

Aquifer Protection Permit #P-106231
 Place ID 140277, LTF 66870
Significant Amendment
GreenGate Fresh

The Arizona Department of Environmental Quality (ADEQ) proposes to issue an Aquifer Protection Permit for the subject facility that covers the life of the facility, including operational, closure, and post-closure periods unless suspended or revoked pursuant to A.A.C. R18-9-A213. This document gives pertinent information concerning the issuance of the permit. The requirements contained in this permit will allow the permittee to comply with the two key requirements of the Aquifer Protection Program: 1) meet Aquifer Water Quality Standards at the Point of Compliance; and 2) demonstrate Best Available Demonstrated Control Technology (BADCT). The purpose of BADCT is to employ engineering controls, processes, operating methods or other alternatives, including site-specific characteristics (i.e., local subsurface geology) to reduce discharge of pollutants to the greatest degree achievable before they reach the aquifer, or to keep pollutants from reaching the aquifer.

I. FACILITY INFORMATION

Name and Location

Name of Permittee:	GreenGate Fresh LLLP
Mailing Address:	1818 S. Letvin Ave Yuma, Arizona 85365
Facility Name and Location:	GreenGate Fresh 3255 South Avenue 3 ½ East Yuma, Arizona 85366 Yuma County

Regulatory Status

This is an existing facility. An Aquifer Protection Permit was issued on September 13, 2012. This Significant Amendment application was received on October 4, 2017.

Facility Description

GreenGate Fresh LLLP is authorized to dispose of wash water from the GreenGate Fresh fresh-vegetable cooling and processing facility. The facility washes and sanitizes vegetables using potable water from the City of Yuma Water Treatment Plant and sodium hypochlorite. During its operating season (November thru April) the facility generates 403,200 gallons per day (gpd) of wastewater from the vegetable washing operation and equipment sanitizing. The wash water shall be treated to meet Arizona aquifer water quality standards (AWQS).

The treatment process consists of a sump, hydro-sieves and rotary screens to remove the organic matter, two air strippers to reduce the concentration of Trihalomethanes (THMs) and a

heat exchanger. The effluent may be disposed by surface infiltration in four percolation basins, or used for dust control. The percolation basins are not located contiguously and will be operated on a rotating schedule. The basins will be used for intermittent percolation and recharge or for sludge removal events. When the effluent is used for dust control it is not considered a discharge as long as it is applied evenly over the dust control area in such a manner to prevent ponding. The dewatered solids shall be disposed of in accordance with State and Federal Regulations.

The total surface area available at the site for treated-water evaporation and infiltration-recharge is approximately 2.38 acres. The maximum flow rates of the treated wastewater into any one of the percolation basins are estimated to be approximately 280 gallons per minute (gpm).

The site includes the following permitted discharging facilities:

Facility	Latitude	Longitude
Percolation Area / Basin 1: (SE)	32° 40' 4.05" N	114° 34' 09.05" W
Percolation Area / Basin 2: (SE corner)	32° 40' 2.23" N	114° 34' 09.22" W
Percolation Area / Basin 3: (SW)	32° 40' 2.09" N	114° 34' 16.31" W
Percolation Area / Basin 4: (SW corner)	32° 40' 2.06" N	114° 34' 19.30" W

Amendment Description

ADEQ has reviewed and approved the increase of disposal of treated wash water from 288,000 gpd to 403,200 gpd, updated the closure/post closure cost and change of ownership.

II. BEST AVAILABLE DEMONSTRATED CONTROL TECHNOLOGY (BADCT)

The process of washing fresh vegetables and sanitizing equipment will produce up to approximately 403,200 gpd of wastewater that must be treated to meet AWQS before being discharged to percolation basins for disposal by means of evaporation and direct infiltration recharge into the vadose zone. Wastewater treatment will consist of closely controlling the residual free chlorine levels in the water prior to discharging to the mechanical treatment devices. A pump will be used to withdraw water from the bottom of the sump and lift it to the hydrosieve for removal of organic particulates. The air strippers will be used to remove excess TTHMs before the water is discharged through a heat exchanger into one of four percolation basins (or for dust control).

Disposal of treated wastewater will be accomplished by infiltration and evaporation in four percolation basins. The total surface area available at the site for infiltration is approximately 2.38 acres. The discharge to the four percolation basins, the boundaries of which are not contiguous, will be on a rotating schedule and act as intermittent percolation and recharge or slug events. The water infiltration will be sporadic and not under a constant hydraulic head. The maximum discharge rate to any one percolation basin will be approximately 280 gallons per minute.

A series of bermed basins will be maintained to collect and control stormwater runoff at the site.

III. HYDROGEOLOGIC SETTING

The facility was constructed within the Basin and Range Physiographic Province. The topography is characterized by a series of north-northwest trending mountain ranges with deep groundwater basins filled with alluvium from the surrounding mountains. The geographical region is near the confluence of the Colorado and Gila rivers. The local area is an elevated and topographically flat river terrace called the Yuma Mesa located near the South Gila Valley within the Yuma Basin. The Yuma Basin is bordered on the north and west by floodplains of the Colorado and Gila rivers. The site also lies within the tectonically active Salton Trough. However, known faults in the site's region are not believed to exert significant influence on the occurrence or behavior of the local groundwater.

The site is within the Yuma Groundwater Basin and is underlain by five recognized geologic units composed of various mixtures of silts, sands, clay, and gravel. The groundwater flow systems have changed in recent years due to extensive agricultural activities. The agricultural irrigation return flows have caused extensive groundwater mounding in the area of the facility and caused well levels to rise in last few decades. Groundwater is approximately 60 to 80 feet below ground surface in the area of the site. Local groundwater flow directions are to the north-northwest.

IV. STORM WATER/SURFACE WATER CONSIDERATIONS

The facility is located within the Lower Gila River Surface Water Basin. There are two natural surface waters near the site. The mostly ephemeral Gila River, located to the north, flows west, where it meets the perennial Colorado River, located west of the site. Natural surface water flow is infrequent and rare due to the arid environment, high surface-infiltration rates, and low precipitation levels (~ 3 to 4 inches/year). There are numerous cement-lined channels/canals constructed throughout the area for conveyance of irrigation waters.

The site, which lies on an elevated ancient river terrace, is not located in the 100-year flood plain according to *FEMA map panel 06025C2275C* and is protected by levees from the nearby canals.

V. COMPLIANCE WITH AQUIFER WATER QUALITY STANDARDS

Monitoring and Reporting Requirements

Operational monitoring will be performed according to Section 4.2, Table 4.2.2. The air stripper shall be monitored on a daily basis for proper operation, since the plant's ability to maintain low levels of TTHMs in the effluent depends on the operation and efficiency of the air stripper. Discharge monitoring for the permitted facilities listed in Section 2.1 of the APP shall be performed according to Section 4.2, Table 4.2.1.

Based on the quality of the discharge, groundwater monitoring is not a requirement of the permit.

Discharge Monitoring Point

Monitoring port on the discharge line before disposal into the pond:

Latitude: 32° 40' 6.02" North
Longitude: 114° 34' 11.01" West

Point of Compliance (POC)

The Points of Compliance (POC) are designated at the following location:

POC #	POC Location	Latitude	Longitude
1	Percolation Basin 1 & 2	32° 40' 4.94" N	14° 34' 10.52" W
2	Percolation Basin 3 & 4	32° 40' 5.28" N	14° 34' 20.01" W

Routine groundwater monitoring is not required at this time. The Director may amend this permit to require installation of a monitor well and initiation of groundwater monitoring at the POC, or to designate additional points of compliance if information on groundwater gradients or groundwater usage indicates the need.

VI. COMPLIANCE SCHEDULE

The permittee shall submit a demonstration that the financial assurance mechanism listed in Section 2.1, Financial Capability, is being maintained as per A.R.S. 49-243.N.4 and A.A.C. R18-9-A203(H) for all estimated closure and post-closure costs every two years. Every six years the permittee shall update the cost estimates for facility closure and post-closure, as per A.A.C. R18-9-A201(B)(5) and A.R.S. 49-243.N.2.a.

VII. OTHER REQUIREMENTS FOR ISSUING THIS PERMIT

Technical Capability

GreenGate Fresh LLLP has demonstrated the technical competence necessary to carry out the terms and conditions of the permit in accordance with A.R.S. § 49-243(N) and A.A.C. R18-9-A202(B).

The permit requires that appropriate documents be sealed by an Arizona-registered Geologist or Professional Engineer. This requirement is a part of an on-going demonstration of technical capability. The permittee is expected to maintain technical capability throughout the life of the facility.

Financial Capability

GreenGate Fresh LLLP has demonstrated the financial responsibility necessary to carry out the terms and conditions of the permit in accordance with A.R.S. § 49-243(N) and A.A.C.

R18-9-A203. The estimated closure and post-closure cost is \$85,283.77. The financial capability was demonstrated through A.A.C. R18-9-A203(C)(1) with a Financial test for Self-Assurance.

Zoning Requirements

GreenGate Fresh LLLP has been properly zoned for the permitted use and the permittee has complied with all Yuma County zoning ordinances in accordance with A.R.S. § 49-243(O) and A.A.C. R18-9-A201(A)(2)(c).

VIII. ADMINISTRATIVE INFORMATION

Public Notice (A.A.C. R18-9-108(A))

The public notice is the vehicle for informing all interested parties and members of the general public of the contents of a draft permit or other significant action with respect to a permit or application. The basic intent of this requirement is to ensure that all interested parties have an opportunity to comment on significant actions of the permitting agency with respect to a permit application or permit. This permit will be public noticed in a local newspaper after a pre-notice review by the applicant and other affected agencies.

Public Comment Period (A.A.C. R18-9-109(A))

The Aquifer Protection Program rules require that permits be public noticed in a newspaper of general circulation within the area affected by the facility or activity and provide a minimum of 30 calendar days for interested parties to respond in writing to ADEQ. After the closing of the public comment period, ADEQ is required to respond to all significant comments at the time a final permit decision is reached or at the same time a final permit is actually issued.

Public Hearing (A.A.C R18-9-109(B))

A public hearing may be requested in writing by any interested party. The request should state the nature of the issues proposed to be raised during the hearing. A public hearing will be held if the Director determines there is a significant amount of interest expressed during the 30-day public comment period, or if significant new issues arise that were not considered during the permitting process.

IX. ADDITIONAL INFORMATION

Additional information relating to this permit may be obtained from:

Arizona Department of Environmental Quality
Water Quality Division – Groundwater Protection Value Stream – APP Unit 1
Attn: Monica Phillips
1110 West Washington Street, Mail Code 5600D-3
Phoenix, Arizona 85007
Phone: (602) 771-2253