



STATE OF NEVADA

Department of Conservation & Natural Resources

Brian Sandoval, Governor

Leo M. Drozdoff, P.E., Director

DIVISION OF ENVIRONMENTAL PROTECTION

Colleen Cripps, Ph.D., Administrator

Nevada Division of Environmental Protection FACTSHEET (Pursuant to NAC 445A.236)

PERMITTEE NAME: Carico Farms, Inc.
705 Peterson Road
Lovelock, Pershing County, Nevada 89419

PERMIT NUMBER: NEV2008511

LOCATION: Carico Farms, Inc. Bio-Organic Reuse Facility
705 Peterson Road
Lovelock, Pershing County, Nevada 89419

COORDINATES: Latitude - 40° 04' Longitude - 118° 33'
Township - 25N, Range - 31E, Section - 3 MDB&M

FLOW: Land application volume - 100,000 gallons per acre per year.
Permanent holding tanks - Total volume capacity - 40,000 gallons.

PUBLIC WATER SUPPLY: There are no public supply wells within one (1) mile of this facility.

CORRECTIVE ACTIONS SITES: There are no Bureau of Corrective Actions remediation sites located within a five-mile radius from the center-point of the landfill's property.

WELLHEAD PROTECTION AREA: Carico Farms, Inc. agricultural facility is not within any Drinking Water Protection zone, nor is the facility within a Wellhead Protection Zone.

GENERAL:

The Permittee has applied for a "major modification" to its current Nevada groundwater discharge permit - NEV2008511, for discharges from its Carico Farms Inc. Bio-Organic Reuse Facility; this facility is located in Lovelock, Pershing County, Nevada. The purpose of the requested permit modification is to reflect proposed operational conditions, including amount of applied nutrients and available land application areas.

The permit modification and early renewal request is to update the permit to match the land use following a change in ownership and subsequent reduction in available materials land application

area. The permitted 640 acre parcel is being split into two (2) 320-acre “halves” with George E. Waters, Jr. owning the half where land application of treated grease trap materials will take place. Carico Farms Inc. is requesting the flexibility to plant alfalfa on individual Assessor Parcel Numbers rather than having a grass or grain crop on the same parcel as the alfalfa.

Although the land available for land application of treated grease trap materials is being reduced from 640 acres to 320 acres, it is important to note that the actual land application area has never been more than 53 acres per year. Discharge monitoring reports for current permit NEV2008511 show actual land application areas to be 26 acres in 2008/2009, 26 acres in 2009/2010 and 26 acres in 2010/2011.

The average gallons of treated grease trap materials applied per year is 2,684,676 for an average of 223,723 gallons per month. Under the proposed modification, treated grease trap materials would only be applied over a 25% section (80 acres) of the 320 acres available. The Permittee anticipates that it would only cultivate crops in about 40 acres per year of the 80 acres of available for treated grease trap material land application.

The Permittee proposes to continue land apply aqueous fluids and associated solids from treated grease trap material for use as a soil amendment and nutrient source on nutrient deficient agricultural land. The grease trap material, provided by **Waters Septic Tank Service d.b.a. Waters Vacuum Truck Service**, is treated onsite using a patent pending process system. Fats, oils and greases from the grease trap material extracted during the treatment process are used onsite for power generation, and have the potential for use as feed stock for biofuel production. The aqueous fluids and associated solids from treated grease trap material will be applied as a fertilizer and soil amendment for beneficial use on portions of nutrient deficient agricultural land at the **Carico Farms Inc. Bio-Organic Reuse Facility**. The Permittee has a current Special Use Permit for the facility issued by Pershing County.

Waters Vacuum Truck Service is a licensed hauler and is required to maintain this license to transport grease trap material to the facility. Should the Permittee seek to accept for treatment and application grease trap material provided by another licensed hauler, the Division may require major modifications of this permit.

Carico Farms, Inc. farmland is flood irrigated; treated grease trap materials are directly injected into the land application fields. The aqueous fluids and associated solids from treated grease trap material applied are screened to remove solids over 5/16-inch in size before the material can be land applied. The aqueous fluids and associated solids from treated grease trap material must be incorporated into the soil within 6 hours of land application. A crop must be planted to uptake the nitrogen that is contained in the aqueous fluids and associated solids from treated grease trap material within one year of application. The application rate will be based on the nitrogen needs of the crop to be planted. To reapply aqueous fluids and associated solids from treated grease trap material to cropland, the crop must be harvested. Grazing does not meet this requirement.

The Permittee proposes to continue to use its four (4) 10,000-gallon holding tanks at the beneficial use site to store the aqueous fluids and associated solids from treated grease trap material during inclement weather and when the incorporation equipment is not operational. The tanks will be equipped with sight glasses for tank level indicators. The tanks will also be equipped with one-inch ball valves on the tank inlets to facilitate mixing and sample collection. Prior to entering the tanks, grease trap material must be screened through at least a screen with maximum hole size of 5/16

inch. Oversize material will be removed to a covered and lined dumpster for holding until disposal at an approved landfill. The dumpster will be dosed with lime for odor and vector attraction reduction.

PROPOSED OPERATIONAL CONDITIONS:

Proposed treated grease trap material use requirements:

- a. Aqueous fluids and associated solids from treated grease trap material shall not be applied to land if the depth to groundwater is less than 3 feet.
- b. Aqueous fluids and associated solids from treated grease trap material shall not be applied to land within 100 feet of any public roadway or within 600 feet of any residence.
- c. Aqueous fluids and associated solids from treated grease trap material shall not be applied to land within 200 feet of monitoring wells.
- d. Aqueous fluids and associated solids from treated grease trap material shall not be applied within 200 feet of a drinking water well not defined as a public water system.
- e. Aqueous fluids and associated solids from treated grease trap material shall not be applied within 50 feet of an irrigation well that has been sealed per Nevada Administrative Code (NAC) 534.380.
- f. Aqueous fluids and associated solids from treated grease trap material shall not be applied within 200 feet of an irrigation well that is not sealed or cannot be documented as sealed per NAC 534.380
- g. Aqueous fluids and associated solids from treated grease trap material shall not be applied within 1,000 feet of a public water system well.
- h. Aqueous fluids and associated solids from treated grease trap material shall not be applied within 50 feet of any irrigation or drainage ditch, swale, intermittent stream, creek, river, wetland, lake, or other surface water.
- i. Equipment to incorporate the aqueous fluids and associated solids from treated grease trap material into the soil shall be on the site and in operating condition before the treated grease trap material is land applied.
- j. Food crops for human consumption shall not be grown on land that has had aqueous fluids and associated solids from treated grease trap material applied within the past five (5) years. The permit must be modified by the Division to allow food crops to be grown within 5 years of application of aqueous fluids and associated solids from treated grease trap material
- k. The aqueous fluids and associated solids from treated grease trap material shall be land applied at a uniform rate by means of a spray bar, splash plate, or other method approved by the Division.

- l. The grease trap material shall be screened through a 5/16-inch or finer screen to remove solids from the material prior to land application. Solid material removed from the grease trap material shall be disposed in an approved landfill.
- m. All treatment equipment and storage tanks shall be within appropriate secondary containment and appropriate Best Management Practices (BMPs) shall be applied.
- n. All tanks used for storage at the beneficial use site shall be permanently labeled to identify the contents of the tank, the Permittee, the Permittee’s phone number, and the Permittee’s address.
- o. All tanks storing aqueous fluids and associated solids from treated grease trap material shall be inspected daily for leakage. Documentation of the inspections shall be maintained in a bound logbook at the facility. Leaking tanks shall be immediately evacuated and not returned to service until all leaks have been repaired.
- p. The Permittee shall maintain in the onsite logbook details of the operation of the facility, including, but not limited to, gallons of grease trap material received, treated, and applied, with appropriate dates.

PROPOSED EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS:

Monitoring and sampling of treated grease trap material performed in compliance with the requirements of this permit shall be as specified below:

Table - 1: Treated Grease Trap Material Monitoring

Characteristics	Discharge Limits	Monitoring Requirements	
	Quarterly Average	Measurement Frequency	Sample Type
Cumulative Annual Treated Grease Trap Material Applied (gallons/acres/yr.)	100,000	Monthly	Calculate
Application Area (acres)	Monitor & Report	Monthly	Report
Organic Nitrogen (mg/Kg)	Monitor & Report	Monthly	Composite ¹
Ammonia Nitrogen (mg/Kg)	Monitor & Report	Monthly	Composite ¹
Nitrate Nitrogen (mg/Kg)	Monitor & Report	Monthly	Composite ¹
pH (Standard Units)	Monitor & Report	Monthly	Composite ¹
Total Phosphorus (mg/l)	Monitor & Report	Monthly	Composite ¹
Sulfate (mg/l)	Monitor & Report	Monthly	Composite ¹
Fluoride (mg/l)	Monitor & Report	Monthly	Composite ¹
Iron (mg/l)	Monitor & Report	Monthly	Composite ¹
Fats, Oils and Greases (FOG) (mg/l)	Monitor & Report	Monthly	Composite ¹
Plant Available Nitrogen Applied (lbs/acre)	Monitor & Report	Monthly	Calculate
Crop Grown (type)	Monitor & Report	Annually ²	Report
Crop Yield (dry metric tons/acre)	Monitor & Report	Annually ²	Calculate

Notes

1. On a monthly basis, the Permittee shall collect a composite sample of treated grease trap material from the four (4) holding tanks on site, which shall be analyzed for the listed parameters
2. To be submitted with the 4th quarter report.

GROUNDWATER MONITORING:

The Permittee shall monitor and sample Monitor Wells MW-1 and MW-2 on a quarterly basis, according to the following:

Table - 2: Groundwater Monitoring

Characteristics	Discharge Limits	Monitoring Requirements		
	Quarterly Average	Sample Location	Measurement Frequency	Sample Type
Depth to Groundwater (feet AMSL)	Monitor & Report	MW-1, MW-2	Quarterly	Field Measurement
Groundwater Elevation (feet)		MW-1, MW-2	Quarterly	Discrete
Nitrate as N (mg/L)	Monitor & Report	MW-1, MW-2	Quarterly	Discrete
Total Nitrogen (mg/L)	10	MW-1, MW-2	Quarterly	Discrete
Total Phosphorus (mg/L)	Monitor & Report	MW-1, MW-2	Quarterly	Discrete
Fluoride (mg/L)	Monitor & Report	MW-1, MW-2	Quarterly	Discrete

Notes:

mg/L - milligram per liter.

FLOW:

The application rate, in gallons of treated grease trap material per acre per year, shall be based on the nitrogen needs of the crop to be grown. The Permittee has requested an allowed maximum application rate of **100,000 gallons** of treated material per acre per year. The Permittee is required to monitor the nitrogen content of the material applied, and is required to grow and harvest a crop that has an annual nitrogen requirement of at least the nitrogen applied.

Total holding tank volume capacity approved for this operation is **40,000 gallons** - four (4) holding tanks with a 10,000 gallon capacity each. Holding tank flows are not metered either individually or collectively; in order to ensure proper domestic septage and/or grease trap process water collection, the daily flow into each of the tanks shall not exceed its volume capacity.

Proposed Operational Conditions: Holding tanks shall be monitored as specified below in Table - 3 - Holding Tank Limitations & Special Conditions.

Table - 3 - Holding Tank Limitations & Special Conditions

Tank Outfall	Site Description / Location ³	Tank Volume (Gallons)	Pumping Frequency	Holding Tank Inspections
1	Tank # 1	10,000	As Needed	Daily ^{1,2}
2	Tank # 2	10,000	As Needed	Daily ^{1,2}
3	Tank # 3	10,000	As Needed	Daily ^{1,2}
4	Tank # 4	10,000	As Needed	Daily ^{1,2}
	Total Volume	40,000	-	-

Notes:

1. Holding tanks shall be inspected daily for leaks;
2. All equipment used for domestic septage and/or grease trap process water collection and land application shall be inspected daily for leaks;
3. All discharge activities shall be carried out in a way that minimizes exposure to workers and anyone present at the facility during discharge activities.

Additional monitoring requirements for all categories may be added at the Division's discretion. Permittee is required to implement an Operations & Maintenance (O & M) manual with operational policies that ensure proper equipment operation and compliance with the terms and conditions of this permit.

SCHEDULE OF COMPLIANCE:

The Permittee shall implement and comply with the provisions of the schedule of compliance after approval by the Administrator, including in said implementation and compliance, any additions or modifications which the Administrator may make in approving the schedule of compliance.

The Permittee shall implement and/or execute the following scheduled compliance requirements:

- a. The Permittee shall achieve compliance with the reuse limitations upon effective date of this permit;
- b. The Permittee shall submit reports illustrating compliance or noncompliance with specified compliance dates within 14 days of any respective, scheduled compliance date;
- c. By Month XXth, 2011 (90 days) the Permittee shall submit an updated **Operation and Maintenance (O&M) Manual** covering the beneficial use and storage of the aqueous fluids and associated solids from treated grease trap material to the Division for review and approval. All changes to the current operation shall be documented in this **O&M Manual**. Furthermore, the **O&M Manual** shall also include information that would be applicable to a **Nutrient Management Plan**.

APPLIED MATERIAL CHARACTERISTICS:

Only aqueous fluids and associated solids from treated grease trap material may be land applied under this permit. Aqueous fluids and associated solids from treated grease trap material is either liquid or solid material removed from grease interceptor equipment at food service installations

that has been treated to remove fats, oils and greases. This does not include material removed from a septic tank, cesspool, portable toilet, Type III marine sanitation device, or similar treatment works. Further, it does not include liquid or solid material removed from a septic tank, cesspool, or similar treatment works that receives either commercial or industrial wastewater.

RECEIVING WATER CHARACTERISTICS:

The groundwater is reported to be at a depth of approximately 8 feet below ground surface in the Permittee's on-site water level monitoring well. Profile II analytical analysis of the monitoring well water sample indicate poor quality, with exceedances of Profile II maximum concentration levels (MCL) for Aluminum, Chloride, Fluoride, Iron, Manganese, Sulfate, and Total Dissolved Solids (TDS).

Groundwater quality monitoring shall be required for the aqueous fluids and associated solids from treated grease trap material site.

PERMIT REQUIREMENTS & RATIONALE:

Permit requirements are necessary to protect the public health and prevent the land application site from becoming a public nuisance or a source of groundwater pollution. The permit requires routine monitoring, implementation of Best Management Practices (BMP), O & M and reporting to ensure the site is performing at a level that minimizes water pollution and protects public health and the environment.

For discharges which are not granted coverage under this permit because the discharge contains pollutants in quantities which represent reasonable potential to cause or contribute to violations of water quality standards, the discharger must apply for an individual NPDES permit.

OPERATION REQUIREMENTS:

The Permittee shall operate the facility in compliance with permit provisions and requirements and in accordance with the Division approved Operations and Maintenance Manual (O & M Manual). The O & M Manual shall contain information required to comply with this permit. Spill response procedures shall be documented in the facility's O & M Manual.

PROPOSED DETERMINATION:

The division has made the tentative determination to issue the proposed permit, under the provisions prescribed, for a 5-year period. Under NAC 445A.232, this permit is classified as a reuse of sewage sludge.

PROCEDURES FOR PUBLIC COMMENT:

The Notice of the Division's intent to re- issue a modified discharge permit to the Permittee, subject to the conditions contained within the permit is being sent to the Lovelock Review Miner and the 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 for a period of thirty (30) days following the date of publication of the public notice in the newspaper. The comment period can be extended at the discretion of the Administrator. The deadline date and time by which all comments are to be submitted (via postmarked mail or time-stamped faxes, e-mails, or hand-

delivered items) to the Division is **September 30th, 2011 by 5:00 P.M.**

A public hearing on the proposed determination can be requested by the Permittee, any affected State, any affected interstate agency, the Regional Administrator 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 determines 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**.

The application and proposed permit on file and may be copied or copies may be obtained by writing or by calling [Alexi Lanza, P.E.](mailto:alanza@ndep.nv.gov), Bureau of Water Pollution Control at **(775)687-9468**; fax: **(775)687-4684**; or email: alanza@ndep.nv.gov. This notice and the fact sheet can be viewed online at the following web address: <http://ndep.nv.gov/admin/public.htm>

Prepared by:

[Alexi Lanza, P.E.](mailto:alanza@ndep.nv.gov)

Nevada Division of Environmental Protection
Bureau of Water Pollution Control - Permits Branch
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