



Douglas A. Ducey  
Governor

# ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Misael Cabrera  
Director

State of Arizona  
Clean Water Act § 401 Water Quality Certification  
ADEQ LTF No.: 86815

## 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 Virgin River Bridge No. 1 Replacement will not violate applicable Surface Water Quality Standards (SWQS) in the Virgin River.

## APPLICANT INFORMATION

Project Name: Virgin River Bridge Replacement  
Latitude: 36.893915 N  
Longitude: -113.91860 W  
Applicant: Arizona Department of Transportation  
Audra Merrick  
1959 S. Woodlands Village Blvd.  
Flagstaff, Arizona 86001

## AUTHORIZING SIGNATURE

\_\_\_\_\_  
Trevor Baggione  
Water Quality Division  
Arizona Department of Environmental Quality

\_\_\_\_\_  
Date

## 2. DESCRIPTION OF ACTIVITIES TO BE CERTIFIED

The Virgin River Bridge Replacement Project (VRB1) is located on Interstate 15 (I-15) in Mohave County, Arizona, approximately 9.0 miles northeast of Mesquite, Nevada. It is adjacent to the unincorporated communities of Beaver Dam and Littlefield, Arizona. The Virgin River crosses under the I-15 Bridge at 36.893933 N, -113.918528 W. An unauthorized recreational feature has been developed at the project location by damming discharge from a spring to create a pool area in the river channel within the ADOT right-of-way, known as the Little Jamaica Pool.

The Federal Highway Administration (FHWA) identified the need to repair VRB1 and deconstruct Little Jamaica Pool to address structural deficiencies, to accommodate high volumes of truck traffic, to support interstate and regional travel, and to control unauthorized use of the right-of-way.

The VRB1 project will permit 5.424 acres of extended temporary impact on aquatic resources associated with temporary construction access road and temporary construction work area, cofferdam, and 0.293 acre of permanent impact on aquatic resources associated with bridge pier installation and Little Jamaica Pool deconstruction. Project elements include:

- Establishing temporary access to the river bottom for construction (grading, base material) and for cranes and construction equipment access.
- Excavating material from the upland staging/borrow area to construct access roads within portions of the Virgin River 100-year floodplain.
- Constructing a temporary bridge across the Virgin River low-flow channel.
- Constructing cofferdams and diversion barriers.
- Constructing temporary crane pads beneath the bridge and using a crane to place the new girders and for other bridge construction, L-panel retaining walls, and soil filter fabric.
- Constructing wider bridge deck and roadway approaches to match new bridge width.
- Removing four damaged piers.
- Installing two new piers.
- Restoring the excavated material to the staging area following construction.
- Removing sandbags and mortar from Little Jamaica Pool retaining wall, placing boulders in deconstructed pool footprint.

The project would consist of the following activities within waters of the U.S. (WOTUS):

- Ground disturbance and vegetation removal within the 100-year floodplain.
- Staging areas.
- Access and equipment in the floodplain.
- Cofferdams and dewatering.
- Construction of a temporary bridge.
- Pier removal and replacement.

The following control measures have been incorporated into the project design in an effort to reduce the impacts to the Virgin River:

1. The contractor shall comply with all terms and conditions of the Section 404 Individual permit as established by the Corps.
2. The contractor shall comply with all terms and conditions of the Individual Section 401 Water Quality Certification (WQC) certified by the Arizona Department of Environmental Quality.
3. The areas to be used for staging and stockpiling of equipment and materials will be located outside of the Ordinary High Water Mark (OHWM) of the Virgin River.
4. Impacts on WOTUS will be further minimized by incorporating additional restrictions and requirements. These restrictions and requirements include, but are not limited to, incorporation of BMPs designed to reduce erosion, minimize sedimentation, and eliminate non-stormwater pollutants as identified in ADOT's Erosion and Pollution Control Manual for Highway Design and Construction (2012), and ADOT's Standard Specifications for Road and Bridge Construction (2008). Restrictions and requirements that will be incorporated into the project consist of the following:
5. The OHWM of the Virgin River shall be flagged prior to project construction, and the flagging shall be approved by ADOT. The contractor's final construction plans for construction within and immediately adjacent to WOTUS shall be submitted to the Corps for approval prior to starting construction within WOTUS.
6. In accordance with the requirements of the Arizona Pollutant Discharge Elimination System Construction General Permit, a Stormwater Pollution Prevention Plan (SWPPP) will be prepared during project design and shall be implemented by the contractor during construction.
7. To avoid contamination of the Virgin River, the contractor shall develop and implement a containment plan for soil, debris, construction materials, and pollutants such as fuels, oil, bitumen, calcium chloride, fresh Portland cement, fresh Portland cement concrete, raw sewage, muddy water, chemicals, or other harmful materials. The containment plan shall be approved by ADOT prior to construction.
8. No construction activities shall be conducted within the Virgin River during storm events or other periods when high flows are present.
9. Wastewater shall be contained and disposed of at an approved offsite location.
10. No materials or equipment shall be stored or stockpiled within the OHWM of the Virgin River overnight.
11. Any excess excavation or other materials shall be backfilled or moved to the designated area before the end of the same working day.
12. No equipment refueling shall occur within the OHWM of the Virgin River.
13. The contractor shall keep a regulated work area free of litter and trash. The construction site shall be cleaned up at the end of each day that work is being conducted (e.g., trash and scrap materials removed).
14. Except for within the limits of the construction footprint, no vegetation shall be removed, existing vegetation shall be avoided to the maximum extent practicable.
15. Upon project completion, all disturbed areas, both inside and outside the OHWM, shall be restored to their original contours and elevations, and reestablished as described in the revegetation and monitoring plan (RMP). Previously vegetated areas shall be reestablished by seeding and/or planting native species at a ratio similar to the preconstruction condition.

16. The contractor shall complete the project in as short of a timeframe as possible.
17. The contractor shall remove all construction material and debris from the construction site upon completion of the project, and all temporarily disturbed areas within the OHWM of the Virgin River shall be reclaimed to their preconstruction elevations and topography.
18. The contractor shall give special attention to the effect of its operations upon the landscape and shall take care to maintain natural surroundings undamaged.
19. Impacts on the low-flow channel will be minimized through several restrictions and requirements. No equipment will be allowed to cross the low-flow channel during construction, nor will temporary culverts or other drainage structures be installed. All equipment must use a temporary bridge to cross to the construction areas. The temporary bridge will sit above the average flow level and will be constructed such that it can be moved by a crane in anticipation of high flows.
20. L-panel retaining walls will hold in temporary fill and keep debris and sediment out of the low-flow channel. The area behind the panels will be protected by cofferdams; all work will be conducted in the dry. The fill will act like a mat or buffer to reduce impacts on the delineated wetlands in the project limits. Once the L-panels are installed, no additional impacts are anticipated. A containment system will be constructed beneath the bridge to prevent accidental discharge of debris into the OHWM during bridge construction and pier removal and replacement.
21. Fill discharge and impacts on aquatic resources will be minimized as follows:
  - a) Clean fill will be located and confined within cement retaining L walls on temporary work pads to minimize the introduction of sediment and the smothering of organisms.
  - b) The temporary access bridge is designed to maintain flow and reduce disruption of the Virgin River low-flow channel. No work would occur within open water.
  - c) The construction site uses areas that have been previously disturbed during original VRB1 construction (1960s).
  - d) Fill substrate is composed of clean material similar in texture to that of work area substrate. Fill material will be obtained from within the project boundaries.
  - e) The disposal site, the discharge point, and the method of discharge will be selected to minimize the extent of any plume.
  - f) Fill material will not create any standing bodies of water or drain any bodies of water.
  - g) The contractor will design and install a containment system that contains all cement sludge/slurry created during pier construction. No cement or cement slurry will be allowed to discharge into the Virgin River 100-year floodplain or low-flow channel. Cement work activity will be contained on the dry cofferdam temporary construction pad away from the Virgin River low-flow channel.
  - h) All work would cease, and all equipment would be removed from the site when a 2-year flow event or greater is forecasted to occur. The temporary bridge would be removed to bridge damage or loss of the bridge.
  - i) Once work is complete, all temporary fills and structures would be removed and the area restored back to its original conditions and contours. The applicant would conduct reestablishment and enhancement activities on 8.575 acres of WOTUS once construction is complete. Rock sills consisting of boulder material would be installed to prevent off-

road vehicle use within the reestablishment areas and provide protection to newly established vegetation from high flows.

### 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 October 6, 2020; received by ADEQ on November 20, 2020. Permittee: Arizona Department of Transportation.
- B. U.S. Corps of Engineers (USACE) Public Notice of Virgin River Bridge No. 1 Application for Permit, comment period October 15, 2020 – November 14, 2020. USACE Project Manager: Jesse Rice.
- 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 the Virgin River are: Aquatic and Wildlife Warm (A&Ww); Agricultural Irrigation (AgI); Agricultural Livestock (AgL); Full Body Contact (FBC); and Fish Consumption (FC).
- D. State of Arizona's 2018 303(d) List of Impaired Waters: at the location of the project, the Virgin River is impaired for Selenium (total), E.coli, and Suspended Sediment concentrations.

### 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 / mailstop 5415A-1  
1110 West Washington Street  
Phoenix, Arizona 85007

For questions or general comments:

Email: [sherrill.laurie@azdeq.gov](mailto:sherrill.laurie@azdeq.gov)

Voice: (602) 771-4409

In any correspondence, please reference:

Virgin River Bridge No. 1 Replacement  
USACE File No.: SPL-2015-00154-JMR  
ADEQ LTF No.: 86815