



FACTSHEET
(pursuant to NAC 445A.236)

Permittee Name: GALEPPI LAND & LIVESTOCK COMPANY

560 GENOA LANE
MINDEN, NV 89423

Permit Number: NS2002513

Permit Type: GROUNDWATER DISCHARGE

Designation: GROUNDWATER

New/Existing: EXISTING

Location: GALEPPI RANCH, DOUGLAS
560 GENOA LANE, MINDEN, NV 89423
LATITUDE: 39.005556, LONGITUDE: -119.814444
TOWNSHIP: 13 N, RANGE: 19 E, SECTION: 11, 12,13

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Latitude	Longitude	Receiving Water
001	RECLAIMED WATER	Land Application Site		38.9794	-119.7916	GROUNDWATER
002	MONITORING WELL - #5	Monitoring Well		39.0022	-119.7941	N/A
003	MONITORING WELL - #6	Monitoring Well		39.0250	-119.7910	N/A
004	MONITORING WELL - #8	Monitoring Well		39.0174	-119.8022	N/A
005	MONITORING WELL - #9	Monitoring Well		39.0080	-119.8027	N/A

Permit History/Description of Proposed Action

The Permittee, Galeppi Land and Livestock Company, has applied for the renewal of groundwater discharge permit NS2002513 for the Galeppi Ranch located at 560 Genoa Lane in Genoa, Douglas County, Nevada. The Permittee proposes to continue to use reclaimed water, supplied by the Minden-Gardnerville Sanitation District (MGSD) (Permit #NS0040027), for the irrigation of its common property.

This permit was first issued in October of 2004. The last renewal was issued on January 13, 2010, and expired on January 13, 2015; the permit has been administratively continued since.

Facility Overview

Galeppi Ranch, located west of U.S. Highway 395 on both sides of Genoa Lane (see the attached figure), uses reclaimed water, provided by the MGSD, for a portion of its annual irrigation demand. Of the approximately 1,550 acres, 820 acres are irrigated with reclaimed water. A portion of the fields are supplemented with reclaimed water, while it is the primary source of irrigation on others. The fields which use reclaimed water as a supplement also use water from the Carson River located to the west of the ranch.

The MGSD operates two (2) clay-lined reservoirs located on Muller Lane. The total combined storage of the reservoirs is 550 acre-feet. From the reservoir, the reclaimed water flows either to the Rosser Ditch or the Middle Ditch and then to a ditch system with check gates. The reclaimed water is then applied via flood irrigation. Irrigated crops include pasture grasses, clover hay, and alfalfa.

Discharges to the Carson River or its tributaries are strictly prohibited. Measures implemented to ensure no discharges occur to the River include using check gates to lessen any flooding runoff from occurring outside of the tail water ditches, minimizing potential surface runoff by considering ground conditions prior to irrigating (e.g., frozen or saturated soils, etc.), preventing over-application of reclaimed water to flood irrigated fields, and maintaining irrigation ditches and tailwater containment berms.

Outfall Summary

Outfall 001 – This outfall is for the discharge of reclaimed water to the Galeppi Ranch.

Outfall 002 – This outfall is for monitoring well #5 located up gradient of Galeppi reservoir, near the north corner of field 18.

Outfall 003 – This outfall is for monitoring well #6 located in the northernmost field at the tail water control berms.

Outfall 004 – This outfall is for monitoring well #8 located down gradient of fields 10 and 11.

Outfall 005 – This outfall is for monitoring well #9 located down gradient of Galeppi reservoir in field 13.

Effluent Characterization

The discharge consists of secondary treated effluent which meets Category D bacteriological quality per Nevada Administrative Code (NAC) 445A.276.

Nevada State Network Discharge Monitoring Report (NetDMR) data, as reported from the year 2019 to 2023, was reviewed as part of this permit renewal process. The long-term average discharge flow rate was approximately 1.3 million gallons per day (MGD). The previous permitted maximum discharge flow rate was limited to 2.0 MGD; there was no exceedance of this limit.

There was only one reported exceedance of a permit limit during the above-mentioned reporting period. That exceedance was for the annual total flow rate which occurred in 2019.

Pollutants of Concern

Pollutants of concern are any pollutant, or parameters, that are believed to be present in the discharge and could affect or alter the physical, chemical, or biological conditions of the receiving water. Common pollutants of concern for reclaimed water are total nitrogen, fecal coliform, total dissolved solids, and chloride.

Receiving Water

Receiving water is groundwater of the State. Depth to groundwater in the Galeppi Ranch area ranges from less than a foot below ground surface (bgs) to 7.6 feet bgs.

Compliance History

The Permittee was considered to be in substantial compliance during the 2019 to 2023 reporting period.

Proposed Effluent Limitations

The discharge shall be limited and monitored by the Permittee as specified below:

Groundwater Monitoring Wells Table for Sample Location 002 (Monitoring Well - #5) To Be Reported Quarterly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Chloride (as Cl)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	002	Quarterly	DISCRT
Nitrogen, total	Daily Maximum		<= 10 Milligrams per Liter (mg/L)	Groundwater	002	Quarterly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	002	Quarterly	DISCRT
Water level relative to mean sea level ^[1]	Daily Maximum	M&R Feet (ft)		Groundwater	002	Quarterly	DISCRT
Depth to water level ft below landsurface ^[2]	Daily Minimum	M&R Feet (ft)		Groundwater	002	Quarterly	DISCRT

Notes (Groundwater Monitoring Wells Table):

1. Groundwater elevation above mean sea level (AMSL).
2. Depth to groundwater.

Groundwater Monitoring Wells Table for Sample Location 003 (Monitoring Well - #6) To Be Reported Quarterly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Chloride (as Cl)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	003	Quarterly	DISCRT
Nitrogen, total	Daily Maximum		<= 10 Milligrams per Liter (mg/L)	Groundwater	003	Quarterly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	003	Quarterly	DISCRT
Water level relative to mean sea level ^[1]	Daily Maximum	M&R Feet (ft)		Groundwater	003	Quarterly	DISCRT
Depth to water level ft below landsurface ^[2]	Daily Minimum	M&R Feet (ft)		Groundwater	003	Quarterly	DISCRT

Notes (Groundwater Monitoring Wells Table):

1. Groundwater elevation above mean sea level (AMSL).
2. Depth to groundwater.

Groundwater Monitoring Wells Table for Sample Location 004 (Monitoring Well - #8) To Be Reported Quarterly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Chloride (as Cl)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	004	Quarterly	DISCRT
Nitrogen, total	Daily Maximum		<= 10 Milligrams per Liter (mg/L)	Groundwater	004	Quarterly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	004	Quarterly	DISCRT
Water level relative to mean sea level ^[1]	Daily Maximum	M&R Feet (ft)		Groundwater	004	Quarterly	DISCRT
Depth to water level ft below landsurface ^[2]	Daily Minimum	M&R Feet (ft)		Groundwater	004	Quarterly	DISCRT

Notes (Groundwater Monitoring Wells Table):

1. Groundwater elevation above mean sea level (AMSL).
2. Depth to groundwater.

Groundwater Monitoring Wells Table for Sample Location 005 (Monitoring Well - #9) To Be Reported Quarterly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Chloride (as Cl)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	005	Quarterly	DISCRT
Nitrogen, total	Daily Maximum		<= 10 Milligrams per Liter (mg/L)	Groundwater	005	Quarterly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	005	Quarterly	DISCRT
Water level relative to mean sea level ^[1]	Daily Maximum	M&R Feet (ft)		Groundwater	005	Quarterly	DISCRT
Depth to water level ft below landsurface ^[2]	Daily Minimum	M&R Feet (ft)		Groundwater	005	Quarterly	DISCRT

Notes (Groundwater Monitoring Wells Table):

1. Groundwater elevation above mean sea level (AMSL).
2. Depth to groundwater.

Re-use Discharge Limitations Table for Sample Location 001 (Land Application Site) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow rate	Daily Maximum	<= 9.0 Million Gallons per Day (Mgal/d)		Prior to Irrigation	001	Continuous	CALCTD ^[1]
Flow rate	30 Day Average	M&R Million Gallons per Day (Mgal/d)		Prior to Irrigation	001	Continuous	CALCTD ^[2]

Notes (Re-use Discharge Limitations Table):

1. A representative daily maximum flow rate value can be calculated by dividing the volume of released water by the number of irrigation days (e.g., Release Volume / Days of Irrigation).
2. A representative 30-day average flow rate value can be calculated by dividing the calculated daily maximum flow rate value by 30 (e.g., Calculated Daily Maximum Flow Rate / 30 Days).

Re-use Discharge Limitations Table for Sample Location 001 (Land Application Site) To Be Reported Quarterly

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Prior to Irrigation	001	Quarterly	DISCRT
Coliform, fecal general ^[1]	Daily Maximum		<= 400 Most Probable Number per 100ml T (MPN/100mL) ^[2]	Prior to Irrigation	001	Quarterly	DISCRT
Coliform, fecal general ^[1]	30 Day Geometric Mean		<= 200 Most Probable Number per 100ml T (MPN/100mL) ^[2]	Prior to Irrigation	001	Quarterly	DISCRT

Notes (Re-use Discharge Limitations Table):

1. Sampling may be done by the supplier of the effluent, results must be reported by the Permittee. The fecal coliform count must meet Reuse Category D standards specified in NAC 445A.2768.
2. MPN / 100 mL or CFU / 100 mL.

Re-use Discharge Limitations Table for Sample Location 001 (Land Application Site) To Be Reported Annually

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Nitrogen, total ^[1]	Annual Mass Loading	<= 562 Pounds per Year (lb/yr) ^[2]		Prior to Irrigation	001	Annual	CALCTD
Nitrogen, total ^[3]	Annual Maximum	<= 306000 Pounds per Year (lb/yr) ^[4]		Prior to Irrigation	001	Annual	CALCTD

Notes (Re-use Discharge Limitations Table):

1. Cumulative Annual Nitrogen Applied (lbs/acre/year). This includes all sources of nitrogen applied (e.g., fertilizer, etc.).
2. To be reported as pound per acre per year (lb/acre/year).

270 lb/acre/year – Alfalfa
158 lb/acre/year – Sweet Clover
134 lb/acre/year – Pasture Grass
3. Total annual nitrogen used.
4. To be reported as pounds per year (lb/year).

Summary of Changes From Previous Permit

The requirement to report the total suspended solids for Outfall 001 has been removed.

The requirement to report the 5-day biochemical oxygen (BOD5) demand for Outfall 001 has been removed.

The requirement to report pH for Outfall 001 has been removed.

The requirement to report the irrigation volume and facility (field) area for Outfall 001 has been removed.

The 30-day average flow rate limit of 2.0 MGD for Outfall 001 has been removed and changed to monitor and report.

The monthly maximum flow rate has been changed to a daily maximum flow rate.

The maximum flow rate has been changed from 2.0 MGD to 9.0 MGD.

The 30-day average for fecal coliform for Outfall 001 has been changed to a 30-day geometric mean.

The 30-day average for total nitrogen for Outfall 001 has been removed.

The monthly maximum for fecal coliform and total nitrogen for Outfall 001 has been changed to a daily maximum.

The requirement to report nitrate for the monitoring wells has been removed.

Technology Based Effluent Limitations

Technology based effluent limitations are not applicable to this permit.

Water Quality Based Effluent Limitations

Water quality based effluent limitations are not applicable to this permit.

Proposed Water Quality Based Effluent Limits (monthly/weekly/daily)

Water quality based effluent limitations are not applicable to this permit.

Basis for Effluent Limitations

Fecal coliform and total nitrogen are required to be monitored to assess the quality of reclaimed water being applied and for the protection of human health and the environment. The monthly maximum and 30-day average for fecal coliform have been changed to a daily maximum and a 30-day geometric mean, respectively, according to NAC 445A.276. Furthermore, the monthly maximum for total nitrogen, as well as the flow, have been changed to a daily maximum. This change was made to be consistent with similar permitted facilities.

The previous permit included a 30-day average and monthly maximum flow rate limit of 2.0 MGD. Permits issued by the Bureau of Water Pollution Control typically have a daily maximum flow rate limit as this is what the annual and renewal fee is based on. One reason for not including a daily maximum flow rate limit in the previous permit was due to the fact that a daily maximum flow rate was difficult to obtain since the flow is not metered. Instead of a flow meter, tracking of reclaimed water used by the Permittee is done by collecting the starting reservoir elevation, ending reservoir elevation, the change in reservoir volume, the volume pumped to the reservoir, and calculation of total volume released for irrigation. To calculate a daily maximum flow rate, the Permittee will take the total volume released from the reservoir and divide it by the number of days the fields are irrigated with the reclaimed water from the reservoir. Due to this new calculation, the Permittee has requested that the maximum flow rate limit (i.e., daily maximum flow rate) be increased to 9.0 MGD.

The requirement to report the 30-day average for total nitrogen for Outfall 001 has been removed as the permit only requires a sample taken once every quarter and therefore a 30-day average cannot be calculated.

The requirement to report the total suspended solids, the BOD5, and pH for Outfall 001 has been removed as these constituents are not considered pollutants of concern. Furthermore, these constituents are reported by the supplier of the reclaimed water.

The requirement to report nitrate for the monitoring wells has been removed as nitrate is a species of total nitrogen which is already being reported.

The proposed permit maintains the requirement to report the annual nitrogen loading to ensure groundwater of the State is not being degraded.

The requirement to report depth to groundwater, groundwater elevation, total dissolved solids, total nitrogen, and chloride from each well has been retained to collect groundwater data and to ensure groundwater of the State is not being degraded.

Anti-backsliding

To prevent backsliding, effluent limitations in a reissued permit are required to be as stringent as those in the previous permit, with some exceptions.

The previous permit included a monthly maximum and 30-day average total suspended solids limit of 45 mg/L and 30 mg/L, respectively. These limits originate from the secondary treatment standards applicable to all publicly owned treatment works (POTWs). The secondary standards are technology-based requirements that stipulate POTWs meet a minimum level of effluent quality. Additionally, the requirement to sample for total suspended solids was included in accordance with NAC 445A.121(4) which state, "Waters must be free from...toxic...substances attributable to domestic or industrial waste or other controllable sources at levels or combinations sufficient to be toxic to human, animal, plant or aquatic life or in amounts sufficient to interfere with any beneficial use of the water." When treated effluent is discharged to a surface water, high concentrations of total suspended solids can affect turbidity, increase water

temperatures, and decrease the amount of dissolved oxygen in rivers and streams which can then negatively affect aquatic life. The concentration of total suspended solids of the reclaimed water provided by the MGSD has been between 5.2 mg/L and 20 mg/L during the 2019 to 2023 reporting period and has never exceeded the 30-day average or daily maximum permit limit. Furthermore, the reclaimed water first flows into one of two clay-lined reservoirs where it sits until it is needed for irrigation. While the reclaimed water sits in the reservoir any suspended solids settle to the bottom. When the reclaimed water is needed, a valve is opened to allow the water to flow into one of two ditches and then to the fields for flood irrigation. The reclaimed water then percolates into the ground or evaporates to the atmosphere. Since the discharge of reclaimed water at this facility is not to a surface water, total suspended solids is not considered a pollutant of concern; therefore, total suspended solids has been removed from the permit. Furthermore, the permit for the MGSD includes the secondary treatment standard effluent limits for total suspended solids.

The previous permit included a monthly maximum and 30-day average BOD5 limit of 45 mg/L and 30 mg/L, respectively. These limits originate from the secondary treatment standards applicable to all POTWs. The secondary standards are technology-based requirements that stipulate POTWs meet a minimum level of effluent quality. When treated effluent is discharged to a surface water, BOD5 can affect the amount of dissolved oxygen in rivers and streams which can then negatively affect aquatic life if the BOD5 levels are too high. The BOD5 concentrations of the reclaimed water discharged at the facility has been between 3.5 mg/L and 12 mg/L during the 2019 to 2023 reporting period and has never exceeded the 30-day average or daily maximum limits. Additionally, as the discharge of reclaimed water at this facility is not to a surface water, BOD5 is not considered a pollutant of concern; therefore, it has been removed from the permit. Furthermore, the permit for the MGSD includes the secondary treatment standard effluent limits for total suspended solids.

The previous permit included a maximum pH limit of 9.0 standard units (S.U.) and a minimum limit of 6.0 S.U. These limits originate from the secondary treatment standards applicable to all POTWs. The secondary standards are technology-based requirements that stipulate POTWs meet a minimum level of effluent quality. When treated effluent is discharged to a surface water, pH levels that are too low or too high can negatively affect aquatic life. The pH levels of the discharged reclaimed water at the Galeppi Ranch, from the 2019 to 2023 reporting period, has consistently been between 7.1 S.U. and 7.7 S.U. As the discharge of reclaimed water at this facility is not to a surface water, pH is not considered a pollutant of concern; therefore, it has been removed from the permit. Furthermore, the permit for the MGSD includes the secondary treatment standard effluent limits for pH.

The previous permit included a maximum limit of 375-acre feet per year for the irrigation volume and a maximum application area of 820 acres. The irrigation volume requirement has been removed as the Permittee has an established agreement with MGSD for the use of 375 acre-feet of reclaimed water in a year. Furthermore, the application area has been removed as the irrigation area has not changed from the last permit, nor does the Permittee expect this number to change in the future. These changes are also in line with similar permitted facilities.

The previous permit included the requirement to sample for nitrate from each monitoring well. Nitrate is a species of total nitrogen which is also required to be sampled for. Furthermore, while there is no permit limit for nitrate, there is a limit of 10 mg/L for total nitrogen. Therefore, the removal to sample for nitrate from each monitoring well does not loosen the permit requirements.

Antidegradation

The Division has developed an antidegradation regulation that is applied on a statewide basis, and which meets the statutory requirements of Nevada's water pollution control law found at Nevada Revised Statute (NRS) 445A.520 and NRS 445A.565 and is consistent with the federal antidegradation policy found at Title 40 in the Code of Federal Regulations (CFR) § 131.12. The objective of the Division's antidegradation regulation is to prevent degradation of Nevada's surface waters and maintain the unique attributes and special characteristics and water quality associated with high-quality waters.

As this permit is for discharges to groundwater, and not surface water, the new antidegradation rule is not applicable. There are currently no specific water quality standards that have been formally adopted by the State for groundwater, however, data reviewed during the renewal process does not indicate the potential for degradation of the groundwater from the reclaimed water discharged within the compliance limits of the proposed permit.

Special Conditions

See the Special Approvals / Conditions Table below.

SA – Special Approvals / Conditions Table

Item #	Description
1	The Permittee shall continue to submit their Discharge Monitoring Reports (DMRs) through the Nevada NetDMR website: https://netdmr.ndep.nv.gov/netdmr/public/home.htm .

Discharges From Future Outfalls/ Planned Facility Changes

The Permittee does not anticipate discharges from future outfalls or changes to the facility.

Corrective Action Sites

There are no active Bureau of Corrective Action sites located within a one-mile radius of the discharge location.

Wellhead Protection Program

The nearest Public Water System (PWS) well is located approximately 1.1 miles southeast of the Galeppi Ranch. The Galeppi Ranch is not located within a Drinking Water Protection Area, which is defined by a 3,000-foot radius around a PWS well, or a Wellhead Protection Area, which represents an approximate 10-year capture zone of a well.

Schedule of Compliance:

SOC – Schedule of Compliance Table

Item #	Description	Due Date
1	The Permittee shall submit two copies (one electronic and one hard copy) of an updated Reclaimed Water Management Plan (RWMP) (formerly known as an Effluent Management Plan) for review and approval by the Division. The RWMP shall follow guidance document WTS-1B: <i>General Design Criteria for Preparing a Reclaimed Water Management Plan</i> .	1/1/2025

Deliverable Schedule:

DLV– Deliverable Schedule for Reports, Plans, and Other Submittals

Item #	Description	Interval	First Scheduled Due Date
1	Quarterly DMRs	Quarterly	1/28/2025
2	Annual DMRs	Annually	1/28/2025

Procedures for Public Comment:

The Notice of the Division's intent to issue a permit authorizing the facility to discharge to groundwater of the State of Nevada subject to the conditions contained within the permit, is being mailed to interested persons on our mailing list and will be posted on our website at <https://ndep.nv.gov/posts>. Anyone wishing to comment on the proposed permit can do so in writing until 5:00 P.M. **9/13/2024**, a period of 30 days following the date of the public notice. The comment period can be extended at the discretion of the Administrator.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator of EPA Region IX or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted. Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determined to be appropriate. All public hearings must be conducted in accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Determination:

The Division has made the tentative determination to issue/re-issue the proposed 5-year permit.

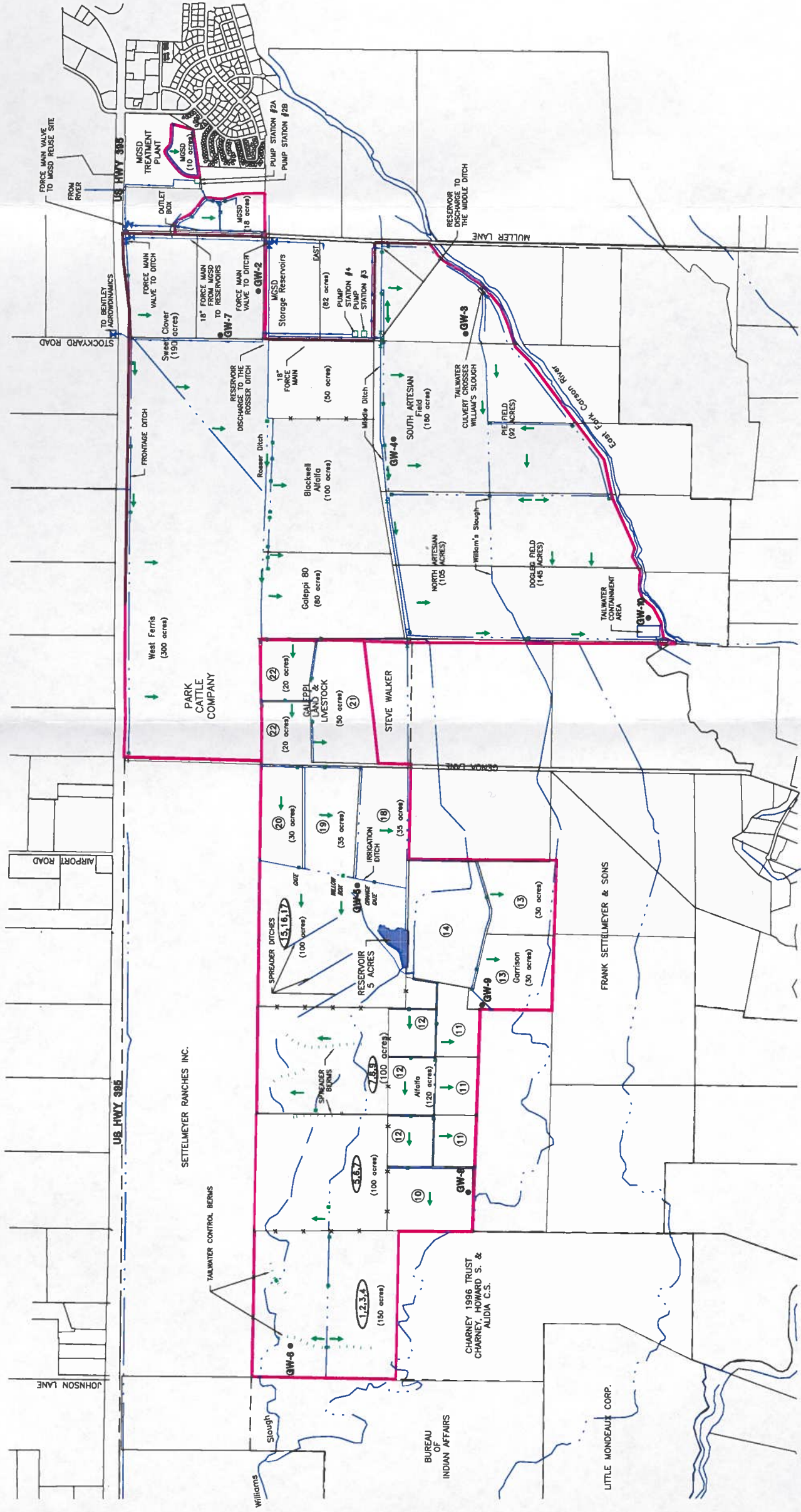
Prepared by: **Bonnie Hartley**

Date: **8/6/2024**

Title: **Staff II, Associate Engineer**



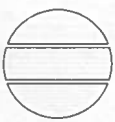
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Legend

- DIRECTION OF OVERLAND IRRIGATION FLOW
- REUSE AREA BOUNDARY
- IRRIGATION DITCHES
- FIELD BOUNDARIES
- PROPERTY BOUNDARIES
- GALLEPPI LAND AND LIVESTOCK FIELD NAME
- PARK CATTLE COMPANY FIELD NAME
- WEST FERRIS
- IRRIGATION CHECK GATES, SCREW GATES, AND TAKE OUT STRUCTURES (APPROXIMATE LOCATION)
- DITCH BLOCKED
- TREATED EFFLUENT FORCE MAIN
- MSDD MONITORING WELL (APPROXIMATE LOCATION)
- LOW BERMS TO SPREAD IRRIGATION WATER

FIGURE 3 - AREA PLAN
 MGSD Reuse Areas West of US Highway 395



REVISION	DATE

Figure 3
Area Plan