



Douglas A. Ducey
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Misael Cabrera
Director

Clean Water Act § 401 Water Quality Certification Sunnyside Exploratory Drilling

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.

Based on the information provided and identified in Section 3, ADEQ certifies that the activities proposed for the Sunnyside Exploratory Drilling Project will not violate applicable Surface Water Quality Standards (SWQS) in Flux Canyon, Alum Gulch, Humboldt Canyon, Harshaw Creek, and other washes within the project area.

a. Location

Latitude: 31.476825 N ADEQ PLC: 211262
Longitude: -110.744610 W ADEQ LTF: 95274
Near Patagonia, AZ

b. Applicant Information

Arizona Standard, LLC.
Rick Trotman
610-815 W. Hastings Street, Vancouver, BC

Authorizing Signature

Trevor Baggione
Water Quality Division

Date

2. Description of Certified Activities

This § 401 Water Quality Certification supersedes the certification, LTF 87599, granted on April 16, 2021. Regulatory changes regarding the jurisdiction of ephemeral waters occurred after that certification was granted.

The Sunnyside Exploratory Drilling Project (project) involves exploratory drilling for mineral resources on unpatented claims held by Arizona Standard, LLC, in the Coronado National Forest. The project will construct up to 30 drill pads, improve existing access roads and construct a new, temporary, low standard access road to provide access to the drilling locations. The project encompasses exploratory work only; no mining, milling or permanent facilities are being constructed at this time. In many cases, the existing road alignment crosses the same feature multiple times and is located coincident with the stream channel. No drill pads, laydown yards, turnouts, or other project facilities will be located within wetlands or other waters of the U.S. (WOTUS).

Due to regulatory changes, ephemeral waters are now included in the total impacts to waters within the project area. Approximately 0.86 acres of ephemeral non-wetland waters within 15 washes and 0.0518 acres of wetlands (within 4 washes) will be impacted as a direct result of road improvements and construction activities associated with the project. Due to the limited width of the canyons throughout the project area, many of the existing access roads are located adjacent to or within the channel of the wash, rather than crossing perpendicular. To provide travel-way surface for access, the majority of crossings will require fill consisting of 3-inch to 18-inch stone riprap, or excavation and redistribution of existing streambed materials to build up, level, and even out the road bed surface.

To minimize impacts to WOTUS and wetlands, each individual road crossing was evaluated in the field by a USFS Road Engineer and site-specific construction recommendations have been made for each crossing. Concurrent reclamation will be conducted by reseeding drill sites and up to 3.5 miles of upgraded roads will be decommissioned prior to completion of the project.

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 the U.S. Army Corps of Engineers Application (Eng. Form 4345) with project descriptions and maps, dated January 18, 2021; received by ADEQ on January 20, 2021. Permittee: Western Resource Consulting, LLC, Attn.: Bradley Norling.
- B. U.S. Corps of Engineers (USACE) Public Notice, March 3 – April 1, 2021. Attn: Kathleen Tucker, USACE Project Manager.

- C. U.S. Corps of Engineers (USACE) Public Notice, May 24 – June 7, 2022. Attn: Kathleen Tucker, USACE Project Manager.
- D. State of Arizona Surface Water Quality Standards: Arizona Administrative Council Title 18, Chapter 11, Article 1, Appendix B – Surface Waters and Designated Uses
- E. State of Arizona’s 2018 303(d) List of Impaired Waters

**Table 3: Designated Uses and Impairments for Wetland Waters
Within the Project Area:**

Waterbody	Designated Uses	Impairments
Flux Canyon	A&We, PBC, AgL	N/A
Alum Gulch (Headwaters to Humboldt Cyn)	A&We, PBC, AgL	Low pH, zinc, copper, and cadmium (1996)
Alum Gulch (Humboldt Cyn to 31°29'19.93"/110°44'32.63)	A&Ww, FBC, FC, AgL	Low pH, zinc, copper, and cadmium (1996)
Humboldt Canyon (above 5000')	A&Wc, FBC, FC	Low pH, zinc, copper, and cadmium (1996)
Humboldt Canyon (below 5000')	A&Ww, FBC, FC	Low pH, zinc, copper, and cadmium (1996)
Harshaw Creek	A&We, PBC, AgL	Copper and pH (1992)

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:

Project Name: Sunnyside Exploratory Drilling

USACE File No.: SPL-2020-00103

ADEQ LTF No.: 95274

5. SPECIAL CONDITION

This Certification applies only to the activities described in Section 2 and is based upon the information listed in Section 3. This Certification is valid for the same period as the CWA § 404 permit issued by the USACE. The applicant must apply for renewal, modification or extension of this Certification if the CWA § 404 permit is renewed, modified, extended or otherwise changed.

6. CERTIFICATION CONDITIONS

In the ADEQ Water Quality Application, Arizona Standard, LLC identified the following best management practices that will be implemented during the construction of this project:

- The project has been designed to include the placement of drill sites, laydown yards, road turnouts, and water storage areas outside of wetlands, floodplains and other WOTUS.
- Drilling mud and any groundwater that is encountered during drilling would be collected and stored in a plastic-lined in-ground sump located adjacent to the drill rig.
- Water needed for use in drilling will be stored in a number of central reserve storage tanks located at each of the two laydown yards. Water would be pumped from the tanks to individual drill sites via a system of water distribution hoses, which will be installed along the shoulder of the road.
- Temporary sediment barriers such as silt fences, straw wattles (containing certified weed-free straw), water bars, culverts, and other erosion-control features, would be installed as necessary during drilling operations and/or as part of reclamation activities.
- Water diversion structures/erosion control may be utilized on roads to prevent runoff and reduce erosion.

- Although interim shutdown periods are not expected for the Project, regular inspections of the site's erosion control system will be performed by the operator at least monthly during inactive periods.
- During shutdown periods, the containment sump at each drill site will not exceed 50 percent capacity, in order to accommodate any potential heavy precipitation events.
- Exposure of disturbed areas to rainfall will be minimized by only building drill pads prior to scheduled drilling activity.
- Regrading and reseeding will be scheduled to commence following completion of drilling to stabilize the site. Concurrent reclamation will reduce the amount of material exposed at any given time and will reduce the possibility of sedimentation or siltation to nearby waterways.
- All temporarily disturbed areas will be stabilized, decompacted, and reseeded to prevent erosion and to promote vegetation growth.
- Slash stockpiled from original construction will be scattered in the area after seeding. Slash will be spread especially thickly over areas on which erosion is most likely to occur, such as steep slopes.
- Couplings and high-pressure valves (rated at 3,000 PSI operating pressure and 7,500 PSI burst pressure) will be installed along water distribution hoses to shut off water flow from individual segments for repairs, if necessary.
- A meter will also be installed at each pump, each water storage tank, and at water storage tanks at the drill site. Pressure readings at each meter will be evaluated and logged on a regular basis to ensure there are no potential leaks in the system and that the water pumps are operating as expected.
- Water distribution hoses will be located along the shoulder of the road, and will be easily monitored by personnel in the area, which would serve as a secondary source of leak detection.
- Issues such as freezing are not expected to be a problem; however, in the unlikely event that temperatures are well below normal, it may be necessary to install heaters along the water distribution hoses at 50 to 500-foot intervals, as appropriate.
- Spillage containment and clean up kits or materials would be provided for each water pump set-up to handle at least 10 gallons of fuel, which is four times the capacity of the fuel tank and twice the estimated fuel that would be stored at that location.
- In addition, each vehicle would carry a spill kit and each drill site would be equipped with a large industrial spill kit capable of handling twice the total amount of fuel located at each drill site.

After review of the application documents provided by Arizona Standard, LLC, ADEQ believes that sufficient best management practices (BMPs) have been identified to allow ADEQ to certify, conditionally upon implementation of those BMPs, that this project will not cause or contribute to an exceedance of a surface water quality standard in the waterbodies listed in Section 3.

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