



Katie Hobbs
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Karen Peters
Cabinet Executive Officer
Executive Deputy Director

Clean Water Act § 401 Water Quality Certification Cienega Creek Beaver Dam Analogs

1. Authorization

This State Water Quality Certification (WQC) is issued by the Arizona Department of Environmental Quality (ADEQ) under the authority of § 401(a) of the Federal Clean Water Act (CWA) (33 U.S.C. § 1251 et seq.) and Arizona Revised Statutes (ARS) § 49-202. This § 401 WQC will become part of the U.S. Army Corps of Engineers (USACE) § 404 permit SPL-2024-00198

Based on the information provided and identified in Section 3, ADEQ certifies that the proposed activities for the installation of Beaver Dam Analogs will not violate applicable Surface Water Quality Standards (SWQS) in Cienega Creek.

a. Location

Latitude: 31.855275 Longitude: -110.575333

ADEQ PLC: 240325 ADEQ LTF: 102894

b. Project Proponent Information

Bureau of Land Management, Tucson Office
Colleen Dingman
3201 E Universal Way
Tucson, AZ 85756

Authorizing Signature

Josephine Maressa, Deputy Director
Water Quality Division
Arizona Department of Environmental Quality

Date

2. Description of Certified Activities

The Bureau of Land Management (BLM) Tucson Field Office is proposing to reintroduce beaver into the Las Cienegas National Conservation Area, Pima County, Arizona. The BLM proposes to install man-made beaver dams, called Beaver Dam Analogs (BDAs), at nine locations within Cienegas Creek (Creek).

All work within the Creek will be conducted using hydraulic or pneumatic post hammers and hand tools, such as hammers and saws. All materials will be hauled on foot, where road access is not available. Construction of the BDAs will start with the installation of wooden poles, with a diameter ranging between 2.5 and 4 inches. The poles will be driven into the stream bed, approximately two feet apart, using a pneumatic drill.

Cobble and other natural materials will be placed at the upstream base of each BDA to prevent potential scour and underflow. Layers of native tree and shrub branches will be woven within the poles and the gaps filled with cobbles. Branches are also woven into the mesh to create a downstream apron, which reduces downstream hydraulic drop created by the BDA. Cobble and other materials will be taken from the Creek and/or adjacent washes.

Locations for the BDAs have been identified to minimize water quality issues and maximize habit growth and groundwater recharge. The following locations for BDA installation were included in the WQC application:

Site	Latitude	Longitude
BDA1	31.85547377	-110.5751344
BDA2	31.85797167	-110.5739626
BDA3	31.85887566	-110.57419
BDA4	31.85972893	-110.5739348
BDA5	31.86113298	-110.5731
BDA6	31.88247897	-110.5566216
BDA7	31.88159168	-110.5578272
BDA8	31.88041765	-110.5612361
BDA9	31.86662766	-110.5688778

Once the BDAs are in place, the BLM will monitor water quality and riparian vegetation to ensure there are no adverse effects on the Creek; and if data suggests that these man-made structures are causing long term adverse effects, they will be deconstructed.

Cienega Creek is an outstanding Arizona water (OAW), and as such, requires an individual § 401 WQC to ensure that the proposed activities will not cause or contribute to an exceedance of a surface water quality standard (SWQS) in the waterbody; and that any water quality impacts are temporary. Temporary water quality impacts are those impacts that occur for a period of six months or less, and are not regularly occurring, per A.A.C. R18-11-107.01(C)(4).

3. Information Reviewed

During the development of this WQC, ADEQ had access to and reviewed the following documents, which are on file with ADEQ:

- A. CWA § 401 WQC application package including associated details, plans and maps; dated and received by ADEQ on March 6, 2024. Permittee: BLM Tucson Field Office, Attn.: Peter Christensen.
- B. CWA § 404 Pre-construction Notification Form, submitted to the USACE on March 6, 2024; USACE, Attn.: Kathleen Tucker. Additional information was provided to the USACE and copied to ADEQ on April 26, 2024.
- C. State of Arizona Surface Water Quality Standards (SWQS), Arizona Administrative Code (A.A.C.) Title 18, Chapter 11, Article 1, Appendix B. Designated uses for Cienega Creek are: Agriculture – Livestock (AgL), Aquatic and Wildlife Warm (A&Ws), Full Body Contact (FBC), and Fish Consumption (FC).
- D. Arizona Administrative Code Title 18 Chapter 11, Article 112 (R18-11-112(G)(8) Outstanding Arizona Waters.

4. Notification Provisions

For any correspondence regarding this project, the ADEQ mailing address is:

Arizona Department of Environmental Quality
Rosi Sherrill
Surface Water Permits / 401 WQCs
1110 West Washington Street, Phoenix, Arizona 85007

For questions or general comments:

Email: sherrill.laurie@azdeq.gov Voice: (602) 771-4409

In any correspondence, please reference:

Cienega Creek Beaver Dam Analogs
USACE File No.: SPL-2024-00198
ADEQ LTF No.: 102894

5. Certification Notes:

- a. As noted in Section 1, this WQC will become part of the USACE § 404 permit SPL-2024-00198 and is valid for the same time period as that permit. The project proponent must apply for renewal, modification or extension of this WQC if the CWA 404 permit is renewed, modified, extended or otherwise changed.
- b. This WQC applies only to the activities described in Section 2 and is based upon the information listed in Section 3.
- c. This certification was published in the Arizona Daily Star on May 28, 2024, to allow the public to comment. The comment period ended on June 27, 2024.

- d. In the application documents for this 401 WQC, the BLM stated that they would monitor the BDA sites to determine if there are any water quality issues in the Creek. In discussions with the Arizona Game and Fish Department (AZGFD) and the BLM, Turbidity and E.coli will be analytically monitored and the data will be provided to ADEQ. Monitoring is planned follows:
1. Turbidity will be monitored at the BDA location prior to starting the BDA installation, then once every six (6) months for the first year; annually for subsequent years.
 2. E.coli will be monitored at the BDA location prior to releasing beaver into the Creek. Additional monitoring should be done once every (6) months for the first year; annually for subsequent years.

The analytical monitoring goals for Turbidity are 10 NTU; the associated goals for E.coli are 126 CFU. An exceedance of a limit does not violate the 401 WQC. These goals are provided for informational purposes only.