discharging Manti lagoon facility, discharge data from the nearby Ephraim lagoon system was adopted as a regional surrogate. This approach establishes a more representative assumption for the water quality parameters (temperature, pH, etc.) needed in the model.

Assessment Category and Total Maximum Daily Load (TMDL)

The receiving water for this discharge, San Pitch River (San Pitch-3-1, UT16030004-005_01, San Pitch River and tributaries from Gunnison Reservoir to U132 crossing and below USFS boundary) is listed as impaired for Ammonia, Dissolved Oxygen, *E*. coli, and total dissolved solids (TDS) according to the 2026 303(d) list. A TMDL for TDS was completed for the Middle San Pitch River (HUC #16030004) on November 18th, 2003 (UDWQ 2003). The TMDL identified a critical season of March 1 - September 30 and a TMDL target of 1,200 mg/L TDS. As a result, new discharges that were not assigned a wasteload allocation in the 2003 TMDL and with the potential to cause or contribute to the existing impairment are not permitted during the critical season. Discharges that occur during the non-critical season (October to February) must meet the TMDL target of less than 1,200 mg/L TDS.

Parameters of Concern

The potential parameters of concern identified for the discharge/receiving water were BOD_5, total suspended solids, TDS, total ammonia, dissolved oxygen, pH, *E*.coli, and total residual chlorine as determined in consultation with the UPDES Permit Writer.

Mixing Zone

The maximum allowable mixing zone is 15 minutes of travel time for acute conditions, not to exceed 50% of stream width, and 2,500 feet for chronic conditions, per UAC R317-2-5. Water quality standards must be met at the end of the mixing zone.

Since the receiving water low flow (0.2 cfs) is equal to or less than twice the flow of a point source discharge (1.5 cfs), the combined flows are considered to be totally mixed.

WET Limits

The percent of effluent in the receiving water in a fully mixed condition, and acute and chronic dilution in a not fully mixed condition are calculated in the WLA in order to generate WET limits. The LC_{50} (lethal concentration, 50%) percent effluent for acute toxicity and the IC_{25} (inhibition concentration, 25%) percent effluent for chronic toxicity, as determined by the WET test, needs to be below the WET limits, as determined by the WLA. The WET limit for LC_{50} is typically 100% effluent and does not need to be determined by the WLA.

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Table 2: WET Limits for IC_{25}

Outfall	Percent Effluent
Outfall 001	86.2%

Wasteload Allocation Methods

Effluent limits were determined for conservative constituents using a simple mass balance mixing analysis (UDWQ 2012). The mass balance analysis is summarized in the Wasteload Addendum.

The water quality standard for chronic ammonia toxicity is dependent on temperature and pH, and the water quality standard for acute ammonia toxicity is dependent on pH. The AMMTOX Model developed by University of Colorado and adapted by Utah DWQ and EPA Region VIII was used to determine ammonia effluent limits (Lewis et al. 2002). The analysis is summarized in the Wasteload Addendum.

Models and supporting documentation are available for review upon request.

Antidegradation Level I Review

The objective of the Level I ADR is to ensure the protection of existing uses, defined as the beneficial uses attained in the receiving water on or after November 28, 1975. No evidence is known that the existing uses deviate from the designated beneficial uses for the receiving water. Therefore, the beneficial uses will be protected if the discharge remains below the WQBELs presented in this wasteload.

Antidegradation Level II Review

A Level II Antidegradation Review (ADR) is not required for this facility because it is a simple renewal with no changes in operations.

Documents:

WLA Document *:*

- *Manti Lagoons_WLADoc_2026.docx*

Wasteload Analysis and Addendum:

- *Manti Lagoons_WLA_2026.xlsm*
- *Manti Lagoons_WLA_SOB_2026.pdf*

References:

Utah Division of Water Quality. 2026. *Final 2026 Integrated Report.* Utah Department of Environmental Quality.
https://lf-public.deq.utah.gov/WebLink/DocView.aspx?id=684130&dbid=0&repo=Public&cr=1

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Utah Division of Water Quality. (2003). *San Pitch River Watershed Water Quality Management Plan*. Utah Department of Environmental Quality. https://lf-public.deq.utah.gov/WebLink/ElectronicFile.aspx?docid=15463&eqdocs=DWQ-2015-006598&dbid=0&repo=Public

Utah Division of Water Quality. 2021. *Utah Wasteload Analysis Procedures Version 2.0.* Utah Department of Environmental Quality. https://documents.deq.utah.gov/water-quality/standards-technical-services/DWQ-2021-000684.pdf

Lewis, B., J. Saunders, and M. Murphy. 2002. *Ammonia Toxicity Model (AMMTOX, Version2): A Tool for Determining Effluent Ammonia Limits*. University of Colorado, Center for Limnology.

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WASTELOAD ANALYSIS [WLA]
Addendum: Statement of Basis

11-Aug-26
4:00 PM

Facilities: **Manti Lagoons** **UPDES No: UT-UT0026026**
Discharging to: **Unnamed Ditch -->San Pitch River**

I. Introduction

Wasteload analyses are performed to determine point source effluent limitations necessary to maintain designated beneficial uses by evaluating projected effects of discharge concentrations on in-stream water quality. The wasteload analysis also takes into account downstream designated uses [R317-2-8, UAC]. Projected concentrations are compared to numeric water quality standards to determine acceptability. The anti-degradation policy and procedures are also considered. The primary in-stream parameters of concern may include metals (as a function of hardness), total dissolved solids (TDS), total residual chlorine (TRC), un-ionized ammonia (as a function of pH and temperature, measured and evaluated interms of total ammonia), and dissolved oxygen.

Mathematical water quality modeling is employed to determine stream quality response to point source discharges. Models aid in the effort of anticipating stream quality at future effluent flows at critical environmental conditions (e.g., low stream flow, high temperature, high pH, etc).

The numeric criteria in this wasteload analysis may always be modified by narrative criteria and other conditions determined by staff of the Division of Water Quality.

II. Receiving Water and Stream Classification

Unnamed Ditch -->San Pitch River:	2B, 3C, 3D, 4
Antidegradation Review:	Level I review completed. Level II review not required.

III. Numeric In-Stream Criteria for Protection of Aquatic Wildlife

Total Ammonia (TNH3)	Varies as a function of Temperature and pH Rebound. See Water Quality Standards
Chronic Total Residual Chlorine (TRC)	0.011 mg/l (4 Day Average) 0.019 mg/l (1 Hour Average)
Dissolved Oxygen (DO)	5.00 mg/l (30 Day Average) N/A mg/l (7Day Average) 3.00 mg/l (instantaneous)
Maximum Total Dissolved Solids	1200.0 mg/l

Acute and Chronic Heavy Metals (Dissolved)

	4 Day Average (Chronic) Standard			1 Hour Average (Acute) Standard		
Parameter	**Concentration**		**Load***	**Concentration**		**Load***
Aluminum	87.00	ug/l**	0.704 lbs/day	750.00	ug/l	6.066 lbs/day
Arsenic	150.00	ug/l	1.213 lbs/day	340.00	ug/l	2.750 lbs/day
Cadmium	2.12	ug/l	0.017 lbs/day	6.38	ug/l	0.052 lbs/day
Chromium III	237.50	ug/l	1.921 lbs/day	4969.05	ug/l	40.191 lbs/day
ChromiumVI	11.00	ug/l	0.089 lbs/day	16.00	ug/l	0.129 lbs/day
Copper	26.86	ug/l	0.217 lbs/day	44.94	ug/l	0.363 lbs/day
Iron				1000.00	ug/l	8.088 lbs/day
Lead	15.38	ug/l	0.124 lbs/day	394.69	ug/l	3.192 lbs/day
Mercury	0.0120	ug/l	0.000 lbs/day	2.40	ug/l	0.019 lbs/day
Nickel	148.64	ug/l	1.202 lbs/day	1336.95	ug/l	10.813 lbs/day
Selenium	4.60	ug/l	0.037 lbs/day	18.40	ug/l	0.149 lbs/day
Silver	N/A	ug/l	N/A lbs/day	31.81	ug/l	0.257 lbs/day
Zinc	341.98	ug/l	2.766 lbs/day	341.98	ug/l	2.766 lbs/day

* Allowed below discharge
**Chronic Aluminum standard applies only to waters with a pH < 7.0 and a Hardness < 50 mg/l as CaCO3

Metals Standards Based upon a Hardness of 344.8 mg/l as CaCO3

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Organics [Pesticides]

	4 Day Average (Chronic) Standard				1 Hour Average (Acute) Standard			
Parameter	**Concentration**		**Load***		**Concentration**		**Load***	
Aldrin					1.500	ug/l	0.012	lbs/day
Chlordane	0.004	ug/l	0.040	lbs/day	1.200	ug/l	0.010	lbs/day
DDT, DDE	0.001	ug/l	0.009	lbs/day	0.550	ug/l	0.004	lbs/day
Dieldrin	0.056	ug/l	0.525	lbs/day	0.240	ug/l	0.002	lbs/day
Endosulfan	0.056	ug/l	0.525	lbs/day	0.110	ug/l	0.001	lbs/day
Endrin	0.036	ug/l	0.338	lbs/day	0.086	ug/l	0.001	lbs/day
Guthion					0.010	ug/l	0.000	lbs/day
Heptachlor	0.004	ug/l	0.036	lbs/day	0.260	ug/l	0.002	lbs/day
Lindane	0.080	ug/l	0.751	lbs/day	1.000	ug/l	0.008	lbs/day
Methoxychlor					0.030	ug/l	0.000	lbs/day
Mirex					0.010	ug/l	0.000	lbs/day
Parathion					0.066	ug/l	0.001	lbs/day
PCB's	0.014	ug/l	0.131	lbs/day	N/A	ug/l	#VALUE!	lbs/day
entachlorophenol	15.00	ug/l	140.727	lbs/day	19.000	ug/l	0.154	lbs/day
Toxephene	0.0002	ug/l	0.002	lbs/day	0.7300	ug/l	0.006	lbs/day

IV. Numeric Stream Standards for Protection of Agriculture

	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard	
	Concentration	**Load***	**Concentration**	**Load***
Arsenic			100.0 ug/l	lbs/day
Boron			750.0 ug/l	lbs/day
Cadmium			10.0 ug/l	0.04 lbs/day
Chromium			100.0 ug/l	lbs/day
Copper			200.0 ug/l	lbs/day
Lead			100.0 ug/l	lbs/day
Selenium			50.0 ug/l	lbs/day
TDS, Summer			1200.0 mg/l	4.85 tons/day

V. Numeric Stream Standards for Protection of Human Health (Class 1C Waters)

	4 Day Average (Chronic) Standard		1 Hour Average (Acute) Standard	
Metals	**Concentration**	**Load***	**Concentration**	**Load***
Arsenic			ug/l	lbs/day
Barium			ug/l	lbs/day
Cadmium			ug/l	lbs/day
Chromium			ug/l	lbs/day
Lead			ug/l	lbs/day
Mercury			ug/l	lbs/day
Selenium			ug/l	lbs/day
Silver			ug/l	lbs/day
Fluoride (3)			ug/l	lbs/day
to			ug/l	lbs/day
Nitrates as N			ug/l	lbs/day

Chlorophenoxy Herbicides

2,4-D	ug/l	lbs/day
2,4,5-TP	ug/l	lbs/day
Endrin	ug/l	lbs/day
hexane (Lindane)	ug/l	lbs/day
Methoxychlor	ug/l	lbs/day
Toxaphene	ug/l	lbs/day

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VI. Numeric Stream Standards the Protection of Human Health from Water & Fish Consumption [Toxics]

Maximum Conc., ug/l - Acute Standards

	Class 1C			Class 3A, 3B		
Toxic Organics	[2 Liters/Day for 70 Kg Person over 70 Yr.]			[6.5 g for 70 Kg Person over 70 Yr.]		
Acenaphthene	ug/l	lbs/day	90.0	ug/l	0.84	lbs/day
Acrolein	ug/l	lbs/day	400.0	ug/l	3.75	lbs/day
Acrylonitrile	ug/l	lbs/day	7.0	ug/l	0.07	lbs/day
Benzene	ug/l	lbs/day	51.0	ug/l	0.48	lbs/day
Benzidine	ug/l	lbs/day	0.0	ug/l	0.00	lbs/day
Carbon tetrachlor	ug/l	lbs/day	5.0	ug/l	0.05	lbs/day
Chlorobenzene	ug/l	lbs/day	800.0	ug/l	7.51	lbs/day
1,2,4-Trichlorobenzene						
Hexachlorobenze	ug/l	lbs/day	0.0	ug/l	0.00	lbs/day
1,2-Dichloroethar	ug/l	lbs/day	2000.0	ug/l	18.76	lbs/day
1,1,1-Trichloroethane						
Hexachloroethan	ug/l	lbs/day	0.1	ug/l	0.00	lbs/day
1,1-Dichloroethane						
1,1,2-Trichloroeth	ug/l	lbs/day	8.9	ug/l	0.08	lbs/day
1,1,2,2-Tetrachlo	ug/l	lbs/day	3.0	ug/l	0.03	lbs/day
Chloroethane			0.0	ug/l	0.00	lbs/day
Bis(2-chloroethyl)	ug/l	lbs/day	2.2	ug/l	0.02	lbs/day
2-Chloroethyl viny	ug/l	lbs/day	0.0	ug/l	0.00	lbs/day
2-Chloronaphthal	ug/l	lbs/day	1000.0	ug/l	9.38	lbs/day
2,4,6-Trichlorophe	ug/l	lbs/day	2.8	ug/l	0.03	lbs/day
p-Chloro-m-cresol			0.0	ug/l	0.00	lbs/day
Chloroform (HM)	ug/l	lbs/day	2000.0	ug/l	18.76	lbs/day
2-Chlorophenol	ug/l	lbs/day	800.0	ug/l	7.51	lbs/day
1,2-Dichlorobenze	ug/l	lbs/day	3000.0	ug/l	28.15	lbs/day
1,3-Dichlorobenze	ug/l	lbs/day	10.0	ug/l	0.09	lbs/day
1,4-Dichlorobenze	ug/l	lbs/day	900.0	ug/l	8.44	lbs/day
3,3'-Dichlorobenz	ug/l	lbs/day	0.2	ug/l	0.00	lbs/day
1,1-Dichloroethyle	ug/l	lbs/day	20000.0	ug/l	187.64	lbs/day
1,2-trans-Dichlorc	ug/l	lbs/day	4000.0	ug/l	37.53	lbs/day
2,4-Dichlorophen	ug/l	lbs/day	60.0	ug/l	0.56	lbs/day
1,2-Dichloropropa	ug/l	lbs/day	31.0	ug/l	0.29	lbs/day
1,3-Dichloropropy	ug/l	lbs/day	1700.0	ug/l	15.95	lbs/day
2,4-Dimethylphen	ug/l	lbs/day	3000.0	ug/l	28.15	lbs/day
2,4-Dinitrotoluene	ug/l	lbs/day	1.7	ug/l	0.02	lbs/day
2,6-Dinitrotoluene	ug/l	lbs/day	0.0	ug/l	0.00	lbs/day
1,2-Diphenylhydra	ug/l	lbs/day	0.2	ug/l	0.00	lbs/day
Ethylbenzene	ug/l	lbs/day	130.0	ug/l	1.22	lbs/day
Fluoranthene	ug/l	lbs/day	20.0	ug/l	0.19	lbs/day
4-Chlorophenyl phenyl ether						
4-Bromophenyl phenyl ether						
Bis(2-chloroisopro	ug/l	lbs/day	65000.0	ug/l	6.10E+02	lbs/day
Bis(2-chloroethox	ug/l	lbs/day	0.0	ug/l	0.00	lbs/day
Methylene chlorid	ug/l	lbs/day	1000.0	ug/l	9.38	lbs/day
Methyl chloride (H	ug/l	lbs/day	0.0	ug/l	0.00	lbs/day
Methyl bromide (H	ug/l	lbs/day	10000.0	ug/l	93.82	lbs/day
Bromoform (HM)	ug/l	lbs/day	120.0	ug/l	1.13	lbs/day
Dichlorobromome	ug/l	lbs/day	27.0	ug/l	0.25	lbs/day
Chlorodibromome	ug/l	lbs/day	21.0	ug/l	0.20	lbs/day
Hexachlorobutadi	ug/l	lbs/day	0.0	ug/l	0.00	lbs/day
Hexachlorocyclop	ug/l	lbs/day	4.0	ug/l	0.04	lbs/day
Isophorone	ug/l	lbs/day	1800.0	ug/l	16.89	lbs/day
Naphthalene						
Nitrobenzene	ug/l	lbs/day	600.0	ug/l	5.63	lbs/day
2-Nitrophenol	ug/l	lbs/day	0.0	ug/l	0.00	lbs/day
4-Nitrophenol	ug/l	lbs/day	0.0	ug/l	0.00	lbs/day
2,4-Dinitrophenol	ug/l	lbs/day	14000.0	ug/l	131.34	lbs/day
4,6-Dinitro-o-cres	ug/l	lbs/day	765.0	ug/l	7.18	lbs/day
N-Nitrosodimethy	ug/l	lbs/day	3.0	ug/l	0.03	lbs/day
N-Nitrosodipheny	ug/l	lbs/day	6.0	ug/l	0.06	lbs/day
N-Nitrosodi-n-pro	ug/l	lbs/day	0.5	ug/l	0.00	lbs/day
Pentachlorophen	ug/l	lbs/day	0.0	ug/l	0.00	lbs/day
Phenol	ug/l	lbs/day	3.0E+05	ug/l	2.81E+03	lbs/day
Bis(2-ethylhexyl)p	ug/l	lbs/day	0.4	ug/l	0.00	lbs/day
Butyl benzyl phth	ug/l	lbs/day	0.1	ug/l	0.00	lbs/day

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Di-n-butyl phthala	ug/l	lbs/day	30.0	ug/l	0.28 lbs/day
Di-n-octyl phthlate					
Diethyl phthalate	ug/l	lbs/day	600.0	ug/l	5.63 lbs/day
Dimethyl phthlate	ug/l	lbs/day	2.0E+03	ug/l	1.88E+01 lbs/day
Benzo(a)anthrace	ug/l	lbs/day	0.0	ug/l	0.00 lbs/day
Benzo(a)pyrene (	ug/l	lbs/day	0.0	ug/l	0.00 lbs/day
Benzo(b)fluoranth	ug/l	lbs/day	0.0	ug/l	0.00 lbs/day
Benzo(k)fluoranth	ug/l	lbs/day	0.0	ug/l	0.00 lbs/day
Chrysene (PAH)	ug/l	lbs/day	0.1	ug/l	0.00 lbs/day
Acenaphthylene (PAH)					
Anthracene (PAH	ug/l	lbs/day	400.0	ug/l	3.75 lbs/day
Dibenzo(a,h)anth	ug/l	lbs/day	0.0	ug/l	0.00 lbs/day
Indeno(1,2,3-cd)p	ug/l	lbs/day	0.0	ug/l	0.00 lbs/day
Pyrene (PAH)	ug/l	lbs/day	30.0	ug/l	0.28 lbs/day
Tetrachloroethyle	ug/l	lbs/day	520.0	ug/l	4.88 lbs/day
Toluene	ug/l	lbs/day	520	ug/l	4.88 lbs/day
Trichloroethylene	ug/l	lbs/day	7.0	ug/l	0.07 lbs/day
Vinyl chloride	ug/l	lbs/day	1.6	ug/l	0.02 lbs/day
					lbs/day
Pesticides					lbs/day
Aldrin	ug/l	lbs/day	0.0	ug/l	0.00 lbs/day
Dieldrin	ug/l	lbs/day	0.0	ug/l	0.00 lbs/day
Chlordane	ug/l	lbs/day	0.0	ug/l	0.00 lbs/day
4,4'-DDT	ug/l	lbs/day	0.0	ug/l	0.00 lbs/day
4,4'-DDE	ug/l	lbs/day	0.0	ug/l	0.00 lbs/day
4,4'-DDD	ug/l	lbs/day	0.0	ug/l	0.00 lbs/day
alpha-Endosulfan	ug/l	lbs/day	30.0	ug/l	0.28 lbs/day
beta-Endosulfan	ug/l	lbs/day	40.0	ug/l	0.38 lbs/day
Endosulfan sulfat	ug/l	lbs/day	40.0	ug/l	0.38 lbs/day
Endrin	ug/l	lbs/day	0.0	ug/l	0.00 lbs/day
Endrin aldehyde	ug/l	lbs/day	1.0	ug/l	0.01 lbs/day
Heptachlor	ug/l	lbs/day	0.0	ug/l	0.00 lbs/day
Heptachlor epoxide					
PCB's					
PCB 1242 (Aroch	ug/l	lbs/day	0.0	ug/l	0.00 lbs/day
PCB-1254 (Aroch	ug/l	lbs/day	0.0	ug/l	0.00 lbs/day
PCB-1221 (Aroch	ug/l	lbs/day	0.0	ug/l	0.00 lbs/day
PCB-1232 (Aroch	ug/l	lbs/day	0.0	ug/l	0.00 lbs/day
PCB-1248 (Aroch	ug/l	lbs/day	0.0	ug/l	0.00 lbs/day
PCB-1260 (Aroch	ug/l	lbs/day	0.0	ug/l	0.00 lbs/day
PCB-1016 (Aroch	ug/l	lbs/day	0.0	ug/l	0.00 lbs/day
Pesticide					
Toxaphene	ug/l		0.0	ug/l	0.00 lbs/day
Dioxin					
Dioxin (2,3,7,8-TC	ug/l	lbs/day			

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Metals				
Antimony	ug/l	lbs/day		
Arsenic	ug/l	lbs/day	640.00 ug/l	6.00 lbs/day
Asbestos	ug/l	lbs/day		
Beryllium				
Cadmium				
Chromium (III)				
Chromium (VI)				
Copper				
Cyanide	ug/l	lbs/day	4.0E+02 ug/l	3.75 lbs/day
Lead	ug/l	lbs/day		
Mercury			0.15 ug/l	0.00 lbs/day
Nickel			4600.00 ug/l	43.16 lbs/day
Selenium	ug/l	lbs/day		
Silver	ug/l	lbs/day		
Thallium			0.47 ug/l	0.00 lbs/day
Zinc				

There are additional standards that apply to this receiving water, but were not considered in this modeling/waste load allocation analysis.

VII. Mathematical Modeling of Stream Quality

Model configuration was accomplished utilizing standard modeling procedures. Data points were plotted and coefficients adjusted as required to match observed data as closely as possible.

The modeling approach used in this analysis included one or a combination of the following models.

(1) The Utah River Model, Utah Division of Water Quality, 1992. Based upon STREAMDO IV (Region VIII) and Supplemental Ammonia Toxicity Models; EPA Region VIII, Sept. 1990 and QUAL2E (EPA, Athens, GA).

(2) Utah Ammonia/Chlorine Model, Utah Division of Water Quality, 1992.

(3) AMMTOX Model, University of Colorado, Center of Limnology, and EPA Region 8

(4) Principles of Surface Water Quality Modeling and Control. Robert V. Thomann, et.al. Harper Collins Publisher, Inc. 1987, pp. 644.

Coefficients used in the model were based, in part, upon the following references:

(1) Rates, Constants, and Kinetics Formulations in Surface Water Quality Modeling. Environmental Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Athens Georgia. EPA/600/3-85/040 June 1985.

(2) Principles of Surface Water Quality Modeling and Control. Robert V. Thomann, et.al. Harper Collins Publisher, Inc. 1987, pp. 644.

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VIII. Modeling Information

The required information for the model may include the following information for both the upstream conditions at low flow and the effluent conditions:

Flow, Q, (cfs or MGD)	D.O. mg/l
Temperature, Deg. C.	Total Residual Chlorine (TRC), mg/l
pH	Total NH3-N, mg/l
BOD5, mg/l	Total Dissolved Solids (TDS), mg/l
Metals, ug/l	Toxic Organics of Concern, ug/l

Other Conditions

In addition to the upstream and effluent conditions, the models require a variety of physical and biological coefficients and other technical information. In the process of actually establishing the permit limits for an effluent, values are used based upon the available data, model calibration, literature values, site visits and best professional judgement.

Model Inputs

The following is upstream and discharge information that was utilized as inputs for the analysis. Dry washes are considered to have an upstream flow equal to the flow of the discharge.

Current Upstream Information

	Stream Critical Low Flow cfs	Temp. Deg. C	pH	T-NH3 mg/l as N	BOD5 mg/l	DO mg/l	TRC mg/l	TDS mg/l
Summer	0.24	19.3	8.2	0.04	1.00	---	0.01	890.6
Fall	0.20	7.2	8.2	0.03	1.00	9.02	0.01	682.8
Winter	0.90	3.3	8.3	0.10	1.00	---	0.01	1111.5
Spring	1.00	15.8	8.3	0.08	1.00	---	0.01	1509.0

Dissolved Metals	Al ug/l	As ug/l	Cd ug/l	CrIII ug/l	CrVI ug/l	Copper ug/l	Fe ug/l	Pb ug/l
All Seasons	13.00	0.795*	0.05	0.795*	2.97	3.22	79.5	0.53

Dissolved Metals	Hg ug/l	Ni ug/l	Se ug/l	Ag ug/l	Zn ug/l	Boron ug/l		
All Seasons	0.0000	2.50	1.45	0.25	12.96	173.0		* ~80% MDL

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Projected Discharge Information

Season	Flow, MGD	Temp.
Summer	0.97000	21.2
Fall	0.97000	15.9
Winter	0.97000	8.3
Spring	0.97000	12.3

All model numerical inputs, intermediate calculations, outputs and graphs are available for discussion, inspection and copy at the Division of Water Quality.

IX. Effluent Limitations

Current State water quality standards are required to be met under a variety of conditions including in-stream flows targeted to the 7-day, 10-year low flow (R317-2-9).

Other conditions used in the modeling effort coincide with the environmental conditions expected at low stream flows.

Effluent Limitation for Flow based upon Water Quality Standards

In-stream criteria of downstream segments will be met with an effluent flow maximum value as follows:

Season	Daily Average	
Summer	0.970 MGD	1.501 cfs
Fall	0.970 MGD	1.501 cfs
Winter	0.970 MGD	1.501 cfs
Spring	0.970 MGD	1.501 cfs

Flow Requirement or Loading Requirement

The calculations in this wasteload analysis utilize the maximum effluent discharge flow of 0.97 MGD. If the discharger is allowed to have a flow greater than 0.97 MGD during 7Q10 conditions, and effluent limit concentrations as indicated, then water quality standards will be violated. In order to prevent this from occuring, the permit writers must include the discharge flow limititation as indicated above; or, include loading effluent limits in the permit.

Effluent Limitation for Whole Effluent Toxicity (WET) based upon WET Policy

Effluent Toxicity will not occur in downstream segements if the values below are met.

WET Requirements	LC50 >	100.0%	Effluent	[Acute]
	IC25 >	86.2%	Effluent	[Chronic]

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Effluent Limitation for Biological Oxygen Demand (30 day average BOD) based upon Water Quality Standards or Regulations

In-stream criteria of downstream segments for Dissolved Oxygen will be met with an effluent BOD limitation as follows:

Season	Concentration		
Summer	25.0	mg/l as BOD5	202.2 lbs/day
Fall	25.0	mg/l as BOD5	202.2 lbs/day
Winter	25.0	mg/l as BOD5	202.2 lbs/day
Spring	25.0	mg/l as BOD5	202.2 lbs/day

Effluent Limitation for Dissolved Oxygen (30 day average DO) based upon Water Quality Standards

In-stream criteria of downstream segments for Dissolved Oxygen will be met with an effluent D.O. limitation as follows:

	ELS Absent **Concentrations**
Summer	5.0
Fall	5.0
Winter	5.0
Spring	5.0

Effluent Limitation for Total Ammonia based upon Water Quality Standards

In-stream criteria of downstream segments for Total Ammonia will be met with an effluent limitation (expressed as Total Ammonia as N) as follows:

Season		**Concentration**		**Load**	
Summer	4 Day Avg. - Chronic	2.63	mg/l as N	21.3	lbs/day
	1 Hour Avg. - Acute	15.32	mg/l as N	123.9	lbs/day
Fall	4 Day Avg. - Chronic	3.45	mg/l as N	27.9	lbs/day
	1 Hour Avg. - Acute	15.02	mg/l as N	121.5	lbs/day
Winter	4 Day Avg. - Chronic	3.76	mg/l as N	30.4	lbs/day
	1 Hour Avg. - Acute	9.22	mg/l as N	74.6	lbs/day
Spring	4 Day Avg. - Chronic	4.04	mg/l as N	32.7	lbs/day
	1 Hour Avg. - Acute	13.03	mg/l as N	105.4	lbs/day

Acute limit calculated with an Acute Zone of Initial Dilution (ZID) to be equal to 100.%.

Effluent Limitation for Total Residual Chlorine based upon Water Quality Standards

In-stream criteria of downstream segments for Total Residual Chlorine will be met with an effluent limitation as follows:

Season		**Concentration**		**Load**	
Summer	4 Day Avg. - Chronic	0.011	mg/l	0.09	lbs/day
	1 Hour Avg. - Acute	0.020	mg/l	0.16	lbs/day
Fall	4 Day Avg. - Chronic	0.011	mg/l	0.09	lbs/day
	1 Hour Avg. - Acute	0.020	mg/l	0.16	lbs/day
Winter	4 Day Avg. - Chronic	0.011	mg/l	0.09	lbs/day
	1 Hour Avg. - Acute	0.024	mg/l	0.19	lbs/day
Spring	4 Day Avg. - Chronic	0.011	mg/l	0.09	lbs/day
	1 Hour Avg. - Acute	0.024	mg/l	0.20	lbs/day

Effluent Limitations for Total Dissolved Solids based upon Water Quality Standards

Season		**Concentration**		**Load**	
Summer	Maximum, Acute	1249.5	mg/l	5.05	tons/day

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Fall	Maximum, Acute	1268.9	mg/l	5.13	tons/day
Winter	Maximum, Acute	1253.1	mg/l	5.07	tons/day
Spring	Maximum, Acute	994.1	mg/l	4.02	tons/day

Colorado Salinity Forum Limits Determined by Permitting Section

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Effluent Limitations for Total Recoverable Metals based upon Water Quality Standards

In-stream criteria of downstream segments for Dissolved Metals will be met with an effluent limitation as follows (based upon a hardness of 344.8 mg/l):

	4 Day Average Concentration		Load		1 Hour Average Concentration		Load	
Aluminum*	N/A		N/A		867.9	ug/l	7.0	lbs/day
Arsenic*	173.86	ug/l	0.9	lbs/day	394.3	ug/l	3.2	lbs/day
Cadmium	2.45	ug/l	0.0	lbs/day	7.4	ug/l	0.1	lbs/day
Chromium III	275.36	ug/l	1.4	lbs/day	5,763.7	ug/l	46.6	lbs/day
Chromium VI*	12.28	ug/l	0.1	lbs/day	18.1	ug/l	0.1	lbs/day
Copper	30.65	ug/l	0.2	lbs/day	51.6	ug/l	0.4	lbs/day
Iron*	N/A		N/A		1,147.2	ug/l	9.3	lbs/day
Lead	17.76	ug/l	0.1	lbs/day	457.7	ug/l	3.7	lbs/day
Mercury*	0.01	ug/l	0.0	lbs/day	2.8	ug/l	0.0	lbs/day
Nickel	172.02	ug/l	0.9	lbs/day	1,550.4	ug/l	12.5	lbs/day
Selenium*	5.10	ug/l	0.0	lbs/day	21.1	ug/l	0.2	lbs/day
Silver	N/A	ug/l	N/A	lbs/day	36.9	ug/l	0.3	lbs/day
Zinc	394.60	ug/l	2.1	lbs/day	394.6	ug/l	3.2	lbs/day
Cyanide*	6.03	ug/l	0.0	lbs/day	25.5	ug/l	0.2	lbs/day

*Limits for these metals are based on the dissolved standard.

Effluent Limitations for Heat/Temperature based upon Water Quality Standards

Summer	23.9	Deg. C.	75.1	Deg. F
Fall	11.7	Deg. C.	53.1	Deg. F
Winter	9.7	Deg. C.	49.5	Deg. F
Spring	22.5	Deg. C.	72.4	Deg. F

Effluent Limitations for Organics [Pesticides] Based upon Water Quality Standards

In-stream criteria of downstream segments for Organics [Pesticides] will be met with an effluent limit as follows:

	4 Day Average Concentration		Load		1 Hour Average Concentration		Load	
Aldrin					1.5E+00	ug/l	1.88E-02	lbs/day
Chlordane	4.30E-03	ug/l	3.48E-02	lbs/day	1.2E+00	ug/l	1.50E-02	lbs/day
DDT, DDE	1.00E-03	ug/l	8.09E-03	lbs/day	5.5E-01	ug/l	6.88E-03	lbs/day
Dieldrin	5.60E-02	ug/l	4.53E-01	lbs/day	2.4E-01	ug/l	3.00E-03	lbs/day
Endosulfan	5.60E-02	ug/l	4.53E-01	lbs/day	1.1E-01	ug/l	1.38E-03	lbs/day
Endrin	3.60E-02	ug/l	2.91E-01	lbs/day	8.6E-02	ug/l	1.08E-03	lbs/day
Guthion	0.00E+00	ug/l	0.00E+00	lbs/day	1.0E-02	ug/l	1.25E-04	lbs/day
Heptachlor	3.80E-03	ug/l	3.07E-02	lbs/day	2.6E-01	ug/l	3.25E-03	lbs/day
Lindane	8.00E-02	ug/l	6.47E-01	lbs/day	1.0E+00	ug/l	1.25E-02	lbs/day
Methoxychlor	0.00E+00	ug/l	0.00E+00	lbs/day	3.0E-02	ug/l	3.75E-04	lbs/day
Mirex	0.00E+00	ug/l	0.00E+00	lbs/day	1.0E-02	ug/l	1.25E-04	lbs/day
Parathion	1.30E-02	ug/l	1.05E-01	lbs/day	6.6E-02	ug/l	8.26E-04	lbs/day
PCB's	1.40E-02	ug/l	1.13E-01	lbs/day	N/A	ug/l	#VALUE!	lbs/day
entachlorophenol	1.50E+01	ug/l	1.21E+02	lbs/day	1.9E+01	ug/l	2.38E-01	lbs/day
Toxephene	2.00E-04	ug/l	1.62E-03	lbs/day	7.3E-01	ug/l	9.13E-03	lbs/day

Effluent Targets for Pollution Indicators Based upon Water Quality Standards

In-stream criteria of downstream segments for Pollution Indicators will be met with an effluent limit as follows:

	1 Hour Average Concentration	Loading

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Gross Beta (pCi/l)	50.0	pCi/L		
BOD (mg/l)	5.0	mg/l	40.4	lbs/day
Nitrates as N	4.0	mg/l	32.4	lbs/day
Total Phosphorus as P	0.05	mg/l	0.4	lbs/day
Total Suspended Solids	90.0	mg/l	727.9	lbs/day

Note: Pollution indicator targets are for information purposes only.

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Effluent Limitations for Protection of Human Health [Toxics Rule]
Based upon Water Quality Standards (Most stringent of 1C or 3A & 3B as appropriate.)

In-stream criteria of downstream segments for Protection of Human Health [Toxics] will be met with an effluent limit as follows:

	Concentration		Maximum Concentration Load	
Toxic Organics				
Acenaphthene	1.04E+02	ug/l	8.44E-01	lbs/day
Acrolein	4.64E+02	ug/l	3.75E+00	lbs/day
Acrylonitrile	8.12E+00	ug/l	6.57E-02	lbs/day
Benzene	5.92E+01	ug/l	4.78E-01	lbs/day
Benzidine		ug/l		lbs/day
Carbon tetrachloride	5.80E+00	ug/l	4.69E-02	lbs/day
Chlorobenzene	9.28E+02	ug/l	7.51E+00	lbs/day
1,2,4-Trichlorobenzene				
Hexachlorobenzene	9.16E-05	ug/l	7.41E-07	lbs/day
1,2-Dichloroethane	2.32E+03	ug/l	1.88E+01	lbs/day
1,1,1-Trichloroethane				
Hexachloroethane	1.16E-01	ug/l	9.38E-04	lbs/day
1,1-Dichloroethane				
1,1,2-Trichloroethane	1.03E+01	ug/l	8.35E-02	lbs/day
1,1,2,2-Tetrachloroethane	3.48E+00	ug/l	2.81E-02	lbs/day
Chloroethane				
Bis(2-chloroethyl) ether	2.55E+00	ug/l	2.06E-02	lbs/day
2-Chloroethyl vinyl ether				
2-Chloronaphthalene	1.16E+03	ug/l	9.38E+00	lbs/day
2,4,6-Trichlorophenol	3.25E+00	ug/l	2.63E-02	lbs/day
p-Chloro-m-cresol				
Chloroform (HM)	2.32E+03	ug/l	1.88E+01	lbs/day
2-Chlorophenol	9.28E+02	ug/l	7.51E+00	lbs/day
1,2-Dichlorobenzene	3.48E+03	ug/l	2.81E+01	lbs/day
1,3-Dichlorobenzene	1.16E+01	ug/l	9.38E-02	lbs/day
1,4-Dichlorobenzene	1.04E+03	ug/l	8.44E+00	lbs/day
3,3'-Dichlorobenzidine	1.74E-01	ug/l	1.41E-03	lbs/day
1,1-Dichloroethylene	2.32E+04	ug/l	1.88E+02	lbs/day
1,2-trans-Dichloroethylene1				
2,4-Dichlorophenol	6.96E+01	ug/l	5.63E-01	lbs/day
1,2-Dichloropropane	3.60E+01	ug/l	2.91E-01	lbs/day
1,3-Dichloropropylene	1.97E+03	ug/l	1.59E+01	lbs/day
2,4-Dimethylphenol	3.48E+03	ug/l	2.81E+01	lbs/day
2,4-Dinitrotoluene	1.97E+00	ug/l	1.59E-02	lbs/day
2,6-Dinitrotoluene				
1,2-Diphenylhydrazine	2.32E-01	ug/l	1.88E-03	lbs/day
Ethylbenzene	1.51E+02	ug/l	1.22E+00	lbs/day
Fluoranthene	2.32E+01	ug/l	1.88E-01	lbs/day
4-Chlorophenyl phenyl ether				
4-Bromophenyl phenyl ether				
Bis(2-chloroisopropyl) ether	7.54E+04	ug/l	6.10E+02	lbs/day
Bis(2-chloroethoxy) methane				
Methylene chloride (HM)	1.16E+03	ug/l	9.38E+00	lbs/day
Methyl chloride (HM)				
Methyl bromide (HM)				
Bromoform (HM)	1.39E+02	ug/l	1.13E+00	lbs/day
Dichlorobromomethane(HM)	3.13E+01	ug/l	2.53E-01	lbs/day
Chlorodibromomethane (HM)	2.44E+01	ug/l	1.97E-01	lbs/day
Hexachlorocyclopentadiene	4.64E+00	ug/l	3.75E-02	lbs/day
Isophorone	2.09E+03	ug/l	1.69E+01	lbs/day
Naphthalene				
Nitrobenzene	6.96E+02	ug/l	5.63E+00	lbs/day
2-Nitrophenol				
4-Nitrophenol				
2,4-Dinitrophenol	1.62E+04	ug/l	1.31E+02	lbs/day
4,6-Dinitro-o-cresol	8.87E+02	ug/l	7.18E+00	lbs/day
N-Nitrosodimethylamine	3.48E+00	ug/l	2.81E-02	lbs/day
N-Nitrosodiphenylamine	6.96E+00	ug/l	5.63E-02	lbs/day
N-Nitrosodi-n-propylamine	5.92E-01	ug/l	4.78E-03	lbs/day
Pentachlorophenol	4.64E-02	ug/l	3.75E-04	lbs/day

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Phenol	3.48E+05	ug/l	2.81E+03	lbs/day
Bis(2-ethylhexyl)phthalate	4.29E-01	ug/l	3.47E-03	lbs/day
Butyl benzyl phthalate	1.16E-01	ug/l	9.38E-04	lbs/day
Di-n-butyl phthalate	3.48E+01	ug/l	2.81E-01	lbs/day
Di-n-octyl phthlate				
Diethyl phthalate	6.96E+02	ug/l	5.63E+00	lbs/day
Dimethyl phthlate	2.32E+03	ug/l	1.88E+01	lbs/day
Benzo(a)anthracene (PAH)	1.51E-03	ug/l	1.22E-05	lbs/day
Benzo(a)pyrene (PAH)	1.51E-04	ug/l	1.22E-06	lbs/day
Benzo(b)fluoranthene (PAH)	1.51E-03	ug/l	1.22E-05	lbs/day
Benzo(k)fluoranthene (PAH)	1.51E-02	ug/l	1.22E-04	lbs/day
Chrysene (PAH)	1.51E-01	ug/l	1.22E-03	lbs/day
Acenaphthylene (PAH)				
Anthracene (PAH)				
Dibenzo(a,h)anthracene (PAH)	1.51E-04	ug/l	1.22E-06	lbs/day
Indeno(1,2,3-cd)pyrene (PAH)	1.51E-02	ug/l	1.22E-04	lbs/day
Pyrene (PAH)	3.48E+01	ug/l	2.81E-01	lbs/day
Tetrachloroethylene	6.03E+02	ug/l	4.88E+00	lbs/day
Toluene	6.03E+02	ug/l	4.88E+00	lbs/day
Trichloroethylene	8.12E+00	ug/l	6.57E-02	lbs/day
Vinyl chloride	1.86E+00	ug/l	1.50E-02	lbs/day
Pesticides				
Aldrin	8.93E-07	ug/l	7.22E-09	lbs/day
Dieldrin	1.39E-06	ug/l	1.13E-08	lbs/day
Chlordane	3.71E-04	ug/l	3.00E-06	lbs/day
4,4'-DDT	3.48E-05	ug/l	2.81E-07	lbs/day
4,4'-DDE	2.09E-05	ug/l	1.69E-07	lbs/day
4,4'-DDD	1.39E-04	ug/l	1.13E-06	lbs/day
alpha-Endosulfan	3.48E+01	ug/l	2.81E-01	lbs/day
beta-Endosulfan	4.64E+01	ug/l	3.75E-01	lbs/day
Endosulfan sulfate	4.64E+01	ug/l	3.75E-01	lbs/day
Endrin	3.48E-02	ug/l	2.81E-04	lbs/day
Endrin aldehyde	1.16E+00	ug/l	9.38E-03	lbs/day
Heptachlor	6.84E-06	ug/l	5.54E-08	lbs/day
Heptachlor epoxide				
PCB's				
PCB 1242 (Arochlor 1242)	5.22E-05	ug/l	4.22E-07	lbs/day
PCB-1254 (Arochlor 1254)	5.22E-05	ug/l	4.22E-07	lbs/day
PCB-1221 (Arochlor 1221)	5.22E-05	ug/l	4.22E-07	lbs/day
PCB-1232 (Arochlor 1232)	5.22E-05	ug/l	4.22E-07	lbs/day
PCB-1248 (Arochlor 1248)	5.22E-05	ug/l	4.22E-07	lbs/day
PCB-1260 (Arochlor 1260)	5.22E-05	ug/l	4.22E-07	lbs/day
PCB-1016 (Arochlor 1016)	5.22E-05	ug/l	4.22E-07	lbs/day
Pesticide				
Toxaphene	8.24E-04	ug/l	6.66E-06	lbs/day

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Metals				
Antimony		ug/l		lbs/day
Arsenic		ug/l		lbs/day
Asbestos		ug/l		lbs/day
Beryllium				
Cadmium				
Chromium (III)				
Chromium (VI)				
Copper		ug/l		lbs/day
Cyanide		ug/l		lbs/day
Lead				
Mercury		ug/l		lbs/day
Nickel		ug/l		lbs/day
Selenium				
Silver				
Thallium		ug/l		lbs/day
Zinc				
Dioxin				
Dioxin (2,3,7,8-TCDD)	1.62E-08	ug/l	1.31E-10	lbs/day

Metals Effluent Limitations for Protection of All Beneficial Uses Based upon Water Quality Standards and Toxics Rule

	Class 4 Acute Agricultural ug/l	Class 3 Acute Aquatic Wildlife ug/l	Acute Toxics Drinking Water Source ug/l	Acute Toxics Wildlife ug/l	1C Acute Health Criteria ug/l	Acute Most Stringent ug/l	Class 3 Chronic Aquatic Wildlife ug/l
Aluminum		867.9				867.9	N/A
Antimony				742.4		742.4	
Arsenic	116.0	394.3				116.0	173.9
Asbestos							
Barium							
Beryllium						0.0	
Cadmium	11.6	7.4				7.4	2.5
Chromium (III)		5763.7				5763.7	275.4
Chromium (VI)	115.9	18.1				18.08	12.28
Copper	231.5	51.6				51.6	30.6
Cyanide		25.5	464.0			25.5	6.0
Iron		1147.2				1147.2	
Lead	115.9	457.7				115.9	17.8
Mercury		2.78		0.17		0.17	0.014
Nickel		1550.4		5335.7		1550.4	172.0
Selenium	57.8	21.1				21.1	5.1
Silver		36.9				36.9	
Thallium				0.5		0.5	
Zinc		394.6				394.6	394.6
Boron	842.3					842.3	
Sulfate	2319.9					2319.9	

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Summary Effluent Limitations for Metals [Wasteload Allocation, TMDL]
[If Acute is more stringent than Chronic, then the Chronic takes on the Acute value.]

	WLA Acute ug/l	WLA Chronic ug/l	
Aluminum	867.9	N/A	
Antimony	742.36		
Arsenic	116.0	173.9	Acute Controls
Asbestos			
Barium			
Beryllium			
Cadmium	7.4	2.5	
Chromium (III)	5763.7	275	
Chromium (VI)	18.1	12.3	
Copper	51.6	30.6	
Cyanide	25.5	6.0	
Iron	1147.2		
Lead	115.9	17.8	
Mercury	0.174	0.014	
Nickel	1550.4	172	
Selenium	21.1	5.1	
Silver	36.9	N/A	
Thallium	0.5		
Zinc	394.6	394.6	
Boron	842.28		
Sulfate	2319.9		N/A at this Waterbody

Other Effluent Limitations are based upon R317-1.
E. coli 126.0 organisms per 100 ml

X. Antidegradation Considerations

The Utah Antidegradation Policy allows for degradation of existing quality where it is determined that such lowering of water quality is necessary to accommodate important economic or social development in the area in which the waters are protected [R317-2-3]. It has been determined that certain chemical parameters introduced by this discharge will cause an increase of the concentration of said parameters in the receiving waters. Under no conditions will the increase in concentration be allowed to interfere with existing instream water uses.

An Antidegradation Level I Review was conducted on this discharge and its effect on the receiving water. Based upon that review, it has been determined that an Antidegradation Level II Review is not required. The proposed permit is a simple renewal with no increase in flow or concentration over that which was approved in the previous permit.

XI. Colorado River Salinity Forum Considerations

Discharges in the Colorado River Basin are required to have their discharge at a TDS loading of less than 1.00 tons/day unless certain exemptions apply. Refer to the Forum's Guidelines for additional information allowing for an exceedence of this value.
This doesn't apply to facilities that do not discharge to the Colorado River Basin.

XII. Summary Comments

The mathematical modeling and best professional judgement indicate that violations of receiving water beneficial uses with their associated water quality standards, including important down-stream segments, will not occur for the evaluated parameters of concern as discussed above if the effluent limitations indicated above are met.

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ATTACHMENT 3

Permit Application

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UTAH DEPARTMENT of ENVIRONMENTAL QUALITY
WATER QUALITY

Division of Water Quality (DWQ)
UPDES Program

UPDES Municipal (POTW) Permit Application

Part I. General Information (40 CFR 122.21(j)(1) and (9))

UPDES Permit No.: UT0026026

Facility Name: Manti City Corp.

Facility Location: 1500 North 100 East

City Manti State **UT** Zip 84642

Facility Mailing Address: 50 South Main Suite 1

City Manti State **UT** Zip 84642

Facility Contact: Cory Hatch **Title:** Public Work Director

Phone Number: (435) 851-1011 **Email Address:** cory.hatch@manti.gov

Name of Signatory: Jason Brown **Title:** City Manager

Is the applicant the facility owner, operator or both? (check only one response.)

☐ Owner ☐ Operator ☒ Both

Indicate below any existing environmental permits. (Check all that apply and type the corresponding permit number for each.)

☐ RCRA (hazardous waste) ☐ UIC (underground injection control) ☐ PSD (air emissions)

☐ Nonattainment program (CAA) ☐ NESHAPs (CAA) ☐ Dredge or fill (CWA Section 404)

☐ Other (specify)

Nature of Business CFR (40 CFR 122.21(f)(8))

Manti City has a piped sewer collection system that terminates as the sewer lagoons. Wastewater from the system outflows into three (3) cells lagoon system. The last cell (secondary cell) has the capacity to release water from the lagoons into a pipes system (Outfall #001) that currently goes into a sprinkler pivot for land application. The system also has the option to discharge to the San Pitch River if in the future we need as indicated in the original permit.

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UTAH DEPARTMENT of ENVIRONMENTAL QUALITY
WATER QUALITY

Division of Water Quality (DWQ)
UPDES Program

UPDES Municipal (POTW) Permit Application

Part II. Facility Information

Population served?	**3800**

Design and Actual Flow Rates

Provide design and actual flow rates in designated spaces.

Design Flow Rate		
Max Hourly	0.012	mgd
Max Daily	0.290	mgd
Max Monthly	8.99	mgd

Annual Average Flow Rates (Actual)					
Five Years Ago		**Four Years Ago**		**Three Years Ago**	
0.218	mgd	0.219	mgd	0.219	mgd
Two Years Ago		**Last Year**		**Current Year**	
0.219	mgd	0.220	mgd	0.221	mgd

Maximum Daily Flow Rates (Actual)					
Five Years Ago		**Four Years Ago**		**Three Years Ago**	
0.230	mgd	0.228	mgd	0.230	mgd
Two Years Ago		**Last Year**		**Current Year**	
0.230	mgd	0.226	mgd	0.226	mgd

Describe the treatment for each outfall

	Outfall No. _001SP_____	**Outfall No. _001R_____**	**Outfall No. _____**
Highest Level of Treatment (check all that apply per outfall)	☐ Primary ☐ Equivalent to secondary ☐ Secondary ☐ Advanced ☒ Other (specify) lagoons	☐ Primary ☐ Equivalent to secondary ☐ Secondary ☐ Advanced ☒ Other (specify) _lagoons__	☐ Primary ☐ Equivalent to secondary ☐ Secondary ☐ Advanced ☐ Other (specify) _____
Design Removal Rates by Outfall			
BOD_5	65%	N/A%	%
TSS	65%	N/A%	%
Phosphorus	☒ Not applicable %	☒ Not applicable %	☐ Not applicable %
Nitrogen	☒ Not applicable %	☒ Not applicable %	☐ Not applicable %
Other (specify)	☒ Not applicable %	☒ Not applicable %	☐ Not applicable %

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UPDES Municipal (POTW) Permit Application

Part II. Facility Information *continued*

Does the POTW use chlorine for disinfection, use chlorine elsewhere in the treatment process, or otherwise have reasonable potential to discharge chlorine in its effluent? ☒ YES ☐ NO

Describe the type of disinfection used for the effluent for each outfall. If disinfection varies by season, describe below.

Outfall #001: The facility is capable of using gas chlorine to disinfect the effluent water if the E.coli concentration exceeds the effluent limitations.

Outfall 001SP: is for water flowing to the San Pitch River.

Outfall 001R: is for water used in land application (pivot).

	Outfall No. 001SP	**Outfall No. 001R**	**Outfall No. _____**
Disinfection type	Chlorine	Chlorine	
Seasons used	Anticipated Oct. 1 through February 28	March 1 through September 30	
Dechlorination used?	☐ Not applicable ☒ Yes ☐ No	☐ Not applicable ☐ Yes ☒ No	☐ Not applicable ☐ Yes ☐ No

MAP: Attach a USGS topographic map or aerial photo extending one mile beyond the property boundaries of the site, the facility or activity boundaries, any treatment area(s), outfall(s), major drainage patterns, and the receiving surface waters stated above.

☒Map Attached

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UPDES Municipal (POTW) Permit Application

Part II. Facility Information *continued*

Are improvements to the facility scheduled?

☒YES If YES, explain below.

☐ NO If NO, Skip to Part III

Briefly list and describe the schedule improvements.

1. Underground pipe and dichlorination facilities to discharge effluent water into the San Pitch River and land application.

2.

3.

4.

Provide scheduled or actual dates of completion for improvements.

Scheduled or Actual Dates of Completion for Improvements

Scheduled Improvement (from above)	Affected Outfalls (list outfall number)	Begin Construction (MM/DD/YYYY)	End Construction (MM/DD/YYYY)	Begin Discharge (MM/DD/YYYY)	Attainment of Operational Level (MM/DD/YYYY)
1.Underground pipe.	001	TBD	TBD	TBD	TBD
2.					
3.					
4.					

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UPDES Municipal (POTW) Permit Application

Part III. Sampling Information

Provide all parameter sampling data with analytical results, reporting limit and any laboratory flags on an Excel spreadsheet. *An Excel Spreadsheet will be provided upon request.*

Has WET testing been conducted during the last 5 years? ☐ YES ☒ NO

Indicate the acute and chronic WET tests (PASS or FAIL) results for the past 5 years. If no WET testing for the quarter, then leave blank (e.g., for semi-annual or annual testing or missed testing events).

Year	Outfall No. _____				Outfall No. _____				Outfall No. _____			
	Acute		Chronic		Acute		Chronic		Acute		Chronic	
	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL
	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL
	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL
	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL
	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL
	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL
	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL
	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL
	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL
	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL
	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL
	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL
	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL
	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL
	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL
	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL
	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL	Qtr 1	☐ PASS ☐ FAIL
	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL	Qtr 2	☐ PASS ☐ FAIL
	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL	Qtr 3	☐ PASS ☐ FAIL
	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL	Qtr 4	☐ PASS ☐ FAIL
Describe any cause(s) of toxicity:												

PREVIEW

UPDES Municipal (POTW) Permit Application

Part IV. Compliance Information

Has the facility had an parameter exceedances over the past five years? ☐ YES ☐ NO

If Yes, provide the below information:

Parameter	Exceedance	Month/Year	Cause

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UPDES Municipal (POTW) Permit Application

Part IV. Compliance Information *continued*

Facility monitoring data.

Please provide the past **five years** of all parameters required to be monitored in the UPDES permit. The data can be entered in the section below or an excel spreadsheet. Attached additional sheets if needed.

Month	Year	Parameter	Min	Max	Avg	MDL/RL*

*MDL/RL is the analysis method detection limit or reporting limit located on the laboratory analysis report.

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UPDES Municipal (POTW) Permit Application

Part V. Outfalls and Receiving Water(s)

Provide the latitude and longitude to the nearest second for each dewatering outfall. The specified location should be after all treatment and before release to the receiving water. Provide the name of the initial receiving water. If the initial receiving water is unnamed, please also indicate the closed named drainage the receiving water flows into (i.e. unnamed tributary of City Creek). Attach additional sheets if necessary for more outfalls.

Each outfall to a different receiving water segment is subject to additional application fees and annual fees.

Outfall No.	Average daily flow rate	Latitude	Longitude	Receiving Surface Waters (Name)
001	0.97 mgd	111 O 37 ‘ 43 “	39 O 17 ‘ 24 “	San Pitch River
	mgd	O ‘ “	O ‘ “	
	mgd	O ‘ “	O ‘ “	

Do any of the outfalls described above have a season or periodic discharges?

☐ YES ☐ NO

If so, provide the following information for each applicable outfall.

	Outfall No. _001SP_____	Outfall No. _001R_____	Outfall No. _____
Number of times per year discharges occurs	1	4+	
Average duration of each discharge (specify units)	Anticipated continuous	14 + days	
Average flow of each discharge	Anticipated 0.97 mgd	Anticipated 0.72 mgd	mgd
Months in which discharge occurs	October-February	March-September	

Part VI. Collection System

Service Area(s)	Population Served	Miles of Pipe
Manti City	3800	25

Total Population Served **Total Miles of Pipe**

USMP Program implemented? ☒ YES ☐ NO

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UPDES Municipal (POTW) Permit Application

Part VII. Pretreatment Information

Does the facility have an approved pretreatment program? ☐ YES ☒ NO

If YES, skip to next section

If No, complete the below industrial user forms and inspections as needed.

A. Industrial Pretreatment Wastewater Survey

Check any of the following that have occurred in the past five years either at the wastewater treatment plant or in the collection system:

- ☐ Foaming
- ☐ Unusual colors
- ☐ Plugged collection lines caused by grease
- ☐ Plugged collection lines caused by sand
- ☐ Plugged collection lines caused by other debris
- ☐ Discharging of excessive BOD
- ☐ Discharging of excessive suspended solids
- ☐ Smells unusually bad or unusual smells
- ☐ Upsets of the treatment plant due to unknown conditions

Does the facility have any industrial users (IUs) which meet any of the following criteria:

1. **Has a lot of process wastewater (5% of the flow at the waste treatment facility or more than 25,000 gallons per work day.)**
    a. Examples: food processor, dairy, slaughterhouse, industrial laundry.

☐ YES ☒ NO

1. **Is subject to federal categorical pretreatment standards**;
    a. Examples: metal plating, cleaning or coating of metals, blueing of metals, aluminum extruding, circuit board manufacturing, tanning animal skins, pesticide formulating or packaging, and pharmaceutical manufacturing or packaging,

☐ YES ☒ NO

2. **Is a concern to the POTW.**
    a. Examples: septage hauler, restaurant and food service, car wash, hospital, photo lab, carpet cleaner, commercial laundry.

☐ YES ☒ NO

Do any users of the water treatment facility caused any of the following to occur:

☐ YES ☒ NO A discharge which creates a fire or explosion hazard in the collection system.
☐ YES ☒ NO A discharge which creates toxic gases, vapor or fumes in the collection system.
☐ YES ☒ NO A discharge of solids or thick liquids which creates flow obstructions in the collection system.
☐ YES ☒ NO An acidic discharge (low pH) which causes corrosive damage to the collection system.
☐ YES ☒ NO Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause problems in the collection system or at the waste treatment facility.
☐ YES ☒ NO Waste haulers are prohibited from discharging without permission.
☐ YES ☒ NO Does the facility believe that illegal dumping is occurring in the jurisdiction?

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UPDES Municipal (POTW) Permit Application

Part VII. Pretreatment Information *continued*

Complete and submit a preliminary inspection of each business that is discharging process wastewater to the wastewater treatment plant

B. PRELIMINARY INSPECTION FORM

Inspection Date _____ Inspection Time _____

Name of Business _____ Person Contacted _____

Street Address _____ City _____

Email Address _____ Phone Number _____

Description of Business:

Principal product or service:

Raw Materials used:

Production process is: ☐ Batch ☐ Continuous ☐ Both

If yes, briefly describe seasonal production cycle.

This facility generates the following types of wastes (check all that apply):

1. ☐ Domestic wastes (Restrooms, employee showers, etc.)
2. ☐ Cooling water, non-contact
3. ☐ Boiler/Tower blowdown
4. ☐ Cooling water, contact
5. ☐ Process
6. ☐ Equipment/Facility washdown
7. ☐ Air Pollution Control Unit
8. ☐ Storm water runoff to sewer
9. ☐ Other describe

Wastes are discharged to (check all that apply):

☐ Evaporation
☐ Ground water
☐ Sanitary sewer
☐ Other (describe below)
☐ Storm sewer
☐ Surface water
☐ Waste haulers

Name of waste hauler(s), if used

_____ _____ _____

Is a grease trap installed? ☐ Yes ☐ No
Is it operational? ☐ Yes ☐ No

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UPDES Municipal (POTW) Permit Application

Part VII. Pretreatment Information *continued*

B. PRELIMINARY INSPECTION FORM *continued*

Does the business discharge a lot of process wastewater?

- More than 5% of the flow to the waste treatment facility? ☐ Yes ☐ No
- More than 25,000 gallons per work day? ☐ Yes ☐ No

Does the business do any of the following or manufacture any of the following?

- ☐ Adhesives
- ☐ Aluminum Forming
- ☐ Battery Manufacturing
- ☐ Car Wash
- ☐ Carpet Cleaner
- ☐ Copper Forming
- ☐ Dairy
- ☐ Electric & Electronic Components
- ☐ Explosives Manufacturing
- ☐ Food Processor
- ☐ Foundries
- ☐ Hospital
- ☐ Industrial Porcelain Ceramic Manufacturing
- ☐ Inorganic Chemicals Mfg. or Packaging
- ☐ Iron & Steel
- ☐ Laundries
- ☐ Metal Finishing, Coating or Cleaning
- ☐ Mining
- ☐ Nonferrous Metals Manufacturing
- ☐ Organic Chemicals Manufacturing or Packaging
- ☐ Paint & Ink Manufacturing
- ☐ Pesticides Formulating or Packaging
- ☐ Petroleum Refining
- ☐ Pharmaceuticals Manufacturing or Packaging
- ☐ Photo Lab
- ☐ Plastics Manufacturing
- ☐ Restaurant & Food Service
- ☐ Rubber Manufacturing
- ☐ Septage Hauler
- ☐ Slaughter House
- ☐ Soaps & Detergents Manufacturing
- ☐ Steam Electric Generation
- ☐ Tanning Animal Skins
- ☐ Textile Mills

Are any process changes or expansions planned during the next three years? ☐ Yes ☒ No

If yes, attach a separate sheet to this form describing the nature of planned changes or expansions.

	Manti City
Inspector Name Printed	Wastewater Treatment Facility

Any questions regarding the form or assistance with inspecting business please contact

Jennifer Robinson
Pretreatment Coordinator
Division of Water Quality
P. O. Box 144870
Salt Lake City, Utah 84114-4870

Phone: (801) 536-4383
Fax: (801) 536-4301
E-Mail:jenrobinson@utah.gov

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UPDES Municipal (POTW) Permit Application

Part VII. Pretreatment Information *continued*

Either list all businesses below or provide a list of business licenses issued in the facilities service area.

	Name of Business	Jurisdiction	SIC Codes	Total Average Process Flow (gpd)	Total Average Facility Flow (gpd)	Facility Description (dentist, manufacturing [state product], dairy, assisted living facility, etc.)
1	See attachment.					
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						

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UTAH DEPARTMENT of ENVIRONMENTAL QUALITY
WATER QUALITY

Division of Water Quality (DWQ)
UPDES Program

UPDES Municipal (POTW) Permit Application

Part VIII. Bisolids Information

Was the Biosolids Annual Report submitted? ☐ YES ☒ NO

☐ Attach a Biosolids Management Plan with application

Serve Connections? N/A

Provide the total dry metric tons per the latest 365-day period of sewage sludge generated, treated, used and disposed of:

Practice	Dry Metric Tons per 365-day Period
Amount generated at the facility	
Amount treated at the facility	
Amount used (i.e., received from offsite) at the facility	
Amount disposed of at the facility	

Treatment Provided at Your Facility

Identify the treatment process(es) used at your facility to reduce pathogens in sewage sludge

- ☐ Preliminary operations (e.g., sludge grindling and degritting)
- ☐ Stablilization
- ☐ Composting
- ☐ Disinfection
- ☐ Heat drying
- ☐ Methane or biogas capture and recovery
- ☐ Thickening (concentration)
- ☐ Anaerobic digestion
- ☐ Conditioning
- ☐ Dewatering (e.g. centrifugation, sludge drying beds, sludge lagoons)
- ☐ Thermal reduction

Sewage Sludge Disposal Method

Land Application of Bulk Sewage Sludge

Is sewage sludge form your facility applied to the land? ☐ YES ☒ NO If No, Skip to next section

Total dry metric tons per 365-day period of sewage sludge applied to all land sites:

Surface Disposal

Is sewage sludge from your facility placed on a surface disposal site?

☐ YES ☒ NO If No, Skip to next section

Total dry metric tons of sewage sludge from your facility placed on all surface disposal sites per 365-day period: _____

Do you own or operate all surface disposal sites to which you send sewage sludge for disposal?

☐ YES ☐ NO If No, complete the below information

Surface disposal site *you do not operate*

Site name _____

Mailing address _____

City _____ State _____ Zip _____

Contact Name _____ Title _____

Phone Number _____ Email Address _____

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UPDES Municipal (POTW) Permit Application

Part VIII. Biosolids Information *continued*

Incineration

Is sewage sludge from your facility fired in a sewage sludge incinerator?
☐ YES ☒ NO If No, Skip to next section

Total dry metric tons of sewage sludge from your facility fired in all sewage sludge incinerators per 365-day period: _____

Do you own or operate all sewage sludge incinerators in which sewage sludge from facility is fired?
☐ YES ☒ NO If No, complete the below information

Incinerator location *you do not operate*

Site name _____

Mailing address _____

City _____ State _____ Zip

Contact Name _____ Title _____

Phone Number _____ Email Address _____

Disposal in a Municipal Solid Waste Landfill

Is sewage sludge from your facility placed on a municipal solid waste landfill?
☐ YES ☒ NO If No, Skip to next section

Total dry metric tons of sewage sludge from your facility placed in this municipal solid waste landfill per 365-day period: _____

Do you own or operate the municipal solid waste landfill in which sewage sludge is disposed?
☐ YES ☐ NO If No, complete the below information

Municipal Solid Waste Landfill *you do not operate*

Site name _____

Mailing address _____

City _____ State _____ Zip _____

Contact Name _____ Title _____

Phone Number _____ Email Address _____

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UTAH DEPARTMENT of ENVIRONMENTAL QUALITY
WATER QUALITY

Division of Water Quality (DWQ)
UPDES Program

UPDES Municipal (POTW) Permit Application

Part IX. Reuse Information

Is wastewater applied to land?

☒YES ☐ NO If YES, complete the below information.

Land Application Site and Discharge Data

Location	Size	Average Daily Volume Applied	How often
See attached map	40 acres	970,000 gpd	☒ Seasonal ☐ Continuous ☐ Intermittent
	acres	gpd	☐ Seasonal ☐ Continuous ☐ Intermittent
	acres	gpd	☐ Seasonal ☐ Continuous ☐ Intermittent

Seasonal land application.

Indicate months of seasonal land application

☐ January	☒April	☒ July	☐ October
☐ February	☒ May	☒ August	☐ November
☒March	☒ June	☒ September	☐ December

Where is the Reuse water distributed

- ☐ Residential irrigation
- ☐ Urban uses
  - ○ Non-residential landscape irrigation
  - ○ Golf course irrigation
  - ○ Toilet flushing
  - ○ Fire protection
- ☐ Irrigation of food crops (direct contact with edible part) – spray irrigation
- ☐ Irrigation of food crops *(Non direct contact with edible part) – no spray irrigation*
- ☐ Irrigation
  - ○ Sod farms
  - ○ Silviculture
  - ○ Limited access highway rights of way
  - ○ Other areas where human access is restrict or unlikely to occur
- ☒ Irrigation of animal feed crops other than pasture for milking animals
- ☐ Impoundment of wastewater where direct human contact is not allowed or is unlikely to occur
- ☐ Cooling water
- ☐ Soil compaction or duct control in construction areas
- ☐ Other

☒ **Attached an updated Reuse Project Plan**

An updated Reuse Project Plan is required during every permit renewal.

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UTAH DEPARTMENT of ENVIRONMENTAL QUALITY
WATER QUALITY

Division of Water Quality (DWQ)
UPDES Program

UPDES Municipal (POTW) Permit Application

Part X. Antidegradation Review

The objective of antidegradation rules and policies is to protect existing high quality waters and set forth a process for determining where and how much degradation is allowable for socially and/or economically important reasons.
In accordance with Utah Administrative Code (UAC R317-2-3), an antidegradation review (ADR) is a permit requirement for any project that will increase the level of pollutants in waters of the state. The rule outlines requirements for both Level I and Level II ADRs, as well as public comment procedures.

Please visit our DWQ Antidegradation Review webpage for more information.

DWQ will determine if the project will impair beneficial uses (Level I ADR) using information provided by the applicant and whether a Level II ADR is required. However, the following can be used as an indication of whether a Level II ADR is required.

Is the UPDES permit new, or is it being renewed and the proposed effluent concentration and loading limits are higher than the concentration and loading limits in the previous permit and any previous ADR(s)?

- ☐ YES – Level II ADR Required, see information below
- ☐ NO – No Level II ADR Required. Proceed to the Certification and Signature page.

For a permit requiring a Level II ADR, the Utah Level II Antidegradation Review Form for Applicants (Form) must be completed and approved by DWQ before any UPDES permit can be issued. This Form is intended to assist the applicant and DWQ staff in complying with the rule, but is not a substitute for the complete rule in UAC R317-2-3.5. Although the applicant is responsible for conducting the Level II ADR, typically, the Form is completed iteratively in consultation with DWQ.

ADRs should be among the first steps of an application for a UPDES permit because the review helps establish treatment expectations. The level of effort and amount of information required for the ADR depend on the nature of the project and the characteristics of the receiving water. To avoid unnecessary delays in permit issuance, DWQ recommends that the process be initiated at least one year prior to the date a final approved permit is required.

.

Part XI. Certification Statement and Signature

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with system designed to assure that quailed 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 of knowing violations.

Jason Brown	*Jason Brown*	City Manager	July 29, 2026
PRINT Signatory Authority	**Signature**	**Title**	**Date**

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UTAH DEPARTMENT of ENVIRONMENTAL QUALITY
WATER QUALITY

Division of Water Quality (DWQ)
UPDES Program

UPDES Municipal (POTW) Permit Application

The Division of Water Quality may request additional information.

Important: The UPDES Permit Application will not be considered complete unless you answer every question. If an item does not apply to you, enter "Not Applicable" to show that you considered the question.

The UPDES Permit Application, must be signed as follows:

1) For a corporation, a responsible corporate officer shall sign the NOT, a responsible corporate officer means:
   a. 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
   b. The manager of one or more manufacturing, production, or operating facilities, if
      i. 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 initiating and directing other comprehensive measures to assure long term environmental compliance with environmental statutes and regulations:
      ii. The manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and
      iii. Authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
2) For a partnership of sole proprietorship, the general partner or the proprietor, respectively; or
3) For a municipality, state or other public agency, either a principal executive officer or ranking elected official shall sign the application; in this subsection, a principal executive officer of any agency means;
   a. The chief executive officer of the agency; or
   b. A senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency.

Where to File the UPDES Permit Application form:

Please submit the original form with a signature in ink to the below address. Remember to retrain a copy for your records.

UPDES sent by mail:

Division of Water Quality
195 North 1950 West
PO Box 144870
Salt Lake City, UT 84114-4870

OFFICE USE ONLY

Date received: ___/___/___ **Received by:** _____ **Document No:** _____

via: ☐ Email ☐ Fax ☐ Webportal ☐ Mail ☐ Hand Delivery

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Business License 2026 * all licenses expire on December 31 of each year.

BUSINESS NAME	OWNER	MANTI ADDRESS	MAILING ADDRESS (if different)	DATE PD	#
29 North Main LLC	Dallas Cox	29 North Main		7/1/2026	421
Adornz	Matthew Gray	537 East 400 South		12/15/2025	320
Allen Mechanical Engineering, PLLC	Spencer Allen	440 East Sabra Way			412
Alta Window Cleaning	Kristopher Springer	701 East 70 South			368
Alvey Lumber	Kelly Alvey	100 West 700 South	P.O Box 570157 Siguard, Utah 84657	1/2/2026	1
Andy Cox Elecltric dba A+ Electric	Mike Warren	406 East Union		3/25/2026	2
Angells Trouch Cleaning Services	Regina Angell	361 North 200 East			381
BW Fulfillment	Robert Whitney	425 West 800 South		12/16/2025	357
Backyard Bees and Things	Juliann Allred	542 South Main			296
Barclay Mechanical	Mike Barclay	595 West 100 North			4
Barry Gardner Con	Barry Gardner	55 North 470 East			401
Beachin Co.	Colton King	60 East Union	1821 E 1000 S, Naples 84078	1/5/2026	212
Berry Siding	Jessee Berry	68 West 200 South			377
Big G Towing & Recovery	Gerald Christiansen	289 North 600 West		12/18/2025	9
Big Rig Construction	Hunter Judkins	635 South Main		12/22/2025	382
BIGS Taxidermy & Woodworks	Alfred C. Bigelow	525 East 200 South			201
Bin There Dump That	Jarrett Guerrera	359 North 500 West		1/28/2026	411
Blades Tree Removal	Ian Frandsen	506 West 100 South		12/23/2025	10054
Blue Ridge Services	Robert Whitney	396 East 600 South			358
Bob-Wired Electric & Maintenance	Bob Grzesik	150 East 500 South		12/23/2025	11

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Bo's Service	Robert Braithwaite	75 North 100 East		12/23/2025	12
Bud Keisel Contracting	Bud Keisel	156 East 200 South			14
Buchanan's Custom Painting	Mike Buchanan	40 South 400 West		1/8/2026	206
CFD5 LLC	Jordan Lee	150 South 100 East	2183 W Main A203, Lehi 84043		538
C&R Custom Works Pro	Wyatt Cook	192 South 300 West			347
Callred Photography	Christie Allred	194 East 300 North			329
Candies on Main LLC	Connie Cox	58 North Main	390 West 200 North, Manti		17
Capstone Concrete Design	Justin Squire	425 West 800 South			18
Cedar Valley Logistics, Inc./Blue Eagle Limited, I	Robin & David Benton	303 West 600 South	P.O. Box 214	12/30/2025	21
Central Utah Precision Rifle LLC	John David VanOrman	25 West 800 North			285
Central Utah Title	Glen Green	140 North Main	P.O. Box 37		22
Charlee's Comfort Kitchen	Tyler Jenkin	115 North Main			353
Clean Monday Meals	Janae Cox	480 E Union			414
CommNet Cellular, Inc.	Radhika Poduri	800 South 500 west	P.O. Box 4199, Lisle, IL 60532	1/2/2026	252
Code Properties LLC	Kenneth M. Cox	480 E Union	249 s country xing ct, Heber 84032		332
Cord's Small Haul	Cordell & Kris Christensen	96 East 200 South			350
County Elegance Events	Stacy Robinson	393 East 300 North			310
Country Lane	Patricia Rice	592 North 500 West			27
Cox Storage LLC	Tim Cox		P.O. Box 95 Manti, Utah 84642		25
Crazy Scones LLC	Barbara Rasmussen	536 South 200 West			535
Curtis Engineering	Evan H. Curtis	370 East 300 South	P.O. Box 117, Manti		536
DL Bown Masonry	Danny/Jerome Bown	Industrial Park	P.O. Box 27, Manti	12/22/2025	32
D&R Storage	Dale Cox	100 North 500 West	P.O. Box 190, Manti		35
Dale Cox Contracting	Dale Cox	405 East 200 South	P.O. Box 190, Manti	12/24/2025	36

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DHI, LLC	David Hall	87 North Main	P.O. Box 255, Manti		39
Demill Contracting	Duane Demill	275 South 600 West			40
Dess & Paws Dog Salon	Dessa Estey	283 South 500 West		1/7/2026	407
Derfy's Customs	Derek Crook	360 South 400 West			290
Dial Herbs	Pamela Malstrom	298 East 300 South	P.O. Box 39	12/15/2025	64
Dino Solutions LLC	Kaden Hill	210 South 100 West		7/2/2026	422
Dollar General Store	Casey Beer	895 North Main	100 Mission Ridge Goodlesttville TN 37072		399
Down Home Preschool	Tristen Jessop	535 South 100 West			333
Drakes Diesel Repair, Inc.	Julie Drake	824 South 500 West	295 E 200, Nephi 84648		311
Dream Acre Flower Farm	Torrie Meidell	146 West 400 North		12/24/2025	362
Ed "Big Daddy" Roth, Inc.	Ilene Roth	404 East 300 North	P.O. Box 36	12/22/2025	46
1851 Holdings LLC	Nate Christensen	96 West 400 North	436 North 100 West	1/6/2026	188
Elevated Wash Company, LLC	Derek Barton	65 South 300 West			270
Eliason & Associates	John Eliason	134 North Main	P.O. Box 203, Manti		47
Empire Builders/Maylett Ent	Jason Maylett	581 North 450 West		1/2/2026	49
Ericsrelics	Eric Haleen	65 East 200 North			224
Eric R. Hedelius, CPA	Eric Hedelius	462 South 100 West			50
La Cocina de Esme	Esmeralda Medina	175 South 300 West			365
Fairaview Watches	Nathan Nelson	285 East 200 South			380
Foundation Studios	Benjamin Harris	292 West 400 South			293
Fred's Woods LLC	Lynn Schiffman	190 West Unin			383
Golden Rule Tree Service LLC	David Hunt	120 West 300 South	P.O. Box 174		269
Goodwin Gathers LLC	Jaden Goodwin	PO Box 223		1/10/2026	409
Gospel Ed, LLC	Patti Adams	691 South Main		1/26/2026	370

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Grandmapipesattic	Laura Pipes	360 East Union			284
Greene Counseling	Jared Greene	50 South Main	545 North 500 West	12/10/2025	58
GreenStride Sanitation LLC	Joshua Redd	592 N 500 W		5/22/2026	418
H&H Excavation & Rentals, LLC	Mike Haxby	430 South 600 West			236
Harmon's	Joel Harmon	98 West 200 North		12/22/2025	60
Henry's Appliance Repair/The Cart DR	Henry Brown	35 North 100 West			63
Heritage Cabin	Tiffany/Niki Covington	90 South 100 East			258
High Mountain Blinds LLC	Kiley Sanders	294 North 400 West		12/31/2025	385
Home Scope LLC	Shawn Rogers	444 East 300 North			376
Hood 2 Hood Transportation LLC	Jeffery Patrik	195 West 200 North		1/6/2026	400
Interwest Saw & Tool	Clint Greenhalgh	94 East 400 South		12/17/2025	68/69
Indigo Bikes	Dallas Cox	29 North Main	660 North 420 West	12/16/2025	109
Inuchan's	Jake Christensen	545 South 300 West			364
JS Development dba Country Village Mo	Jaiden T Olsen	145 North Main		3/13/2026	104
JS Developer LLC dba Temple View Lodg	Jaiden T Olsen	260 East 400 North	6062 Latigo Lane, Mtn Green 84050	3/13/2026	375
JWA Construction LLC	Jayson Albee	765 East Union			73
Janet's Beauty Salon	Janet Garbe	65 West 400 South			74
Janice E Vincent, Publisher	Janice E. Vincent	104 South 500 West			403
Jardine & Associates, PC	David Jardine	55 South Main #21		12/15/2025	398
Jensen Excavating LLC	Brent J Jensen	453 West 200 North			143
Jensen's Department Store	John Jensen	29 North Main			76
Jerry Cluff Builders & Fencing	Jerry Cluff	650 south 300 West	806 E 1070 S, Ephraim	1/31/2026	77
Jo's Ice	Benjamin Olson	60 East Union	206 East 100 North	5/11/2026	367
Jonathan McCormick	Jonathan McCormick	Door-to-Door	PO 516, Spring City 84662		378

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Jones & DeMille Engineering, Inc.	Darin Robinson	50 South Main	1535 S 100 W, Richfield 84701	1/2/2026	80
Keen Impressions	Jeremy Beal	141 South Main		12/22/2025	83
Ken Parry Welding	Ken Parry	465 East 200 South			84
Kik-n-Bak Cottage	Paul Arnold	115 South 200 West	200 Star Cluster CR, Vegas 89145	1/31/2026	319
Kountry Kids Learning Center	Victoria Bown	65 South 300 West		5/6/2026	191
La C ocina de Esme	Esmeralda Medina	175 South 300 West		3/19/2026	365
Layton Homes, Inc	Shaun Layton	555 East 400 SOuth	P.O. Box 255, Manti	12/10/2025	90
Layton Landscapes LLC	Kelan Layton	555 East 400 South		12/10/2025	356
Layton's Loft	Christopher Layton	395 West 400 North		7/6/2026	423
Leah's Garden Shoppe	Leah Black	465 East 100 North	140 North 470 East		386
Les Olson	Ryan Bingham	55 South Main #1		12/22/2025	218
Lewis Small Engine LLC	Troy Lewis	489 West 300 South		6/16/2026	211
Lindsey's Hair Salon	Lindsey Bown	35 South 300 East			207
Little Learners Preschool	Lacee Shakespear	588 North 500 West		12/17/2025	214
Lizzy Walk Nails/Cody Walk Farrier Servi	Lizzy & Cody Walk	353 East 300 North		1/21/2026	369
Lotus Logic, LLC	Jyoti Chauhan	101 South Main	2114 S 1425 W Woodscross 84087	12/17/2025	379
Lovey's Grooming	Pamela Jane Matherne	31 North Main	626 East 600 South		268
Lynn Incorporation and Tree Trimming	Lynn Bishop	67 West 300 North		7/27/2026	96
Ma Max Grillz LLC	Max Christiansen	50 West 100 North	10045 W 14000 S Axtell 84621		391
Madsen Transport LLC	Marty Madsen	506 West 400 North		12/30/2025	98
Magleby's Mortuary	Kelly Magleby	195 West 100 North	50 South 100 West, Richfield	1/26/2026	99
Main Auto/Car Wash	Larry Lund	95 North Main		12/15/2025	101
Manti Street Family Medicine/Manti Pharmacy	Sean Olsen	156 South Main		12/22/2025	263
Maintenance Technology Systems	Milton Olsen	645 South 300 West		12/29/2025	255

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Man with a Ram LLC	Eric Adams	196 East 400 South		12/29/2025	556
Manti Clinic	Brad Howell	159 North Main		1/5/2026	66
Manti Laundromat	Dan Crawley	245 East 100 North	10284 N. Carriage Ln. Cedar Hills, UT 84062	5/27/2026	419
Manti Market AKA Market Fresh	Tyler Merrill	35 East Union			106
Manti Merchantile/LNID, Inc.	Linda Nielsen	145 South Main	P.O. Box 164, Manti		107
Manti Motel	Danny & Cathy Davis	445 North Main		1/12/2026	108
Manti Telephone Company	Paul Cox	40 West Union			110
Manti Trail Builders	Andy Adamson/Steve Gerber	360 West 645 North			241
Manti Vacation Home	JoAnn Jennings	240 West 100 North	1035 McClelland St, SLC 84105	4/27/2026	111
Maple Canyon Consulting	Keith Steurer	202 East 200 North	P.O. Box 187	6/22/2026	287
Mark Hall 3X Master Carpenter Restorations and Wood Crea	Mark Hall	191 South 500 West		12/30/2025	396
Marlar Granary Airbnb	Larry R. Thompson	425 East 100 South			262
Masco Properties	Rylar Masco	403 East 100 South	10248 S Sage Cir, So Jordan 84009	12/29/2025	313
Maughan Seed/Tree Trim	Brad Maughan	194 West 300 South	P.O. Box 72, Manti	12/22/2025	112
May Cottage	David and Tami Price	96 East 400 North	Box 99 Draper 84020-2301	1/5/2026	114
Medieval Gardens Herbal Co	Stacy Prisbrey	96 West 300 South		2/2/2026	393
Melanie Johnson Daycare	Melanie Johnson	95 West 200 South			117
Miller's Drive-Thru, Inc.	Travis Miller	227 North Main			121
Mini Mischief Mechanics LLC	Tommy Carmody or Danie	94 West 400 South	557 West 500 South	3/12/2026	413
Moses & Moses LLC/M&M Ind	Clifford Moses	775 South 300 West		12/17/2025	122
My Bito Heaven Homestead	Nola Mae VanWagenen	203 West 500 North			281
Myra's Beauty Salon	Myra Braithwaite	64 North 300 East			125
Nate Christensen	Nate Christensen	65 West 500 North			62
Nielson Tilling	Wayne Nielson	145 East 500 South		12/19/2025	131

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Nordell Dogs LLC	Bonnie Nordell	95 North 500 West			374
Not Exhausted Motors LLC	Chris Jones	70 West Union	8947 Barton Creek Dr, Eagle Mtn 84005	7/7/2026	326
Oldroyd Orthodontics	Roger Oldroyd	36 North Main	490 North Main, Richfield, UT	1/2/2026	132
One Page Away	Lia McClary	135 S 200 W		5/6/2026	416
Ooli's Naturals	Dalaine R Gagon	103 East 300 North			336
Out in Back Creations LLC	Forrest McNeill	169 South 100 West			134
Outback Recreation, LLC	Gerald Christiansen	102 North Main		12/18/2025	298
Patriot Works	Bruce Hammer	304 West 400 South			137
Peak Welding and Fabrication	Lisa Cormier	67 West 300 North		1/7/2026	406
Platinum One Solutions/Peterson Studios/Lawn	Braden Peterson	401 South Main	P.O. Box 66	1/15/2026	360
Pine Box Casket LLC	Jeff Moses	775 S 300 W		5/21/2026	417
Poppies Floral	Angela Smith	364 West 200 North		12/23/2025	405
Prime Panes	Brayden Thomas/Rhett Olson	395 North 200 West			390
Professional Title Services, LLC	Don Steck	37 So Main - B	107 S 100 E, Price 84501		33
Quality Service and Repair	Donald Southworth III	460 West 300 South		12/29/2025	338
Quilting by Jeanette	Jeanette Spencer	372 South Main St.			415
QI-Dynamics.com	Dale Henningson	645 South 300 West		1/21/2026	254
QI-Holdings, LLC	Dale Henningson	373 East 500 South	645 South 300 West	1/21/2026	335
RabTec, LLC	David C. Lee	450 West 600 South		1/5/2026	271
Rachael's Sweet Treat	Rachael Lundeberg	88 West 200 North			325
Ray's Lawn Services	Raymond Quintero III	375 East 100 South			342
Richard S. Carlile DDS, PLLC	Richard S. Carlile	93 South Main		12/15/2025	317
Richard T. Smith, CPA	Richard Smith	34 West Union	P.O. Box 8, Manti		144
Rick Christensen Construction	Rick Christensen	475 East Union			145

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Royal Six Painting, LLC	Robert K. Larsen	487 East 200 North			148
Ruby and Rae LLC	Whitney Huntington	545 South 200 East			394
RyGuys Auto Sales LLC	Ryan Anderson	204 North Main			392
RyGuys Tire and Auto LLC	Ryan Anderson	204 North Main			345
S&D Vacation Rentals	Shane and Donna Egan	45 East 300 North	840 Windsor Lane Kaysville, Utah 84037	1/5/2026	149
SJ Beauty	Sandra Jefferies	998 North Edna Way		12/17/2025	395
Sadie's Beauty Bar	Sadie Larson	564 South 100 East	150 E 700 N Ephraim, UT 84627	6/18/2026	420
Sanders Plumbing & Heating	Bryan & Jackie Sanders	225 South 600 West	Manti, Utah 84642	3/5/2026	220
Sandy Greenhalgh	Sandy Greenhalgh	506 East 300 South	P.O. Box 232	12/18/2025	219
Sanpete News	Suzanne Dean	35 South Main		1/27/2026	152
Sanpete County Welcome Committee	Chelsey Christensen	583 East 100 South			404
Scenic Highways	John H. Clark	196 North 300 West			209
Shades of Color	Megan Johnson	50 North Main		12/16/2025	154
Shamrock Farm LLC	Gregory Lambourne	704 East 70 South		1/20/2026	330
Six Mile Saddlery	Steve Otten	785 North 500 West		1/21/2026	157
Solsun Boats	Scott Olsen	585 West 615 North			158
South Sanpete Pack	George Blackburn	Slaughter House	P.O. Box 141 Payson, UT 84651		159
Sorensen	Jerry Sorensen	204 West 100 South		1/7/2026	197
Sorensen Towing/Small Engine Repair	Michael Boorman	640 North 500 West		1/2/2026	160
Spark Living	Jessica Lund Henrie	268 East 200 South		1/2/2026	289
Spencer Johnson Construction	Spencer Johnson	460 East 100 North			348
S.R. Johnson Knifemaker	Steven Johnson	202 East 200 North	P.O. Box 5, Manti		164
Step Above Health, PLLC	Rachel Crandell	425 South 200 West			402
Stone Handyman Services LLC	Callan Stone	87 South 400 West		12/30/2025	537

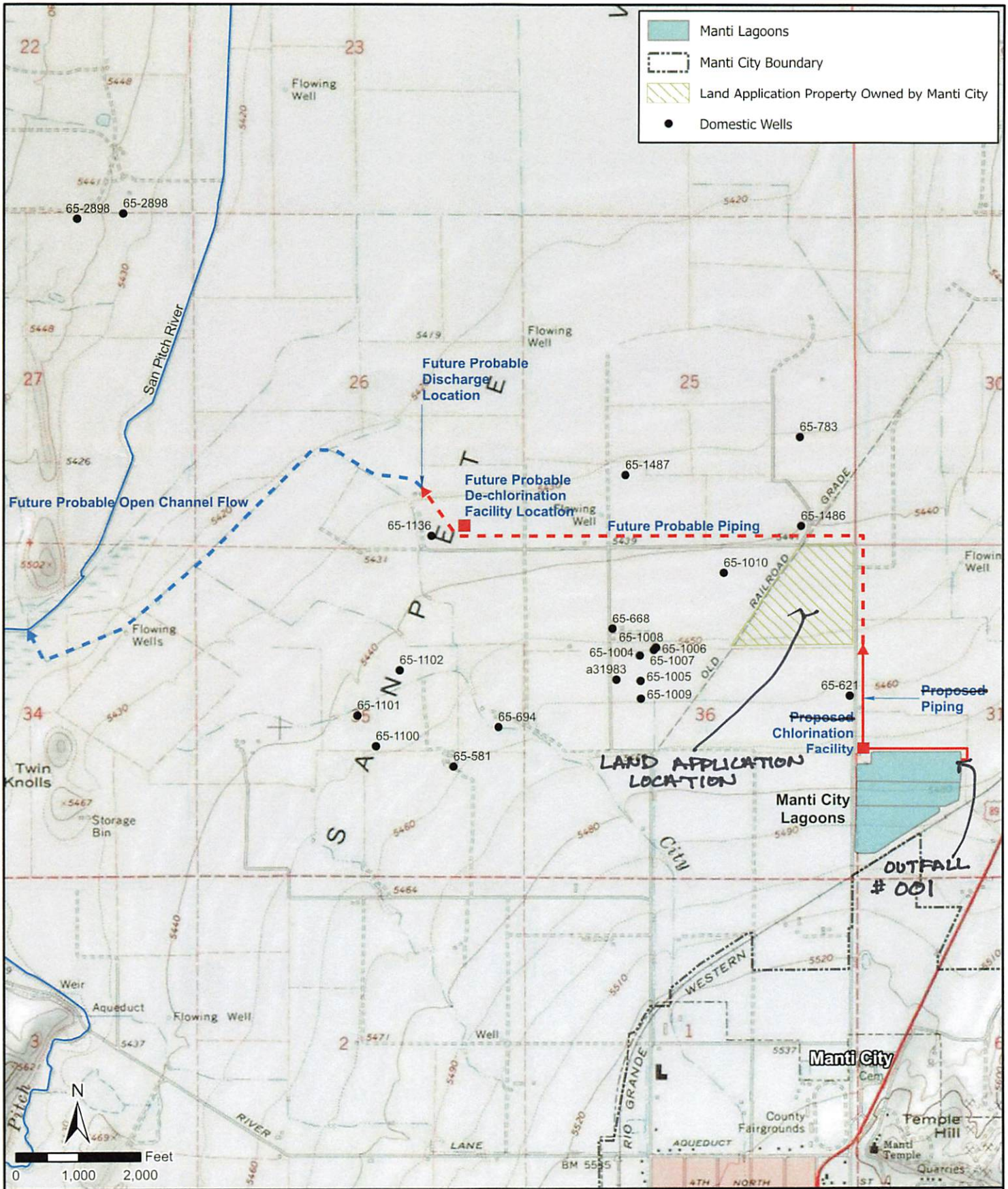
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Sunshine Cottage Childcare	Heather Nordell	580 South 300 West			305
Temple Ridge RV & Campground	Andrew Adams	390 East 850 North	P.O. Box 235		249
Temple Trailer Court		PO Box 280	PO Box 280, Manti	12/23/2025	168
Terkelsen Machine West	Ron Crook	360 south 400 West		12/16/2025	208
The Chill Mobile	Wade Anderson	Peddler	P.O. Box 26		387
The Granary	JonNorton	425 East 100 SOuth		1/2/2026	384
The Groom Room	LuAnn Tuttle	470 North 200 West		12/15/2025	167
The Original Garage LLC	Jason Dotson	243 North Main			302
The King Company, LLC	Robert King	565 East 100 North	P.O. Box 98		339
The Little White House Airbnb/Sorenser	Mei Chi and Jerry Sorensen	204 West 100 South		1/7/2026	274
The Original Garage LLC	Jason Dotson	245 North Main			302
The Rose Cottage Bed & Breakfast	Julie Snow Christensen	475 East Union			173
The Sandoval Taste	Cesar Sandoval	60 South 300 West		12/29/2025	363
The Sewing Company	Laura Brokaw	304 East 100 North		12/23/2025	307
The Storage Station	Leonard Aste	99 South Main	206 East Union		174
The Therapy Center/Cookin with Home Storage	Peggy Layton	60 south 100 East	P.O. Box 44		175
The Twisted Lemon	Tyler Jenkin	102 West 500 South	102 West 500 South		225
The Yardley Inn and Spa	Kateleon Rey-Grant	190 West 200 South		1/5/2026	185
Therapy West	Mountainland Rehabialita	1 North Main	PO Box 711185 SLC, UT 84171-1185	12/29/2025	304
Theta Wellness Center	Michel Simpson	372 South 550 East			331
Thompson Oil	Don Thompson	150 North 600 West	P.O. Box 56		176
Tim's Lawn Care	Tim Domenici	601 South Main			178
Top to Bottom Inspecctions LLC	James Richins	188 south 400 West		2/2/2026	372
Top Stop		295 North Main	5097 S 900 E #200 SLC 84117	1/2/2026	179

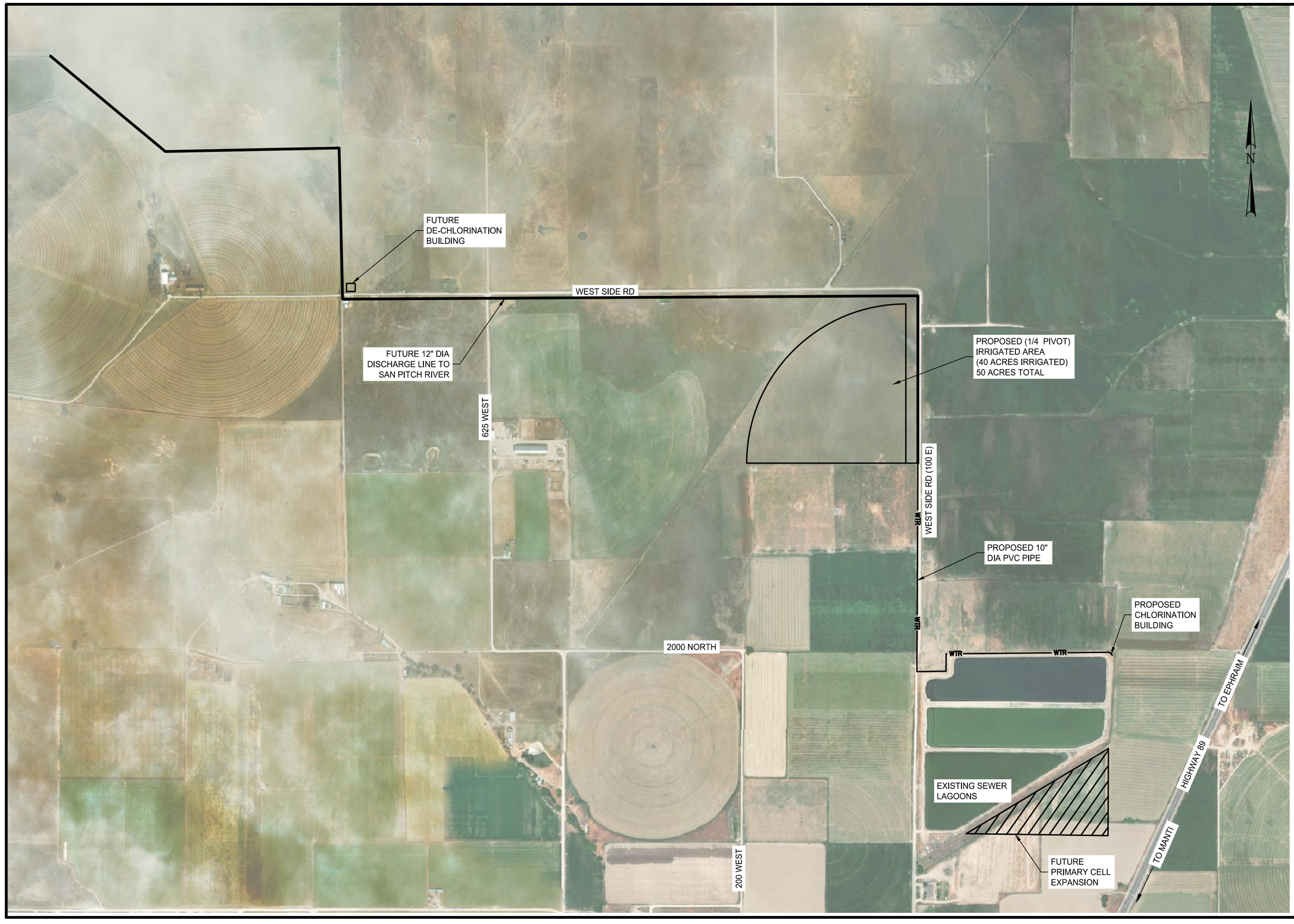
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Tradewinds Heating &AC Applicance, LL	Todd Mortensen	194 East 600 South		1/5/2026	180
Trythall Construction LLC.	Trever Trythall	581 North 450 West		1/10/2026	410
T.U.F. Builders, Inc.	Shane Carrington	21 North Main			371
Utah Outfitter and Guide Association	Tyler Miller	242 North 300 East			388
Valhalla Home Services LLC	Gabe Mayfield	335 South Main		12/16/2025	306
Viking Martial Arts Academys LLC	Ryan Barela	162 West 400 South		1/13/2026	408
Vision Landscapes, Inc.	Cory Hatch	411 East 300 South			182
Visiting Angels of Central Utah	Koriann Workman	55 S Main #23B		1/21/2026	277
Vivint LLC	Alex J. Dunn	Door-to-door	4931 N 300 W, Provo 84604		183
Washburn Pain Relief	Tara Washburn	40 North Main	153 East 100 South		280
Wright Bros Hydro Seed and Fertilizer	Easton Wright	131 So 400 W #B			366
X1 Construction LLC	John Cox	152 South 400 West		12/16/2025	244
Youth Health Associates	Devon Frischknecht	1220 North 100 East			355
Zella Belle Lifestyle	Lisa Anderson	580 West 615 North		1/9/2026	248
Zions First National Bank	David Warren	1 South Main	P.O. Box 279	1/5/2026	186

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Jones & DeMille Engineering - Shaping the Quality of Life - 800.748.5275 www.jonesanddemille.com	Manti City *Wastewater Facilities Area Map*	Sanpete County Scale: 1" = 2,000'
	Map Name: H:\JD\Proj\1506-087\Design\GIS\Projects\Design\1506-087_Design\1506-087_Design.aprx - EXH02 Manti Wastewater Lagoons Project Number: 1506-087 Drawn by: JWW 05-20 Last Edit: 05/05/2020	**EX-2**



Jones & DeMille Engineering, Inc.
CIVIL ENGINEERING - SURVEYING - TESTING
GIS - ENVIRONMENTAL
1.800.748.5275 www.jonesanddemille.com

DESIGN:	.	CHECK:	.	REVIEW
DRAWN:	LG	19/08	CHECK:	.
QUANT:	.		CHECK:	.

NO.	DATE	REMARKS
		ORIGINAL SUBMISSION FOR AUTHORIZATION

REVISIONS

SCALE: 1" = 800'

DWG NAME: PL-01
SHT SET: 1506-087

DWG CREATED: 19/08/07
PEN TBL: 1sheet-24800.ctb

UPDATED: 8/7/2019
PLOTTED: 8/30/2019

APPROVAL RECOMM: DATE
PROJECT DESIGN ENGINEER
APPROVED: DATE

MANTI CITY
WASTEWATER IMPROVEMENT
PLAN SHEET
PROJECT NUMBER: 1506-087

SANPETE
COUNTY

SHEET NO. PL-01

PN DRAFT