



CERTIFICATION

STATE OF ARIZONA
Clean Water Act §401 Water Quality WQC
U.S. Army Corps of Engineers File No.: SPL-2017-00201
ADEQ LTF No.: 69942

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.

The conditions listed in Section 5 are in addition to conditions in the pending U.S. Army Corps of Engineers (USACE) Application No. SPL-2017-00201. These conditions are enforceable by the USACE and are subject to civil penalties if violated. Criminal penalties may also be levied if a person knowingly violates any provision of the CWA.

Subject to the conditions in Section 5, ADEQ certifies that based on the information in Section 3, the activities proposed for the I-17 Verde River Bridge project will not violate applicable Surface Water Quality Standards (SWQS) in the Verde River.

Pursuant to ARS 49-202C, ADEQ's review authority extends only to activities occurring within the ordinary high water mark of WUS. Not all of the project elements involve discharges of dredged or fill material to WUS requiring a §401 WQC.

APPLICANT INFORMATION

Project Name: I-17 Verde River Bridge
Latitude: 34° 35' 11.8818" Longitude: -111° 52' 46.2318"
Applicant: Arizona Department of Transportation
Audra Merrick
1801 S. Milton Road
Flagstaff, Arizona 86001

AUTHORIZING SIGNATURE

Christopher Henninger
Water Quality Division
Arizona Department of Environmental Quality

Date
Reading file: SWGP18-0038

2. DESCRIPTION OF ACTIVITIES TO BE CERTIFIED

Background Information:

Within the project limits, I-17 consists of two, 12-foot-wide travel lanes in each direction, divided by a 60-foot-wide median. The Verde River bridges are both seven-span steel continuous-girder bridges and are approximately 525 feet long and 45 feet wide.

Bank slope protection occurs at both banks and wired rock baskets have been constructed around one of the piers of the southbound (SB) bridge. Over time, the river has eroded material from around the piers of both bridges, undermining the bridges' stability. In addition, cracking on pier walls and abutments is occurring. If not remedied, the bridges would become unsafe for use and would either need to be replaced or traffic would be detoured to an alternate route. The proposed bridge scour retrofit project would prevent this outcome by protecting the bridges from further erosion by the Verde River, thereby maintaining the structural integrity of these facilities.

The Verde River is a perennial stream and the only water of the US (WUS) in the project area. It originates in Big Chino Valley in north-central Arizona, flows south-east through the rugged highlands and valleys of central Arizona, and empties into the Salt River, east of Phoenix. Within the project vicinity, the Verde River generally flows toward the southeast and under I-17, in the town of Camp Verde.

The Verde River, including the ephemeral areas and the intermittent fringe wetlands along both banks, is considered a WUS. In the vicinity of the Verde Bridges, the river is generally contained to a low-flow channel between approximately 25 and 65 feet wide and approximately 2 to 4 feet deep. Sand and gravel bars adjacent to the low-flow channel and the adjacent floodway are typically exposed during low flow periods, but are located within the ordinary high water mark (OHWM) and are included within the jurisdictional limits.

During higher flows, the river can expand from approximately 420 feet wide to up to approximately 816 feet wide across the sand and gravel bars beneath the Verde Bridges and across the adjacent floodway. The stream bed is primarily soft and composed of sand with some small cobbles.

Project Description:

The project will incur temporary and permanent discharges of dredged and fill material below the ordinary high water mark (OHWM) of the Verde River. Permanent impacts of 0.527 acre would occur within areas of the Verde River identified as ephemeral (0.271 acre), wetlands (0.044 acre), and open water (0.212 acre). An additional 4.452 acres of temporary impacts would also occur (3.552 acres of ephemeral, 0.204 acre of wetlands, and 0.696 acre of open water).

The project includes the following activities:

- Conducting geotechnical investigations (percolation test of soils)
- Accessing geotechnical test pit locations from I-17 via existing roads to Roundup Road
- Constructing temporary project construction access roads that are adjacent and parallel to I-17
 - Ingress will be via the southbound I-17 ROW adjacent to the southbound lanes and then Rawhide Road, which continues as a dirt road to the river and passes under the bridges on the north side of the river.
 - Egress from the construction site will be via Roundup Road and the I-17 ROW to merge into the northbound I-17 travel lanes north of the bridge.
- Creating temporary dry work zones within the river bottom
- Constructing concrete armor protection around each pier
- Restoring all disturbed areas, excluding the existing dirt roads, to pre-construction condition following construction
- Staging and stockpiling materials outside of and adjacent to the OHWM
- Reseeding previously vegetated areas outside of the OHWM

The following features have been incorporated into the project to minimize impacts to WUS and associated resources:

- The area designated for staging and stockpiling of equipment and materials is located outside of the OHWM of the Verde River. Staging and stockpiling of materials and equipment will be restricted to a 7.9-acre area located north of the Verde River OHWM and west of I-17.
- Best Management Practices (BMP's) designed to reduce erosion, minimize sedimentation, and eliminate non-storm water 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) would be implemented.
- Dry work zones would be created within the low-flow channel using temporary bypass channels and diversion berms. These features would be located within ephemeral waters, open waters, and wetlands. Construction activities would be conducted in two phases to allow bypass channels to convey flow away from the active construction area. The phase one bypass channel would be decommissioned before the phase two channel is put into operation. The first phase of construction is anticipated to require 120 days with the second phase requiring 60 days, for a total duration of 180 days. Phase durations would be determined by the contractor and may vary from those anticipated. The bypass channels may remain in operation for the full length of their respective phases.
- Temporary bridges will be utilized (over the river in the first construction phase and over the bypass channel in the second construction phase) to facilitate access to the existing bridge piers.
- The 180-day construction duration would begin in the fall when the Verde River's flows are typically at their lowest to minimize the volume of water diverted.

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. U.S. Army Corps of Engineers (USACE), Los Angeles District Public Notice: SPL-2017-00201 for I-17 Verde River Bridge; comment period January 23, 2018 – February 23, 2018
- B. CWA §401 WQC application package including the CWA §404 permit application with project descriptions and maps, dated December 4, 2017 and received by ADEQ on January 31, 2018. Permittee: Audra Merrick, Arizona Department of Environmental Quality
- C. State of Arizona Surface Water Quality Standards (SWQS), Arizona Administrative Code (A.A.C.) Title 18, Chapter 11, Article 1. Designated uses for the Verde River are: Agricultural - Irrigation (AgI), Agricultural - Livestock watering (AgL), Aquatic and Wildlife warm (A&Ww), and Full Body Contact (FBC), and Fish Consumption (FC).

4. NOTIFICATION PROVISIONS

For any correspondence regarding this project, the ADEQ mailing address is:
Arizona Department of Environmental Quality
Rosi Sherrill
Surface Water Section / 401 WQCs / mailstop 5415A-1
1110 West Washington Street
Phoenix, Arizona 85007

For questions or general comments:
Email: LS7@azdeq.gov

Voice: (602) 771-4409

In any correspondence, reference:
I-17 Verde River Bridge
USACE File No.: SPL-2017-00201
ADEQ LTF No.: 69942
Reading file: SWGP18-0038

5. CONDITIONS FOR STATE 401 WATER QUALITY CERTIFICATION

For the purposes of this WQC the following definitions apply:

- Waters of the U.S. (WUS) as defined by the USACE and U.S. Environmental Protection Agency (EPA) under the Clean Water Act. This WQC applies only to activities within a WUS.
- Fill material means soil, sand, gravel and other natural materials that are similar in physical, chemical and biological composition to existing natural materials in the project area and which are free from pollutants in quantities and concentrations that can cause or contribute to an exceedance of applicable Surface Water Quality Standards (SWQS).

GENERAL CONDITIONS

1. ADEQ's §401 WQC of these activities proposed by the applicable CWA §404 Permit, does not affect or modify in any way the obligations or liability of any person for any damages, injury, or loss, resulting from these activities. This WQC is not intended to waive any other federal, state or local laws.
2. If monitoring, by ADEQ or others, indicates that a discharge from the certified activities results in a violation of Arizona's surface water quality standards (numeric or narrative), ADEQ may file a Report of Potential Unauthorized Activity with the USACE, requesting an investigation of the situation.
3. Issuance of a §401 WQC does not imply or suggest that requirements for other permits including, but not limited to Aquifer Protection Permits, Arizona Pollutant Discharge Elimination System Permits, Construction General Permits, DeMinimis Permits and Reclaimed Water permits are met or superseded. Applicant should contact ADEQ to ensure all applicable permits are obtained.
4. This WQC applies only to the activities described in Section 2 and is based upon the information listed in Section 3. This WQC 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 WQC if the CWA§404 permit is renewed, modified, extended or otherwise changed. This WQC may be reopened by ADEQ at any time due to a change (lowered or more stringent) in a SWQS for a parameter likely to result from project activities. ADEQ may add or modify conditions in this WQC to ensure that the applicant's activities comply with the most recent SWQS.
5. The applicant shall provide a copy of this WQC to all appropriate contractors and subcontractors. The applicant shall also post and maintain a legible copy of this WQC in a weather-resistant location at the construction site where it may be seen by the workers.
6. The applicant shall notify ADEQ within 30 days of submitting the notice of completion of work required by the CWA §404 permit for this activity.
7. The applicant is responsible to ensure that certified activities do not cause or contribute to any exceedances of SWQS in any WUS.
8. This WQC does not authorize the discharge of mining, construction or demolition wastes, wastewater, process residues or other potential pollutants to any WUS except as specified in the application, supporting documents, and/or in the CWA §404 permit.

SPECIFIC CONDITIONS

Except as specified in the application and supporting documents, including those documents referenced in Section 3, and allowed in the CWA §404 permit, the following specific conditions apply:

Erosion Prevention and Hydraulic Alterations

9. Clearing, grubbing, scraping or otherwise exposing erodible surfaces shall be minimized to the extent necessary for each construction phase or location.
10. Dredged or fill material shall be placed so that it is stable, meaning after placement, the material does not show signs of excessive erosion. Indicators of excess erosion include: gulying, head cutting, caving, block slippage, material sloughing, etc. Material shall not discharge (via leaching, runoff) pollutants into streams or wetlands.
11. Erosion control, sediment control and/or bank protection measures shall be installed before construction and pre-operation activities, and shall be maintained during construction and post-construction periods to minimize channel or bank erosion, soil loss and sedimentation. Control measures shall not be constructed of uncemented or unconfined imported soil, or other materials easily transported by flow.
12. The effectiveness of all pollution control measures, including erosion and sediment control measures, shall be inspected, maintained and modified (as necessary) to reduce pollutants and ensure compliance with SWQS in any WUS.
13. Direct runoff of water used for irrigation or dust control shall be limited to the extent practicable and shall not cause downstream erosion or flooding nor cause an exceedance of applicable SWQS in any WUS.
14. Except where the activities certified herein are intended to permanently alter any WUS, all disturbed areas within WUS shall be restored and (re)vegetated as indicated in the application documents if approved by the USACE (including offsite/in lieu mitigation). Denuded areas within WUS not intended to be permanently altered shall be revegetated as soon as physically practicable. Vegetation shall be maintained on unarmored banks and slopes to stabilize soil and prevent erosion. Fill used to support vegetation rooting or growth shall be protected from erosion.
15. Activities herein certified shall, as much as practicable, be performed during periods of low flow (baseflow or less) in any perennial WUS, or no flow in any ephemeral or intermittent WUS. No work shall be done, nor shall any equipment or vehicles enter any WUS while flow is present, unless all conditions in this WQC are met.
16. When flow is present in any WUS within the project area, the applicant and any contractor will not alter the flow by any means except to prevent erosion or pollution of any WUS.
17. Any disturbance within the ordinary high water mark of a WUS that is not intended to be permanently altered shall be stabilized to prevent erosion and sedimentation.
18. Applicant will take measures necessary to prevent approaches to any WUS crossing from causing erosion or contributing sediment to any WUS.
19. The applicant shall implement control measures necessary to maintain designated used(s) in WUS both upstream and downstream of the project area.

Sediment Loads

20. When flow in any WUS in the work area is sufficient to erode, carry or deposit material, activities certified herein shall cease until:
 - The flow decreases below the point where sediment movement ceases; or
 - Control measures have been undertaken: equipment and materials easily transported by flow are protected with non-erodible barriers or moved outside the flow area.
21. Silt laden or turbid water resulting from activities certified herein shall managed in a manner to reduce sediment load prior to discharging so as not to exceed SWQS in any WUS.
22. Any washing or dewatering of fill material must occur outside of any WUS prior to placement and the rinsate from such washing shall be settled, filtered or otherwise treated to prevent migration of pollutants (including sediment) or from causing erosion to any WUS. Other than replacement of native fill or material used to support vegetation rooting or growth, fill placed in locations subject to scour must resist washout whether such resistance is derived via particle size limits, presence of a binder, vegetation, or other armoring.

Pollution Prevention

23. If activities certified herein are likely to cause or contribute to an exceedance of SWQS in any WUS operations shall cease until the problem is resolved or until control measures have been implemented.
24. Except as approved in the 404 permit, construction material and/or fill (other than native fill or that necessary to support re-vegetation) placed in any WUS, shall not include pollutants in concentrations that will that will cause or contribute to a violation of a SWQS in any WUS.

Acceptable construction materials that will or may contact water in any WUS are: untreated logs and lumber; natural stone (crushed or not), crushed clean concrete (recycled concrete); native fill; precast, sprayed or cast-in-place concrete (including soil cement and unmodified grouts); steel (including galvanized); plastic and aluminum. Other materials allowed for this project, only if placed in accordance with application and supporting documents, are mining residues including tires, waste rock, gangue and tailings. Use of other materials may be allowed, but require prior written approval from ADEQ.
25. The applicant will erect any barriers, covers, shields and other protective devices as necessary to prevent any construction materials, equipment or contaminants/pollutants from falling, being thrown or otherwise entering any WUS.
26. Area(s) must be designated, entirely outside of any WUS, for equipment staging and storage. In addition, the applicant must designate areas, located entirely outside of any WUS, for fuel, oil and other petroleum product storage and for solid waste containment. All precautions shall be taken to avoid the release of wastes, fuel or other pollutants to any WUS.

Any equipment maintenance, washing or fueling that cannot be done offsite will be performed in the designated area with the following exception: equipment too large or unwieldy to be readily moved, such as large cranes, may be fueled and serviced in the WUS (but outside of standing or flowing water) as long as material specifically manufactured and sold as spill containment is in place during fueling/servicing. All equipment shall be inspected for leaks, all leaks shall be repaired and all repaired equipment will be cleaned to remove any fuel or other fluid residue prior to use within (including crossing) any WUS.

27. Upon completion of the activities certified herein, areas within any WUS shall be promptly cleared of all forms, piling, construction residues, equipment, debris or other obstructions.
28. If fully, partially or occasionally submerged structures are constructed of cast-in-place concrete instead of pre-cast concrete, applicant will take steps using sheet piling or temporary dams to prevent contact between water (instream and runoff) and the concrete until it cures and until any curing agents have evaporated or are no longer a pollutant threat.
29. Washout of concrete handling equipment must not take place within any WUS and any washout runoff shall be prevented from entering any WUS.
30. Any permanent WUS crossings other than fords, shall not be equipped with gutters, drains, scuppers or other conveyances that allow untreated runoff (due to events equal to or lesser in magnitude than the design event for the crossing structure) to directly enter a WUS if such runoff can be directed to a local stormwater drainage, containment and/or treatment system.

Temporary and Permanent Structures

31. Permanent and temporary pipes and culvert crossings shall be adequately sized to handle expected flow and properly set with end section, splash pads, headwalls or other structures that dissipate water energy to control erosion.
32. Debris will be cleared as needed from culverts, ditches, dips and other drainage structures in any WUS to prevent clogging or conditions that may lead to washout.
33. All temporary structures constructed of imported materials and all permanent structures, including but not limited to, access roadways; culvert crossings; staging areas; material stockpiles; berms, dikes and pads, shall be constructed so as to accommodate overtopping and resist washout by streamflow.
34. Any temporary crossing, other than fords on native material, shall be constructed in such a manner so as to provide armoring of the stream channel. Materials used to provide this armoring shall not include anything easily transportable by flow. Examples of acceptable materials include steel plates, untreated wooden planks, pre-cast concrete planks or blocks; examples of unacceptable materials include clay, silt, sand and gravel finer than cobble (roughly fist-sized). The armoring must, via mass, anchoring systems or a combination of the two, resist washout.
35. No vehicles or equipment shall ford any unarmored WUS crossing when flow is present.

36. Any ford, other than fords on native material, shall be designed, and maintained as necessary, to carry the proposed traffic without causing erosion or sedimentation of the stream channel while dry or during a flow event equal to or less than the design event for the crossing.
37. No unarmored ford shall be subject to heavy-truck or equipment traffic after a flow event until the streambed is dry enough to support the traffic without disturbing streambed material to a greater extent than in dry conditions. Light vehicles (less than 14,000 pounds gross weight) are not restricted by this condition.
38. Temporary structures constructed of imported materials are to be removed no later than upon completion of the permitted activity.
39. Temporary structures constructed of native materials, if they provide an obstacle to flow, or can contribute to or cause erosion, or cause changes in sediment load, are to be removed no later than upon completion of the permitted activity.

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