

Amado Farms
Aquifer Protection Permit No. P-513099
Place ID 182819, LTF No. 81982

I. Introduction:

The Arizona Department of Environmental Quality (ADEQ) proposes to issue an Aquifer Protection Permit (APP) for the subject facility that covers the life of the facility, including operational, closure, and post-closure periods unless suspended or revoked pursuant to Arizona Administrative Code (A.A.C.) R18-9-A213. 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 (AWQS) at the Point of Compliance (POC); and 2) demonstrate Best Available Demonstrated Control Technology (BADCT). BADCT's purpose is to employ engineering controls, processes, operating methods or other alternatives, including site-specific characteristics (i.e., the local subsurface geology), to reduce discharge of pollutants to the greatest degree achievable before they reach the aquifer or to prevent pollutants from reaching the aquifer.

II. Permittee

Amado Management, LLC

III. Facility Name & Location:

Amado Farms
2935 E. Frontage Road
Amado, AZ 85645

IV. Facility Description:

Amado Farms is an existing agricultural facility located in Amado, Santa Cruz County, Arizona. The farm is comprised of a 17-acre parcel and a 5-acre parcel, both located on the east side of I-19 Frontage Road, and a 75-acre parcel immediately south of the existing farm.

The existing facility currently utilizes fertigation, the process of directly applying fertilizer to a crop through the irrigation system, to fertilize three greenhouses on a year-round basis. This irrigation process results in nutrient-dense irrigation water runoff. The existing average daily flow used for irrigation results in 9,835 gallons per day (gpd) of runoff water, and anticipated future flows will add an additional 7,500 gpd, bringing the future total to 17,335 GPD of discharge. Amado Farms is seeking a permit allowance for the full 17,335 GPD discharge.

Nitrogen is added as fertilizer into the fertigation system. Fertigation water may carry excess nutrients which are not up taken by the plant roots. The average concentration of nitrogen from all three greenhouses was determined to be approximately 111.4 mg/L Nitrate-N. The fertigation water is directed to four lined impoundments (see Section VI below).

V. Regulatory Status

- Amado Management, LLC, received a Consent Order, Docket No. APP-03-20 dated September 11, 2020, for discharging without a permit as per A.R.S. 49-241(A), and operation of a surface impoundment without an APP as per A.R.S. 49-241(B)(1).

- The APP application for an Individual APP is required by the above Consent Order.

VI. Best Available Demonstrated Control Technology (BADCT):

- There are four ponds that are double-lined with 60-mil HDPE liners, that will be constructed using prescriptive BADCT procedures. Ponds 1 & 2 have a storage capacity of approximately 3,342,670 and 3,398,617 gallons respectively, and Ponds 3 and 4 have a storage capacity of approximately 2,599,608 and 2,500,035 gallons respectively.

VII. Compliance with Aquifer Water Quality Standards (AWQS):

A conceptual point of compliance, POC-1, is identified approximately 500 feet north of Pond 1. Routine groundwater monitoring is not required at this time due to implementation of prescriptive BADCT for the lined evaporation ponds