

**Kadampa Center Wastewater Treatment System  
Aquifer Protection Permit #P-512693  
Place ID 18689, LTF 69624**

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:	Kadampa Meditation Center New York
Mailing Address:	P.O. Box 447 Glen Spey, New York 12737
Facility Name and Location:	Kadampa Center Wastewater Treatment System (WWTS) 6820 E. Mountain Ranch Road Williams, Arizona 86046 Coconino County

### **Regulatory Status**

An application for this Individual APP was received on March 26, 2018.

### **Facility Description**

The permittee is authorized to operate the Kadampa Center Wastewater Treatment System (WWTS). The Kadampa Center is a lodging facility and Buddhist Worship Center to be constructed near the City of Williams, Arizona. The WWTS will serve a hotel, a restaurant and the temple.

The WWTS will have a capacity of a maximum average monthly flow of 13,000 gpd (0.013 mgd). The WWTS includes two (2) 20,000 gallon pre-treatment tanks, a 13,000 gallon recirculation tank, an Advantex Textile Filter with five (5) AX-100 Advantex textile filter pods, a Moving Bed Bio Reactor (MBBR) with a poly carrier media, a 20,000 gallon pump tank, and an in-line UV disinfection unit. The effluent will be discharged to the six disposal fields and disposed through subsurface drip irrigation approximately 12” below ground surface (bgs), which includes 12” of

imported fill material. All sludge pumped from the pre-treatment tanks will be collected by a certified septic hauler. The hauler then transports the sludge to an approved treatment plant.

The site includes the following permitted discharging facility:

Facility	Latitude	Longitude
Disposal Fields	35° 15' 49.7" N	112° 03' 26.7" W

## II. BEST AVAILABLE DEMONSTRATED CONTROL TECHNOLOGY (BADCT)

The WWTS is designed to meet the treatment performance criteria for new facilities as specified in Arizona Administrative Code R18-9-B204(D).

- The WWTS with Advantex Textile Filters is designed to meet total nitrogen of 15 mg/l. The facility has proposed the alternative BADCT per Arizona Administrative Code R18-9-B204(D) for WWTS. The facility has provided following justification: an alternative BADCT has been approved based on following site specific criteria:
  - The groundwater depth is approximately between 2,800 ft. below ground surface.
  - The test results from five boreholes shows that the soil type for first 0-6" is silty clay loam, 6-18" and 18-89" is silty clay. The facility has provided shallow disposal of treated effluent through disposal fields. The feed lines will be at the depth of 30" below the frost line.

## III. HYDROGEOLOGIC SETTING

The City of Williams is situated in the basaltic San Francisco Volcanic Field, located unconformably above the Moenkopi and Kaibab Formations (silty sandstones, and subordinate limestones and shales). Faults generally trend NW-SE and dip moderately to the southwest. Five (5) boreholes near the facility were drilled to refusal, from 84-103 bgs. The first zero (0) to six (6) inches yielded sandy loam. Below six (6) inches bgs to the borehole's depths yielded clay and sandy clay from the Kaibab. Groundwater was not encountered in the borehole study. However, groundwater data obtained from Coconino County indicate the primary aquifer depth at approximately 2800 feet bgs near the Williams area, and flows to the north-northeast. Five (5) domestic production wells are within ½ mile from the discharge area, three (3) of which are downgradient from the discharge area. These wells are drilled to approximately 3,600 ft bgs.

### POLLUTANT MANAGEMENT AREA (PMA) / DISCHARGE IMPACT AREA (DIA)

The PMA circumscribes the treatment plant and effluent drip line locations. Due to the depth to groundwater and how the effluent will be discharged, the DIA is the same as the PMA. No surface water bodies are within the area. The facility is located on a parcel that is designated as a FEMA Zone X, with minimal flood hazards, and contains no 100-year floodplain boundary.

## IV. STORM WATER/SURFACE WATER CONSIDERATIONS

The facility is located in Map Panel 04005C6375G. This map panel is not printed. This area is located in Flood Zone X which is the area outside of any special flood hazard area. The WWTS is outside of the 100-year flood plain.

## V. COMPLIANCE WITH AQUIFER WATER QUALITY STANDARDS

### Monitoring and Reporting Requirements

To ensure that site operations do not violate Aquifer Water Quality Standards at the point of compliance, effluent is required to meet the Discharge Limits in Section 4.2, Table IA.

The permittee shall monitor for flow at the flowmeter located upstream of the UV disinfection unit and a representative sample of the effluent shall be collected monthly at the sampling point located downstream of the UV disinfection unit for Total Nitrogen and fecal coliform.

### Point of Compliance (POC)

The POC for this facility is located as follows:

POC #	POC Location	Screened Interval (ft bgs)	Latitude	Longitude	ADWR #
1	Near the Northern property boundary (Conceptual Well)	2850-2950	35° 15' 50.01" N	112° 03' 26.07" W	N/A

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 compliance schedule is included in Section 3.0 of the permit. The compliance schedule includes requirements for the submittal of the Engineer's Certificate of Completion for the wastewater treatment system (item 3.1) and the updated Financial Assurance (items 3.2 and 3.3).

## VII. OTHER REQUIREMENTS FOR ISSUING THIS PERMIT

### Technical Capability

The Kadampa Meditation Center New York 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 wastewater treatment system for Kadampa Center is designed as per the design report prepared and stamped, dated, and signed (sealed) by Christine Laguna, P.E. (Professional Engineer) Civil Design & Engineering, Inc. dated August 2018 and subsequent sealed submittals that served as additions to the design report. ADEQ requires that appropriate documents be sealed by an Arizona registered geologist or professional engineer. This requirement is a part of an ongoing demonstration of technical capability. The permittee is expected to maintain technical capability throughout the life of the facility.

### **Financial Capability**

The permittee has demonstrated financial capability under A.R.S. § 49-243(N) and A.A.C. R18-9-A203 (B)(1) and (3) and (C)(7). The permittee shall maintain financial capability throughout the life of the facility. The estimated dollar amount demonstrated for financial capability is \$65,223.00.

### **Zoning Requirements**

The WWTS has been properly zoned for the permitted use and the permittee has complied with all zoning ordinances in accordance with A.R.S. § 49-243(O) and A.A.C. R18-9-A201(B)(3).

## **VIII. ADMINISTRATIVE INFORMATION**

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 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. 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.

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

The Department shall accept written comments from the public before a significant permit amendment is made. The written public comment period begins on the publication date of the public notice and extends for 30 calendar days. 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