



STATE OF NEVADA

Department of Conservation & Natural Resources

DIVISION OF ENVIRONMENTAL PROTECTION

Brian Sandoval, Governor

Leo M. Drozdoff, P.E., Director

Colleen Cripps, Ph.D., Administrator

FACTSHEET (pursuant to NAC 445A.236)

Permittee Name: SMITH VALLEY DAIRY
P.O. BOX 367
CHOWCHILLA, CA - 93610

Permit Number: NS2014502

Location: SMITH VALLEY DAIRY, LYON
40 HUNEWILL LANE, WELLINGTON, NV - 89444
LATITUDE: 38.878481, LONGITUDE: -119.379716
TOWNSHIP: T12N, RANGE: R23E, SECTION: S26

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Outfall City	Outfall State	Outfall Zip	Outfall County	Latitude	Longitude	Receiving Water
001	DAIRY TOTALS	Internal Outfall		WELLINGTON	NV	89444	LYON	38.87	-119.38	GROUNDWATER OF THE STATE AND ARTESIA LAKE
002	DAIRY LAGOON NORTH	Internal Outfall		WELLINGTON	NV	89444	LYON	38.87	-119.38	GROUNDWATERS OF THE STATE AND ARTESIA LAKE
003	DAIRY LAGOON SOUTH	Internal Outfall		WELLINGTON	NV	89444	LYON	38.87	-119.38	GROUNDWATERS OF THE STATE AND ARTESIA LAKE
004	MONITORING WELL #1	Monitoring Well		WELLINGTON	NV	89444	LYON	38.882708	-119.377175	GROUNDWATERS OF THE STATE AND ARTESIA LAKE
005	MONITORING WELL #2	Monitoring Well		WELLINGTON	NV	89444	LYON	38.885381	-119.378097	GROUNDWATERS OF THE STATE AND ARTESIA LAKE
006	MONITORING WELL #3	Monitoring Well		WELLINGTON	NV	89444	LYON	38.884514	-119.379719	GROUNDWATERS OF THE STATE AND ARTESIA LAKE
007	DEAD ANIMAL COMPOST	Surface Disposal Site		WELLINGTON	NV	89444	LYON	38.87	-119.38	GROUNDWATERS OF THE STATE AND ARTESIA LAKE
008	STORMWATER DISCHARGE	External Outfall		WELLINGTON	NV	89444	LYON	38.87	-119.38	GROUNDWATERS OF THE STATE AND ARTESIA LAKE

009	CORRAL/SEPARATOR MANURE TESTING AND TRANSFER	External Outfall		WELLINGTON NV	89444	LYON	38.87	-119.38	GROUNDWATERS OF THE STATE AND ARTESIA LAKE
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General:

The Permittee, Smith Valley Dairy (SV Dairy), has applied for a new groundwater discharge permit NS2014502 to discharge dairy manure and process wastewater to groundwater and surface waters of the State. The Smith Valley Dairy is a new dairy facility located 6 miles NE of Smith Valley on the east side of Hunewill Lane.

Smith Valley Dairy is defined as a concentrated animal feeding operation (CAFO) because the dairy is designed to confine at least 700 mature dairy cows for 30 days or more in a 12-month period in an area devoid of vegetation during the normal growing season. As a CAFO, Smith Valley Dairy is required to contain all manure and process wastewater from the production area. An exception to this is a precipitation overflow resulting from a 25-year, 24-hour or larger storm event or chronic storm event. To qualify for this exception the production area must be properly designed, constructed, operated, and maintained to contain manure, process wastewater, direct precipitation and the runoff from a qualifying storm event. CAFOs that land apply manure and/or process wastewater are required to comply with a Nutrient Management Plan (NMP). CAFOs are regulated primarily through adherence to nutrient application rates, and NMP compliance. Precipitation related runoff from land application areas where manure and/or process wastewater have been applied in accordance with the Division reviewed NMP is exempt from permitting requirements.

Smith Valley Dairy consists of a single facility owned and operated by the Permittee. The dairy construction is industry typical with open corrals constructed with pipe and cables, concrete feed aprons and feed bunks, feed alleys and cow movement alleys, feed storage areas and associated storage structures, maintenance facilities and waste management/control structures. The maximum capacity at the 140-acre facility will be 7,248 head of combined cows, heifers and calves. Manure produced at the facility is estimated at 29,417 tons annually. Manure generated by the dairy in excess of crop production needs and land availability will be stockpiled or composted within the footprint of the production area in a manner that is compliant with all permit requirements and then transferred to other agricultural users. There are approximately 1,640 acres of land application area identified in the NMP and owned by the dairy. Solid manure applications are based on soil and manure testing and on crop nutrient uptake as outlined in the Division reviewed NMP. The expected animal mortality rate for the dairy is 3-8% annually. Routine mortalities will be handled by on-site composting or picked up by a commercial rendering facility. The submitted NMP was developed by SV Dairy based on the population of livestock stated above and an available land applicaiton area of 1,640 acres. The NMP has been reviewed by the Division and has been found to meet the regulatory requirements of the State. The submitted NMP is available for public review at the Division's Carson City office.

Discharge Characteristics:

Process water, approximately 31 million gallons per year, generated at the facility will flow via pipeline into a concrete ditch and then to a collection pit. Wastewater from the pit is pumped over a solid separator screen to remove solids prior to entering the lagoons. Water from the screening process may also be directed back into the collection pit for re-use in flushing the barns. Smith Valley Dairy has requested a 30-day average discharge limit of 0.80 million gallons per day (mgd). Natural Resources and Conservation Service (NRCS) "Waste Storage Pond Design" computations were used to calculate pond storage needs. The total required storage period for 5 months process water (40 acre-feet), runoff from the 25-year 24 hour storm event (15.4 acre-feet), including direct precipitation on the ponds, is 55.4 acre-feet. Sludge

storage and extra working capacity is an additional 16.9 acre-feet. The total operational capacity of the lagoons is 72.3 acre-feet. Pond capacity information, including the working volume, process water runoff and storage, design storm and its corresponding runoff, as well as the pond operation/maintenance plans are located in the Division reviewed NMP.

Receiving Water:

The Permittee will use a combination of evaporation and land application to re-use the process wastewater generated by the facility. The Permittee will discharge to groundwater via irrigation and may discharge manure and process wastewater in response to storm events or chronic rainfall events that exceed the 25-year, 24-hour storm design, provided that the facility and its production areas are properly designed, constructed, operated and maintained to contain manure, pollutants, direct precipitation and the runoff from a 25-year 24-hour storm event. During geotechnical investigations in support of construction, groundwater was encountered at approximately 14 to 15 feet below grade. Any surface water discharge would be to the dry basin named Artesia Lake.

Summary of Changes From Previous Permit:

This is a new permit application.

Proposed Effluent Limitations:

There shall be no discharge from the facility property except as authorized by this permit. There shall be no discharge of manure or process wastewater pollutants from the production area to waters of the State, with the exception of pollutants in overflow that may be discharged when a storm greater than the 25-year 24-hour storm event or chronic rainfall event causes an overflow from the production area.

During the period beginning on the effective date of this permit, the Permittee is authorized to discharge manure and process wastewater to:

- 1) Land application areas, reported at 1640 acres, in accordance with a Division reviewed Nutrient Management Plan; and
- 2) Waters of the State in response to storm events or a chronic rainfall event that exceeds the 25-year 24-hour storm design, provided that the facilities and their production areas are properly designed constructed, operated and maintained to contain manure, pollutants, direct precipitation and the runoff from a 25-year 24-hour storm event.

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

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Depth to water level ft below landsurface	Daily Maximum	M&R Feet (ft)		Groundwater	004	Quarterly	DISCRT
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
pH, maximum	Daily Maximum		M&R Standard Units (SU)	Groundwater	004	Quarterly	DISCRT
pH, minimum	Daily Minimum		M&R Standard Units (SU)	Groundwater	004	Quarterly	DISCRT

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

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Depth to water level ft below landsurface	Daily Maximum	M&R Feet (ft)		Groundwater	005	Quarterly	DISCRT
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
pH, maximum	Daily Maximum		M&R Standard Units (SU)	Groundwater	005	Quarterly	DISCRT
pH, minimum	Daily Minimum		M&R Standard Units (SU)	Groundwater	005	Quarterly	DISCRT

Groundwater Monitoring Wells Table for Sample Location 006 (Monitoring Well) To Be Reported Quarterly

Parameter	Discharge Limitations			Monitoring Requirements			
	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Depth to water level ft below landsurface	Daily Maximum	M&R Feet (ft)		Groundwater	006	Quarterly	DISCRT
Chloride (as Cl)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	006	Quarterly	DISCRT
Nitrogen, total	Daily Maximum		<= 10 Milligrams per Liter (mg/L)	Groundwater	006	Quarterly	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Groundwater	006	Quarterly	DISCRT
pH, maximum	Daily Maximum		M&R Standard Units (SU)	Groundwater	006	Quarterly	DISCRT
pH, minimum	Daily Minimum		M&R Standard Units (SU)	Groundwater	006	Quarterly	DISCRT

CAFO Discharge Limitations Table for Sample Location 001 (Dairy Totals) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Flow rate	30 Day Average	<= 0.80 Million Gallons per Day (Mgal/d)		Internal Monitoring Point	001	Weekly	METER
Animals, total estimated no. of	30 Day Average		M&R Number (#)	Internal Monitoring Point	001	Monthly	CALCTD

CAFO Discharge Limitations Table for Sample Location 001 (Dairy Totals) To Be Reported Quarterly

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Manure, wet tons total	30 Day Average		M&R Wet Tons (wet ton)	Internal Monitoring Point	001	Quarterly	ESTIMA
Manure, wet tons removed	30 Day Average		M&R Wet Tons (wet ton)	Internal Monitoring Point	001	Quarterly	ESTIMA

CAFO Discharge Limitations Table for Sample Location 002 (Dairy Lagoon North) To Be Reported Semi Annually

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)	Prior to Irrigation	002	Semiannual	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Prior to Irrigation	002	Semiannual	DISCRT
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Prior to Irrigation	002	Semiannual	DISCRT
Phosphorus, total (as P)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Prior to Irrigation	002	Semiannual	DISCRT
pH, maximum	Daily Maximum		M&R Standard Units (SU)	Prior to Irrigation	002	Semiannual	DISCRT
pH, minimum	Daily Minimum		M&R Standard Units (SU)	Prior to Irrigation	002	Semiannual	DISCRT

CAFO Discharge Limitations Table for Sample Location 002 (Dairy Lagoon North) To Be Reported Annually

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Solids, total suspended	Daily Maximum		M&R Milligrams per Liter (mg/L)	Prior to Irrigation	002	Annual ^[1]	DISCRT
BOD, 5-day	Daily Maximum		M&R Milligrams per Liter (mg/L)	Prior to Irrigation	002	Annual ^[1]	DISCRT

Notes (CAFO Discharge Limitations Table):

1. Annual measurements shall be conducted in the 4th quarter of each calendar year and submitted with the annual report.

CAFO Discharge Limitations Table for Sample Location 003 (Dairy Lagoon South) To Be Reported Semi Annually

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)	Prior to Irrigation	003	Semiannual	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Prior to Irrigation	003	Semiannual	DISCRT
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Prior to Irrigation	003	Semiannual	DISCRT
Phosphorus, total (as P)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Prior to Irrigation	003	Semiannual	DISCRT
pH, maximum	Daily Maximum		M&R Standard Units (SU)	Prior to Irrigation	003	Semiannual	DISCRT
pH, minimum	Daily Minimum		M&R Standard Units (SU)	Prior to Irrigation	003	Semiannual	DISCRT

CAFO Discharge Limitations Table for Sample Location 003 (Dairy Lagoon South) To Be Reported Annually

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Solids, total suspended	Daily Maximum		M&R Milligrams per Liter (mg/L)	Prior to Irrigation	003	Annual ^[1]	DISCRT
BOD, 5-day	Daily Maximum		M&R Milligrams per Liter (mg/L)	Prior to Irrigation	003	Annual ^[1]	DISCRT

Notes (CAFO Discharge Limitations Table):

1. Annual measurements shall be conducted in the 4th quarter of each calendar year and be submitted with the annual report.

CAFO Discharge Limitations Table for Sample Location 007 (Dead Animal Compost) To Be Reported Semi Annually

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)	Internal Monitoring Point	007	Semiannual	COMPOS
Phosphorus, total (as P)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Internal Monitoring Point	007	Semiannual	COMPOS
pH, maximum	Daily Maximum		M&R Standard Units (SU)	Internal Monitoring Point	007	Semiannual	COMPOS
pH, minimum	Daily Minimum		M&R Standard Units (SU)	Internal Monitoring Point	007	Semiannual	COMPOS

CAFO Discharge Limitations Table for Sample Location 008 (Stormwater Discharge) To Be Reported Annually^{[1][2]}

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Chloride (as Cl)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Receiving Water	008	Report	DISCRT
Solids, total dissolved	Daily Maximum		M&R Milligrams per Liter (mg/L)	Receiving Water	008	Report	DISCRT
Solids, total suspended	Daily Maximum		M&R Milligrams per Liter (mg/L)	Receiving Water	008	Report	DISCRT
BOD, 5-day	Daily Maximum		M&R Milligrams per Liter (mg/L)	Receiving Water	008	Report	DISCRT
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Receiving Water	008	Report	DISCRT
Phosphorus, total (as P)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Receiving Water	008	Report	DISCRT
Coliform, fecal general	Daily Maximum		M&R Most Probable Number per 100ml T (MPN/100mL)	Receiving Water	008	Report	DISCRT
Flow, total	Daily Maximum	M&R Million Gallons (Mgal)		Receiving Water	008	Report	DISCRT
pH, maximum	Daily Maximum		M&R Standard Units (SU)	Receiving Water	008	Report	DISCRT
pH, minimum	Daily Minimum		M&R Standard Units (SU)	Receiving Water	008	Report	DISCRT

Notes (CAFO Discharge Limitations Table):

1. The Permittee shall report date and time of each discharge and collect the sample within 30 minutes of first knowledge of the stormwater discharge. If sampling in that period is not possible due to dangerous weather conditions, the Permittee shall collect the sample as soon as possible after suitable conditions occur. Reason for the sampling delay shall be documented.
2. Sampling of the representative stormwater discharge shall occur at the point where the overflow first reaches a water of the State. Waters of the State are defined in NRS 445A.415.

CAFO Discharge Limitations Table for Sample Location 009 (Corral/Separator Manure Testing And Transfer) To Be Reported Annually

Discharge Limitations				Monitoring Requirements			
Parameter	Base	Quantity	Concentration	Monitoring Loc	Sample Loc	Measurement Frequency	Sample Type
Manure, wet tons removed	Annual Total		M&R Tons (ton)	Internal Monitoring Point	009	Annual	CALCTD
Nitrogen, total	Daily Maximum		M&R Milligrams per Liter (mg/L)	Internal Monitoring Point	009	Annual	DISCRT
Phosphorus, total (as P)	Daily Maximum		M&R Milligrams per Liter (mg/L)	Internal Monitoring Point	009	Annual	DISCRT

Rationale for Permit Requirements:

Monitoring requirements for the parameters specified in the Discharge Tables of the permit are being established to ensure that the Permittee has appropriate manure and process wastewater data to comply with the Division reviewed Nutrient Management Plan and to determine any potential impacts to waters of the State that may occur in response to related discharges or seepage.

Special Conditions:

SA – Special Approvals / Conditions Table

Item #	Description
1	Part A, Section A.6 does not apply to this permit. A Certified Operator is not required for this facility.
2	Part B.CO.23 - Soil sampling shall be conducted in accordance with Part IX of the Division reviewed Nutrient Management Plan (NMP) and results shall be submitted to the Division as part of the annual report.
3	Part C, Section C.2 - does not apply to this permit. Operations and Maintenance of this facility are specifically identified in the Division reviewed NMP.
4	Part C, Section C.13 - does not apply to this permit. This section is for biosolids management from treatment facilities. Manure management at this facility is specifically addressed in the Division reviewed NMP.
5	Part C, Section C.33.2 - applies only to Swine, Veal, and Poultry CAFO operations.
6	As indicated in the NMP Part III: <u>Collection Function Requirements</u> - The total required storage period for 5 months (Nov. - Mar.) process water (40 ac-ft), runoff from the 25-year, 24-hour storm event(15.4 ac-ft), and direct precipitation on the ponds is 55.4 ac-ft. Sludge storage and extra working capacity is 16.9 ac-ft. The total operational capacity of the lagoons is 72.3 acre-feet. <u>Transfer Function Requirements</u> - Manure may be stockpiled in and around the pens and in places of the facility that drain to an impoundment. Manure may also be transferred to a third party.
7	The Permittee shall maintain compliance with the Management Plan for Nuisance Control (MPNC) submitted to and reviewed by the Division. Any changes to the MPNC for Odor Control, Dust Control, or Pest Control shall be submitted to the Division for review prior to implementing the changes.
8	The SV Dairy NMP is based on the "narrative rate approach" and provides for changes to crop rotation without permit modification provided the crop and nutrient application parameters are identified in the NMP.

Flow:

Flow is limited to 0.80 MGD, 30-day average.

Corrective Action Sites:

There are no Bureau of Corrective Actions sites within a one mile radius of Smith Valley Dairy.

Wellhead Protection Program:

This facility is not located within an established Drinking Water Protection Area or Wellhead Protection Area.

Schedule of Compliance:

SOC – Schedule of Compliance Table

There are no Schedule of Compliance items

Deliverable Schedule:

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

Item #	Description	Interval	First Scheduled Due Date
1	Discharge Monitoring Reports	Quarterly	4/28/2015
2	Discharge Monitoring Reports	Semi Annually	7/28/2015
3	Annual Report	Annually	1/28/2016

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 sent to the **Mason Valley News, Reno Gazette Journal** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing until 5:00 P.M. **1/9/2015**, 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 to accordance with NAC 445A.238.

Due to a significant degree of interest in this proposed project, the Division has scheduled a Public Hearing to gather additional public input regarding the draft permit. The Public Hearing has been scheduled for **Wednesday January 7, 2015 at 6PM** at the **Smith Valley School** located at **20 Day Lane, Smith, Nevada.**

Members of the public wishing to comment upon the proposed permit and/or recommend terms and conditions for consideration of incorporation in the permit are invited to attend the hearing meeting and provide comments and information that are pertinent to the discharge permit. Comments not related to water quality issues cannot be considered. The Division may set a five-minute time limit for oral statements based on the number of people in attendance who would like to comment. Comments and information may be submitted by interested persons through the close of the public notice period.

All comments or objections received within the thirty (30) day public notice period or submitted at the Public Hearing will be considered in the formulation of final determinations regarding the application. If the determinations of the Administrator are substantially changed from the tentative determinations, the Administrator will give public notice of the revised determinations. Additional comments and objections will be considered at that time.

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: **Michele Reid**
Date: **5/30/2014**
Title: **Staff I Associate Engineer**