



GARY R. HERBERT  
Governor

SPENCER J. COX  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Water Rights

KENT L. JONES  
State Engineer/Division Director

## ORDER OF THE STATE ENGINEER

FOR STREAM ALTERATION APPLICATION NUMBER **17-81-09SA**  
IN THE NAME OF WASHINGTON COUNTY FOR ALTERATION TO AN UNNAMED  
WASH IN WASHINGTON COUNTY, UTAH

This **ORDER** is issued pursuant to statute and in accord with the statutory criteria for approval of a stream alteration application that are described at UTAH CODE ANN. § 73-3-29. The State Engineer has determined that this application does meet the necessary legal criteria to **ORDER** the approval of the application based upon the following information and reasoning set forth in the Findings of Fact and Discussion.

### FINDINGS OF FACT

1. The application was received by the Division of Water Rights ("Division") on June 7, 2017, and made available for comment on the Division's webpage, provided to pertinent governmental agencies, and to other entities as warranted, for a period of 20 calendar days, said period concluding prior to July 2, 2017.
2. The application contains the following information:
  - The stated description of the proposed project is: To install riprap wall, layback walls and grade stabilization structures associated with an unnamed wash in Washington County.
  - The stated purpose of the proposed project is: To protect Sierra Bella Drive culvert and stabilize bank to protect a park and utility infrastructure.
3. A site visit was not conducted by Division personnel.
4. The Division received comments or objections on the proposed project from:
  - Kathy Holder – Utah Division of Emergency Management
  - Bill James – Utah Division of Wildlife Resources

The comments or objections received by the Division are summarized as follows:

- The applicant must be compliant with all rules and regulations of the Federal Floodplain Insurance Program as administered by the local city or county floodplain administrator.
- This unnamed tributary of the Virgin River may contain the following sensitive native fish species: Virgin spinedace (*Lepidomeda mollispinis mollispinis*), desert sucker (*Catostomus clarkii*), and speckled dace (*Rhinichthys osculus*).



Virgin spinedace are managed under the Virgin Spinedace Conservation Agreement and Strategy, which was formulated to avoid listing of the species under the Endangered Species Act. Desert sucker are listed as a state species of concern because of their limited distribution. Speckled dace are not listed but are an ecologically important native fish in the Virgin River. Because of the importance of this unnamed Virgin River tributary to native fish species, we provide the following recommendations regarding any action developed for this project to avoid unnecessary take of native fish:

- Avoid crossing the river whenever possible. If it is necessary for equipment to cross or enter the river, do so only once at a pre-identified crossing point approved by Utah Division of Wildlife Resources (UDWR). Channel diversions, crossings, and in-stream work will require fish clearances. Fish clearance activities must be performed before any construction activities begin in order to minimize “take” of native fishes. Contact the UDWR’s Washington County Field Office personnel (Melinda Bennion 435-619-1229 or main office 435-879-8694) at least 3 business days prior the start of any construction activities that will impact the channel. UDWR personnel will determine if fish clearances are necessary. At a minimum, fish salvage efforts must occur prior to construction of any diversions and before such diversions are removed. Ongoing fish salvage may be required depending on the length of stream impacted and the duration of the impact. In addition, we also request to visit the site during construction activities to ensure protection of native fish species and their habitat.
- Construction activities that may result in any disturbance to the stream should not be completed during critical spawning months; UDWR recommends no construction activities occur from April 1 to July 31. Exceptions to this should be permitted only when explicit conservation actions are formulated from direct consultation with UDWR Native Aquatics biologist Melinda Bennion (435 619-1229).
- Applicants for stream alteration permits are required to provide justification for using hardened structures (rock walls, concrete, rip-rap, etc.) for stabilizing banks instead of less damaging methods such as bioengineering, large woody debris, root wads, and willow plantings. If the applicant must use rock walls they are required to explain how their design “incorporates elements that are beneficial to aquatic organisms.” We recommend that the applicant justify the use of “riprap” and consider using bioengineering techniques where feasible. For more information on the performance standards, stability ratings, and ecological impacts of various types of bank stabilization materials and techniques please reference the following publication from the U.S. Army Corps of Engineers:  
<http://el.erdc.usace.army.mil/elpubs/pdf/eba13.pdf>

- If rock wall construction cannot be avoided for this project we recommend the following methods to minimize the negative effects of rock wall structures to native fish recovery:
  - Any rock wall/riprap construction or repair work must include measures to prevent the creation of refuge areas for non-native fish (e.g., fabric barriers, jetting, grouting, etc.). The interstitial spaces in typical riprap and other armament structures provide refuge for non-native fish which undermines UDWR's native fish conservation and recovery efforts. Actions to recover endangered and sensitive native fish in the Virgin River and its tributaries are dependent on effective removal of non-native fish.
  - To avoid creating non-native fish refugia, improve riparian habitat, and increase bank stability the UDWR recommends that willow plugs are planted within the rip-rap. This can be done effectively by using on site sediment slurry to fill the gaps of the rip-rap and planting willow therein. This practice will allow the roots of the willows to fortify the stability of the rock wall.
- We recommend that living native woody vegetation, especially willows and cottonwoods not be disturbed. Any ground that is graded clean, or where salt cedar (tamarisk) is to be removed, should be required to be re-vegetated with appropriate native species.
- Applicants that are completing bank stabilizations are also required to provide a narrative of current and expected sediment movement, deposition patterns, and erosion conditions in the project area, upstream, and downstream. The installation of rip-rap is an action that is proven to change a watercourse's sediment and deposition profile. The applicant must disclose the fact that the project may accelerate erosion to adjacent properties if rip-rap is used.
- Establish a bulldozer length buffer zone, or maintain an elevation of two feet above the flowing river channel, for all work in the project area. This element is intended to keep all equipment out of the active flowing channel to avoid direct take of conservation fish species. This condition also precludes the need for additional extensive and ongoing fish salvage in the project area during activities.
- During any cutting, filling and grading of slopes, machinery and associated sediment should not be allowed in the stream. Excavated material and construction debris may not be wasted in any stream channel or placed in flowing waters or adjacent wetlands; this will include material such as grease, oil, joint coating, or any other possible pollutants. Excess materials must be wasted at an upland site well away from any channel, and excavated material must be removed from stockpiled areas within 12 months of project completion.
- Fill materials should be free of fines, waste, pollutants, and noxious weeds /seeds.



- Machinery must be properly cleaned and fueled offsite prior to construction.
- In 2009, the Utah Division of Wildlife Resources (UDWR) completed a statewide management plan to address strategies that prevent the spread of aquatic invasive species (AIS) in Utah. The Utah Aquatic Invasive Species Management Plan was created to identify threats and provide techniques to protect Utah's waterways from aquatic nuisance species. Special decontamination procedures are required by the UDWR, and protocols are outlined in the following publication:  
[http://wildlife.utah.gov/mussels/PDF/decon\\_protocol.pdf](http://wildlife.utah.gov/mussels/PDF/decon_protocol.pdf)

### DISCUSSION

1. Based on a review of the Division's water rights records and/or a review of the application by personnel of the Division's regional office, it is the opinion of the State Engineer that the project will not impair vested water rights.
2. It is the opinion of the State Engineer that the project will not unreasonably or unnecessarily affect recreational use or the natural stream environment.
3. It is the opinion of the State Engineer that the project will not unreasonably or unnecessarily endanger aquatic wildlife.
4. It is the opinion of the State Engineer that the project will not unreasonably or unnecessarily diminish the natural channel's ability to conduct high flows.
5. Other comments or concerns submitted by interested persons or parties are not believed to be within the purview of the State Engineer in evaluating an Application to Alter a Natural Stream.

### ORDER

Stream Alteration Application No. **17-81-09SA**, submitted in the name of Washington County, applicant, in order to install riprap wall, layback walls and grade stabilization structures associated with an unnamed wash, a natural stream located in Washington County, Utah, is hereby APPROVED AS A STATE ONLY PERMIT, contingent upon the conditions outlined in this **ORDER**. The applicant is hereby authorized to conduct the work detailed in the application and supporting documentation, as described in this **ORDER**. Any modification or addition to the work may require additional authorization and/or application resubmittal.

1. The expiration date of this order is **July 5, 2019**. Work affecting the bed and/or banks of the stream may not be conducted after this date. Extension of the order is subject to reverification and review by the Division. A request for extension must be submitted in writing to the Division and include an explanation for project delay. The request must be submitted at least 30 days prior to expiration of the order.

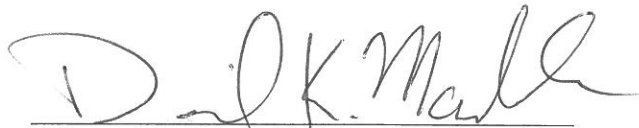
2. A copy of this order must be kept onsite at any time the work authorized under this order is in progress.
3. Contact the UDWR's Washington County Field Office personnel (Melinda Bennion 435-619-1229 or main office 435-879-8694) at least 3 business days prior the start of any construction activities that will impact the channel.
4. Construction activities that may result in any disturbance to the stream should not be completed during critical spawning months; therefore no construction activities may occur from April 1 to July 31.
5. Work must be accomplished during a period of low flow. Sediment introduced into stream flows during construction must be controlled to prevent increases in turbidity downstream. Flows must be diverted away from the construction area using a non-erodible cofferdam or other means of bypass.
6. Impacts to the stream channel and surrounding environment must be minimized. Vegetation should not be destroyed, but if some disturbance is necessary, then revegetating with native species will be required, especially in the case of woody shrubs. The channel contours and configuration must not be changed except in the case of bank contouring for stabilization purposes.
7. Fill materials should be free of fines, waste, pollutants, and noxious weeds/seeds.
8. Riprap must consist of only clean, properly sized angular rock, which must be keyed deeply into the streambed to prevent undercutting. A filter must be placed behind if necessary (i.e., if soils are fine grained, non-cohesive, and/or erodible). Demolition debris or refuse will not be allowed, nor material such as bricks, concrete, asphaltic material [either natural (tar sand, oil shale, etc.) or man-made].
9. Equipment should work from the top of the bank or from the channel to minimize disturbance to the riparian area and to protect the banks. Heavy equipment should avoid crossing and/or disturbing wetlands.
10. Machinery must be properly cleaned and fueled offsite.
11. Excavated material and construction debris may not be wasted in any stream channel or placed in flowing waters, this will include material such as grease, oil, joint coating, or any other possible pollutant. Excess materials must be wasted at an upland site well away from any channel. Construction materials, bedding material, excavated material, etc. may not be stockpiled in riparian or channel areas.
12. Best Management Practices should be implemented and maintained during any streamside or instream work to minimize sedimentation, temporary erosion of stream banks, and needless damage or alteration to the streambed.

13. Approval of this application does not authorize trespass, easements, rights-of-way, or any other access and land use permits. It is the responsibility of the applicant to obtain any such authorizations as may be necessary for this proposal.

Your contact with the Division is Chuck Williamson, who can be reached at telephone number 801-538-7404.

This **ORDER** is subject to the provisions of UTAH ADMIN. CODE R. 655-6-17 of the Division of Water Rights and to UTAH CODE ANN. §§ 63G-4-302 and 73-3-14, which provide for persons or parties with legal standing to file either a Request for Reconsideration with the State Engineer or an appeal with the appropriate District Court. A Request for Reconsideration must be filed with the State Engineer within 20 days of the date of this **ORDER**. However, a Request for Reconsideration is not a prerequisite to filing a court appeal. A court appeal must be filed within 30 days after the date of this **ORDER**, or if a Request for Reconsideration has been filed, within 30 days after the date the Request for Reconsideration is denied. A Request for Reconsideration is considered denied when no action is taken within 20 days after the Request is filed.

Dated this 5th day of July, 2017.

A handwritten signature in dark ink, appearing to read "D. K. Marble", is written over a horizontal line.

David K. Marble, P.E.  
Assistant State Engineer

Page 7

17-81-09SA

July 5, 2017

Mailed a copy of the foregoing Order this 5<sup>th</sup> day of July, 2017, to:

WASHINGTON COUNTY  
RON WHITEHEAD  
197 EAST TABERNACLE  
ST. GEORGE UT 84770

Corps of Engineers

Nathan Moses - Regional Engineer

Richard Clark - EPA

Rhett Boswell - Wildlife Resources

Kathy Holder - Utah Division of Emergency Management, [kcholder@utah.gov](mailto:kcholder@utah.gov)

Bill James - Utah Division of Wildlife Resources

By:

Tiffany Gonzales

Tiffany Gonzales  
Secretary