

**Mark Anthony Brewing Plant
Individual Industrial Reclaimed Water Permit No. R513319
PLACE ID 198939, LTF 91497**

I. Introduction:

In compliance with the provisions of Arizona Administrative Code (A.A.C.) Title 18, Chapter 9, Article 7 and A.A.C. Title 18, Chapter 11, Article 3 and amendments thereto, and the conditions set forth in this permit, Mark Anthony Brewing Inc., located in Waddell, in Maricopa County, Arizona, is hereby authorized to use reclaimed water for beneficial purposes in accordance with the limitations, monitoring requirements and other conditions set forth in this permit and in the rules cited above.

II. Facility Location:

9601 N. Reems Road.,
Waddell, Arizona 85355

III. Facility Description:

Mark Anthony Brewing Inc. operates an industrial Wastewater Treatment Plant (WWTP) to treat wastewater from the Mark Anthony Brewing (MAB) System. MAB System is a beverage manufacturer located in Waddell, Arizona.

The water used for production of beverage products will be pumped from an on-site production well at a maximum rate of 1440 gallons per minutes (gpm). The water will be treated through a Reverse Osmosis (RO) system and the RO reject water will be discharged to an onsite industrial WWTP. The WWTP treats the wastewater generated at the site. The WWTS will receive up to 1.24 million gallons per day wastewater generated by brewing operations including cleaning tanks, cleaning equipment, any product spillage, cooling tower blowdown water, boiler blowdown water and RO reject water. The wastewater is treated through pH polishing tank, AquaTex Bioreactors #1, #2 and #3, Dissolve Air Flotation (DAF) unit, and tertiary disk filters. The WWTS effluent will flow to discharge sump, and then it will be conveyed to the reuse sites located near to the MAB System. The WWTP includes two surge tanks for the storage of any effluent or plant upsets.

This permit authorizes the use of industrial reclaimed water for irrigation of up to 487 acres of a combination of alfalfa, roses, fruits and vegetables which will be used as a food or forage crop for animal or human consumption (A.A.C. R18-9-C701(A)(2)).

IV. Reuse Site Description

The industrial reclaimed water from the MAB System will be conveyed to the reuse sites (Fields) located near the System. The permittee will be constructing ~1500 linear feet of 8" force main and connecting to an existing 36" concrete irrigation pipe at the existing manhole. The 36" irrigation pipe continues easterly until it reached the outfall at the storage pond (Justice Pond). The industrial reclaimed water will be collected in the Justice Pond located on the Field #1 where it will then be pumped into a sprinkler system for irrigation or conveyed easterly up to ~6,100 feet through an earthen ditch which terminates in a storage pond (Rousseau Pond) on the Field #3. The farmers will be supplementing the industrial reclaimed water with water from the Maricopa Water District

(MWD) during the higher demand of irrigation water. The facility has estimated MAB industrial reclaimed water as only 40% of the irrigation water demand for Fields #1, #2 and #3. The MWD water will be blended with MAB industrial reclaimed water in the same irrigation pipe and will be stored in the Justice Pond prior to applying to the fields or conveying through earthen ditch to Field #3.

The industrial reclaimed water will be applied at consumptive use rates at Fields #1, #2 and #3 for irrigation of up to 487 acres of combination of alfalfa, roses, fruits and vegetables which will be used as a food or forage crop for animal or human consumption (A.A.C. R18-9-C701(A)(2)).

The Department has determined that the Justice Pond and Rousseau Pond are not a part of this Industrial Recycled Water Permit and will be regulated under an Aquifer Protection Permit. The permittee will be required to obtain Type 3.01 General Permit for Lined Impoundment for these storage ponds prior to utilizing these ponds for the storage of industrial reclaimed water. The storage capacity of Justice Pond will be 0.598 million gallons and Rousseau Pond will be 0.448 million gallons.

This permit only authorizes the use of industrial reclaimed water or blended water (MWD water and MAB industrial reclaimed water) for agricultural irrigation at the Fields #1, #2 and #3. The industrial reclaimed water or blended water will be provided to the additional Fields #4 to #8 to irrigate up to 605 acres of field as needed in the future. Table I provides the information for reuse fields and irrigation of types of the crop at each field. Prior to providing the reclaimed water to the Fields #4 to #8, the facility shall notify the Department, and provide the information for the conveyance system and provide a copy of the Contractual Agreement as described in Sections 3.3.1 and 3.3.2 of this permit. Upon approval from the Department, the facility may provide the industrial reclaimed water to additional Fields #4 to #8.

The monitoring requirements and discharge limits are specified in Table II and Table III for the industrial reclaimed water from the MAB System and blended water in the Justice Pond respectively. The Discharge Limit for flow from the industrial discharges through the MAB System to the Direct Reuse Irrigation fields shall not exceed 1,240,000 gallons per day. Total daily flow to the reuse site shall be monitored and recorded.

V. Regulatory Status:

An Individual Industrial Reclaimed Water Permit application for Mark Anthony Brewing Plant was received on November 23, 2021.

The industrial reclaimed water from MAB System will be used at Fields #1, #2 and #3 for irrigation of up to 487 acres of combination of alfalfa, roses, fruits and vegetables which will be used as a food or forage crop for animal or human consumption (A.A.C. R18-9-C701(A)(2)). The facility is required to obtain an Individual Industrial Recycled Water Permit per A.A.C. R18-9-C701(A)(2) because of the use of reclaimed water from an industrial facility for production or processing of a crop or substance that may be used as human or animal food.

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

Monitoring and Reporting Requirements

The permittee is required to collect representative samples of the reclaimed water prior to delivery for reuse. The permittee is required to monitor the industrial reclaimed water daily for flow rate, monthly for total nitrogen and fecal coliform, and quarterly for cyanide, fluoride and metals.

The permittee is required to collect representative samples of the blended water at the Justice Pond prior to reuse for irrigation purposes. The permittee is required to monitor the blended water monthly for total nitrogen, fecal coliform, pH and Total Suspended Solids, and quarterly for cyanide, fluoride and metals.

VII. List of the Reuse Fields:

Table I: List of the Reuse Fields					
Fields and Owner	Parcel #	Latitude	Longitude	Acreage (acres)	Types of crops to be irrigated
#1 – Dwayne Justice	501-42-005 501-42-006 501-43-018 501-43-019	33° 34' 36.3" N	112° 22' 34.4" W	197.04	Alfalfa, Fruits & Vegetables
#2 – Leyton Woolf	501-43-016A	33° 34' 10.5" N	112° 22' 19.4" W	153.76	Roses
#3 – Suburban Land Preserve	501-43-015E	33° 34' 35.9" N	112° 21' 48.3" W	136.37	Fruits & Vegetables
#4 – Tall Wi Wi	501-43-023A	33° 34' 9.8" N	112° 21' 47.5" W	134.95	Variety of Alfalfa, Fruits & Vegetables
#5 – Tall Wi Wi	501-43-013C	33° 34' 36.8" N	112° 21' 17.3" W	133.86	Variety of Alfalfa, Fruits & Vegetables
#6 – Tall Wi Wi	501-43-012C	33° 34' 9.7" N	112° 21' 16.7" W	114.12	Variety of Alfalfa, Fruits & Vegetables
#7 – Tall Wi Wi	501-42-024B	33° 33' 43.7" N	112° 21' 40.6" W	72.00	Variety of Alfalfa, Fruits & Vegetables
#8 – Tall Wi Wi	501-47-007G	33° 33' 43.5" N	112° 21' 16.3" W	149.61	Variety of Alfalfa, Fruits & Vegetables

