**STATE OF UTAH**
**DIVISION OF WATER QUALITY**
**DEPARTMENT OF ENVIRONMENTAL QUALITY**
**SALT LAKE CITY, UTAH**

**§401 Water Quality Certification No. DWQ-2007-01985**

Pursuant to *§401 of the Federal Clean Water Act(CWA),* the Utah Department of Environmental Quality (DEQ), Division of Water Quality (DWQ) certifies that the applicant has provided reasonable assurance that any discharges associated with the proposed project will not violate surface water quality standards, or cause additional degradation in surface water not presently meeting water quality standards. In accordance with Section 401(a)(1) of the CWA [33 U.S.C. Sec. 1341(a)(1)], DWQ herby issues this §401 Water Quality Certification provided any listed conditions are met and included in the corresponding U.S. Army Corps of Engineers (USACE) 404 Permit.

**Applicant:** Utah Department of Transportation (UDOT), Region 1
Mr. Randy Jefferies
166 Southwell Street
Ogden. UT 84404

**Project:** The proposed West Davis Corridor (WDC) project is a new 19.2 mile roadway intended to accommodate the growth of residential and employment-based transportation needs projected for western Davis County, Utah. Federal Highway Administration (FHWA) and UDOT have identified Alternative B1 with Wetland Avoidance option as the preferred alternative. The project involves a four-lane divided highway with 250-foot right-of-way from its southern terminus, at a new interchange with I-15 south of Glovers Lane in Farmington, continuing west and northwest to Antelope Drive, in Syracuse. North of Antelope Drive to its northern terminus, at 4100 West / 1800 North in West Point, the road narrows to a limited access highway with a 146-foot right-of-way. FHWA made formal selection of the alternative in the West Davis Corridor Record of Decision dated September 29, 2017.

**Location:** The project site is located in West Point, Syracuse, Layton, Kaysville, Farmington, and Centerville, Davis County, Utah. The alignment extends from I-15/Glovers Lane in Farmington to 1800 North in West Point. The southern terminus is located at approximately 40.941, -111.891 and the northern terminus is located at approximately 41.118, -112.108.

**Watercourse(s):** 7 named streams, 28 additional linear surface waters (ditches, canals, drainages) and approximately 46.72 acres direct impact and 81.68 indirect impacts of wetlands (mix of Emergent Marsh, Wet Meadow, and Playa) in the Weber River Watershed (HUC8:16020102).

**Effective Date:** **March X, 2019**

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Erica Brown Gaddis. PhD
Director, Division Water Quality

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**Section 1: Background:**

I. Other Applicable Permits:

1. USACE 404 Permit No.: SPK-2007-01985

II. Project Description/Purpose:

The proposed West Davis Corridor (WDC) project is a new 19.2 mile roadway intended to accommodate the growth of residential and employment-based transportation needs projected for western Davis County, Utah. Federal Highway Administration (FHWA) and UDOT have identified *Alternative B1 with Wetland Avoidance* option as the preferred alternative. The project involves a four-lane divided highway with 250-foot right-of-way from its southern terminus, at a new interchange with I-15 south of Glovers Lane in Farmington, continuing west and northwest to Antelope Drive, in Syracuse. North of Antelope Drive to its northern terminus, at 4100 West / 1800 North in West Point, the road narrows to a limited access highway with a 146-foot right-of-way. FHWA made formal selection of the alternative in the *West Davis Corridor Record of Decision* dated September 29, 2017.

WDC is expected to improve regional mobility for automobile, transit, and freight trips, and enhance traffic flow during morning and evening peak periods for the main travel directions (north-south) to help accommodate projected travel through 2040. The project will also improve the connections between transportation modes such as automobile, transit, bicycle, and pedestrian travel; support the objectives of local land-use and transportation plans for communities west of I-15 in Weber and Davis Counties; and increase bicycle and pedestrian options consistent with the adopted local and regional plans in the parts of the needs assessment study area in Weber and Davis Counties.

III. Site Description:

The study area for assessing the need of the project consists of approximately 80,000 acres located west of I-15 in Davis and Weber Counties. The study area contains portions of 14 incorporated cities as well as unincorporated land, and is located west of the Wasatch Mountains and east of the Great Salt Lake. Topography in the area includes relatively subtle depressions, gently sloped terraces and plains, small rolling knolls, and the toe of a relatively large bluff. Land use within the project area is predominantly residential and agricultural, with smaller inclusions of natural and other developed areas. There are approximately 43.5 acres of palustrine emergent wetlands and playas and more than 15,000 linear feet of streams and other drainages within the project area. There are also approximately 57.29 acres of wetlands within 300 feet of the proposed right-of-way.

**Section 2: Certification Conditions:**

I. Project Specific Conditions:

1. Bridges, Culverts, and Fill

   a. Wetlands outside of the permitted impact area shall be clearly marked to prevent unintentional/additional impacts to water features.

   b. Construction of bridges/culverts shall be conducted in the "dry" to the maximum extent practicable, by diverting flow utilizing cofferdams, berms constructed of sandbags, clean rock (containing no fine sediment) or other non-erodible, non-toxic material. All diversion materials shall be removed at the completion of the work.

   c. The bottom of culverts shall be installed below streambed elevation in a manner that allows for natural substrate to reestablish. All culverts with more than one barrel shall have base flow concentrated into one barrel.

   d. The culverts should not result in a disruption or cause a barrier to the movement of fish or other aquatic life on the downstream side.

2. Stormwater and Best Management Practices (BMPs)

   a. UDOT shall select and develop site-specific, permanent stormwater BMPS based on guidance set forth in UDOT's Storm Water Quality Design Manual (JUNE 2018), with the specific design goal of retaining all stormwater from the 85$^{th}$ percentile 24-hour storm events.

   b. Enforce UDOT's Stormwater Management Plan (SWMP) as required in the MS4 permit as a special condition for discharges to impaired water bodies (section 3.1). The SWMP contains UDOT's approach to address MS4 permit monitoring requirements as well as minimum control measures used to manage stormwater runoff, reduce pollutant discharge, and protect water quality.

   c. Prepare Operations and Maintenance Plan (O&M) for all stormwater related BMPs (per UDOT MS4 permit section 4.2.5.5).

   d. As specified in Section 4.2 'Water Quality' of the *WDC Wildlife Habitat Management Plan* and Section 6.5.1 of the *WDC Compensatory Mitigation Plan*, UDOT will use a combination of detention basins and vegetated filter strips as structural BMPs to reduce storm water flow and manage water quality. Proposed structural BMPs apply to both direct and dispersed storm water discharges:

      - When surface waters, including wetlands, are located within 20 feet of the project right-of-way, stormwater discharges shall be controlled by conveyance to detention basins constructed to retain all storm water resulting from 85$^{th}$ percentile historical 24-hour storm events, based on design criteria described in UDOT Stormwater Design Manual.

- Otherwise, storm water discharges will be controlled by construction of vegetated filter strips, based on design criteria in UDOT Storm Water Design Manual (see 4.2.1 in footnote 2).

3. Monitoring:

   UDOT shall submit a monitoring plan for DWQ's approval, containing, but not limited to, all the information outlined below to confirm that discharges will meet Numeric Criteria and Narrative Standards for Waters of the State.

   a. Locations: Monitoring should occur at (1) the outfalls of the basins discharging to the three impaired streams (Farmington Creek, Holmes Creek, and Kays Creek), and at the basin outfall of one additional non-impaired stream (Baer Creek, Haight Creek, or Davis Creek) for reference and (2) In stream of the three impaired streams and additional non-impaired stream below the outfall discharge.

   b. Frequency: Monitoring should occur (1) at the outfalls, whenever there is a discharge. (2) Monthly at the sampling locations, in stream, below the outfalls. Sampling needs to be completed only during the snow-free season.

   c. Parameters: (1) Composite samples should be taken at the basin outfalls and (2) Grab samples should be taken at the in stream sampling locations. Please see Table 1 in Appendix A, for a list of parameters to collect.

   d. Limits: Broadly, discharges shall not be offensive or cause undesirable conditions to human health effects of aquatic life. Limits shall not exceed those outlined in UAC R317-2-14; Table 2-14-2 pertaining to Numeric Criteria for Aquatic Wildlife.

   e. Duration: Sampling will begin at the start of the project and will continue for either (1) 3 years after completion, if no violations to the numeric criteria had occurred within those 3 years at the basin outfalls or (2) 5 years after the completion. If storm water discharge monitoring report results reveal that discharges from structural BMPs fail to meet water quality criteria, monitoring will continue at the Director's discretion or until DWQ receives clear assurance that storm water discharges will not further contribute to stream impairments.

   f. Analysis: UDOT shall determine what methods to be used to analyze the samples. The methods must be sensitive enough to determine whether Numeric Criteria is being met. Analysis should be performed by State of Utah certified laboratories (UAC317-2-10).

g. Reporting: (1) UDOT shall notify DWQ if monitoring results exceed numeric water quality criteria outlined in UAC R317-2-14 within 48-hours of receiving results. UDOT shall submit a plan to address the violation within 5 business days from the initial report to the DWQ. (2) UDOT shall submit a yearly report containing all sampling results for the previous year for Division review. The yearly report should contain any compliance issues as identified in (1), if applicable. Reports will be due annually on July 1, unless an alternative date is requested.

4. Mitigation

a. All monitoring reports associated with mitigation required by the USACE, shall additionally be submitted to the DWQ for review.

II. General Conditions:

1. Good Housekeeping

a. Applicant and their subcontractors shall ensure that all workers involved are continuously aware of the water quality protection measures before the start and during the construction period.

b. Retain a copy of this §401 Certification and its affiliated USACE 404 Permit onsite.

2. Stormwater and BMPs

a. Water quality standards in associated water resources could be violated unless appropriate Best Management Practices (BMPs) are incorporated to minimize the erosion-sediment and nutrient load to any adjacent waters during project construction. The applicant shall not use any fill material which may leach organic chemicals (e.g. discarded asphalt), noxious weeds/seeds or nutrients (e.g., phosphate rock) into waters of the State.

b. Construction activities that disturb one acre or more, or are part of a common plan of development, are required to obtain coverage under the Utah Pollutant Discharge Elimination System (UPDES) Stormwater General Permit for Construction Activities, Permit No. UTR300000[1]. The permit requires the development of a Storm Water Pollution Prevention Plan (SWPPP) to be implemented and updated from the commencement of any soil disturbing activities at the site, until final stabilization of the project. The SWPPP should include, but not limited to, final site maps and legible plans, location of stormwater outfalls/discharges, as well as information pertaining to any stormwater retention requirements.

[1]Link: https://documents.deq.utah.gov/water-quality/permits/updes/DWQ-2017-003485.pdf

c. Dewatering activities, if necessary during construction, may require coverage under the UPDES General Permit for Construction Dewatering, Permit No. UTG070000[2]. The permit requires water quality monitoring every two weeks to ensure that the pumped water is meeting permit effluent limitations, unless water is contained onsite.

d. A project within a Municipal Separate Storm Sewer System (MS4) jurisdiction, must comply with all the conditions required in that UPDES MS4 Permit and associated ordinances. No condition of this 401 Certification shall reduce or minimize any requirements provided in the MS4 Permit. In the case of conflicting requirements, the most stringent criteria shall apply.

e. Utah Administrative Code R317-2 requires that the Applicant cannot increase water turbidity by 10 NTUs. If violated shall immediately notify the DWQ. A fact sheet describing the Utah Department of Environmental Quality's (DEQ) recommended environmental BMPs for construction sites are located on our web site [3].

3. Spills

a. Refueling equipment and storage of lubricants and fuels will occur at designated staging areas and in state approved containers. The storage and refueling areas will be at least 500 feet from the edge of the nearest waterbody (including wetlands), at least 200 feet from the nearest private water supply well, and at least 100 feet from the nearest municipal water supply well.

b. Utah Annotated Code 19-5-114 requires that any spill or discharge of oil or other substances which may cause pollution to waters of the State, including wetlands, must be immediately reported to the Utah DEQ Spill Hotline at (801) 536-4123, a 24-hour phone number.



[2] Link: https://deq.utah.gov/legacy/permits/water-quality/utah-pollutant-discharge-elimination-system/docs/utg070000.pdf
[3] Link: https://deq.utah.gov/legacy/businesses/business-assistance/construction/index.htm

**Section 3: Aquatic Resource Impacts:** All Waters of the State of Utah (defined in Administrative Code (UAC) R317-1-1) are protected from pollutant discharges that affect water quality by narrative standards (*see* UAC R317-2-7.2); broadly, discharges should not become offensive or cause undesirable conditions in human health effects of aquatic life. In addition, some particularly sensitive classes of water are further protected from deleterious effects of specific pollutants by application of numeric criteria to designated (beneficial) uses of that water body. Listed below are the water features within the project area and their associated designated beneficial uses (*see* UAC R317-2-6):

I. Impacts to linear water features:

1. Perennial Streams

    a. Class 2B: Protected for infrequent primary contact recreation. Also protected for secondary contact recreation where there is low likelihood of ingestion of water or low degree of bodily contact with the water.

    b. Class 3D: Protected for waterfowl, shore birds and other water-oriented wildlife not included in classes 3A, 3B, or 3C, including the necessary organisms in their food chains.

    c. Class 4: Protected for agricultural uses including irrigation of crops and stock watering.

2. Unnamed watercourses, including irrigation and/or drainage canals & ditches:

    a. Class 2B: Protected for infrequent primary contact recreation. Also protected for secondary contact recreation where there is low likelihood of ingestion of water or low degree of bodily contact with the water.

    b. Class 3E: Severely habitat-limited waters. Narrative Standards will be applied to protect these waters for aquatic wildlife.

    c. Class 4: Protected for agricultural uses including irrigation of crops and stock watering.

II. Impacts to Wetlands

1. Wetlands in the WDC project area that lie above the Great Salt Lake Meander Line (above approximate elevation of 4208 feet above sea level):

    a. Class 2B: Protected for infrequent primary contact recreation. Also protected for secondary contact recreation where there is low likelihood of ingestion of water or low degree of bodily contact with the water.

    b. Class 3D: Protected for waterfowl, shore birds, and other water-oriented wildlife not included in Classes 3A, 3B, or 3C, including the necessary organisms in their food chain.

2. Vegetated wetlands and mudflats associated with the Great Salt Lake. These waters are classified as Transitional Waters along the Great Salt Lake shoreline:

    a. Class 5E: Protected for infrequent primary and secondary contact recreation, waterfowl, shorebirds and other water-oriented wildlife including their necessary food chain.

III. Impairments and Pollutants of Concern:

Results from the current water quality assessment, as documented in Utah's 2016 Integrated Report [[4]], indicate that the water quality of three named streams within the project area (Kays Creek, Holmes Creek, and Farmington Creek) are considered to be impaired (Assessment Category 5). These impairments include degraded recreation uses (Class 2B), due to excessive concentrations of Escherichia coli; and degraded warm-water fish and waterfowl-based aquatic life uses (Classes 3B and 3D), due to excessive concentrations of dissolved Copper. The CWA directs states to prepare a plan to restore water quality to impaired waters, otherwise known as a total maximum daily load (TMDL) study. A TMDL is required for each parameter and water body to define pollutant reduction requirements necessary for the water body to meet water quality standards. At present, no TMDL studies for the impaired waters identified above have been finalized.

Of particular concern for the WDC project, Copper is a known pollutant of concern associated with highway discharges to surface waters via storm water events. Additional important transportation-related pollutants include total dissolved solutes (TDS) from wintertime application of de-icing salts and brine solutions, and Lead and Zinc from vehicle and roadway wear (UDOT Stormwater Quality Design Manual, 2018).

**Section 4: Modifications:**

1. Without limiting DWQ's discretion to take other actions in accordance with UAC R317-15, and, as applicable, 33 USC 1341, DWQ may modify the Certification to add, delete, or modify the conditions in this Certification as necessary and feasible to address:

    a. Adverse or potential adverse project effects on water quality of designated beneficial uses that did not exist or were not reasonably apparent when this certification was issued;

    b. TMDLs;

    c. Changes in water quality standards;

    d. Any failure of Certification conditions to protect water quality or designated uses when the Certification was issued; or

    e. Any change in the Project or its operations that will adversely affect water quality of designated beneficial uses when this Certification was issued.

[4]Link: https://documents.deq.utah.gov/water-quality/monitoring-reporting/integrated-report/DWQ-2017-004941.pdf

**Section 5: Other Information**

I. Fees:

1. The legislatively-mandated fee for the 2019 fiscal year is $100.00/hour, for review and issuance of the §401 Water Quality Certification [4]. A quarterly invoice will be sent once plans have been approved. Your payment is due within 30 days.

II. Liabilities:

1. Applicant must acquire all necessary easements, access authorizations and permits to ensure they are able to implement the project. This §401 Certification does not convey any property rights or exclusive privileges, nor does it authorize access or injury to private property.

2. This §401 Certification does not preclude the applicant's responsibility of complying with all applicable Federal, State or local laws, regulations or ordinances, including water quality standards. Permit coverage does not release the applicant from any liability or penalty, should violations to the permit terms and conditions or Federal or State Laws occur.

**Section 6: Public Notice and Comments**

I. Public Notice Dates:

1. USACE Permit No. SPK-2018-00256 : 07/21/2017 – 09/12/2017

2. Utah DEQ Certification No. DWQ-2018-00256:

II. Public Notice Comments:

**Appendix A**

Self-Monitoring Requirements

| Self-Monitoring Requirements | | | | | |
|---|---|---|---|---|---|
| Parameter | Sample Type | | Frequency** | | Units |
| | Outfall | In Stream | Outfall | In Stream | |
| TSS | Composite | Grab | Each Discharge | Monthly | mg/L |
| TDS | Composite | Grab | Each Discharge | Monthly | mg/L |
| Copper, Total | Composite | Grab | Each Discharge | Monthly | µg/L |
| Copper, Dissolved | Composite | Grab | Each Discharge | Monthly | µg/L |
| Lead, Total | Composite | Grab | Each Discharge | Monthly | µg/L |
| Lead, Dissolved | Composite | Grab | Each Discharge | Monthly | µg/L |
| Zinc, Total | Composite | Grab | Each Discharge | Monthly | µg/L |
| Zinc, Dissolved | Composite | Grab | Each Discharge | Monthly | µg/L |
| Calcium. Total | Composite | Grab | Each Discharge | Monthly | mg/L |
| Calcium, Dissolved | Composite | Grab | Each Discharge | Monthly | mg/L |
| Magnesium, Total | Composite | Grab | Each Discharge | Monthly | mg/L |
| Magnesium, Dissolved | Composite | Grab | Each Discharge | Monthly | mg/L |
| Sodium, Total | Composite | Grab | Each Discharge | Monthly | mg/L |
| Sodium, Dissolved | Composite | Grab | Each Discharge | Monthly | mg/L |
| Potassium, Dissolved | Composite | Grab | Each Discharge | Monthly | mg/L |
| Total Alkalinity | Composite | Grab | Each Discharge | Monthly | mg/L |
| Total Sulfate | Composite | Grab | Each Discharge | Monthly | mg/L |
| Dissolved Organic Carbon | Composite | Grab | Each Discharge | Monthly | mg/L |
| Total Phosphorus | Composite | Grab | Each Discharge | Monthly | mg/L |
| Total Nitrogen | Composite | Grab | Each Discharge | Monthly | mg/L |
| Stream Flow | -- | -- | -- | Monthly | $ft^3/s$ (cfs) |
| Flow into Basin | -- | -- | Continuous | -- | $ft^3/s$ (cfs) |
| Flow out of Basin | -- | -- | Continuous | -- | $ft^3/s$ (cfs) |
| pH | Grab/Composite* | Grab | Each Discharge | Monthly | SU |
| DO | Grab/Composite* | Grab | Each Discharge | Monthly | mg/L |
| Conductivity | Grab/Composite* | Grab | Each Discharge | Monthly | µmhos/cm |
| Temperature | Grab/Composite* | Grab | Each Discharge | Monthly | ºC |
| * Choice between composite or Grab.<br>** Only needs to be conducted during snow-free season | | | | | |

Table 1. Self-Monitoring Requirements to be included in UDOT's monitoring plan, as required in Section 2-I-1.3 of this 401 Water Quality Certification.

**Appendix B**

Site Location/ Alignment


Plain City
Farr West
Harrisville
Marriott-Slaterville
15
12th South
2100 South
Ogden
West Haven
5100 West
4700 West
84
4000 South
Midland Drive
1900 West
89
Hooper
Riverdale
Roy
5900 West
5500 South
3500 West
5600 South
Washington Terrace
WEBER COUNTY
DAVIS COUNTY
84
1800 North
Sunset
Clinton
Hill Air Force Base
4000 West
West Point
300 North
4500 West
3000 West
2000 West
1000 West
State Street
Clearfield
1700 South
Antelope Drive
Syracuse
Bluff Road
Layton
Gentile Street

**Appendix C**

Project Discharge Locations/ Impacts

| Discharge Location ID | Surface Water Name | Discharge Lat./Long: (I Degrees) |
|---|---|---|
| 1 | Unnamed Drainage | 40.96414 N, 111.907 |
| 2 | Farmington Creek | 40.96753 N, 111.915 |
| 3 | Unnamed Drainage | 40.96787 N, 111.924 |
| 4 | Unnamed Drainage | 40.97793 N, 111.937 |
| 5 | Unnamed Drainage | 40.98995 N, 111.936 |
| 6 | Baer Creek | 40.99474 N, 111.943 |
| 7 | Unnamed Drainage | 41.00482 N, 111.956 |
| 8 | Unnamed Drainage | 41.01090 N, 111.964 |
| 9 | Holmes Creek | 41.01843 N, 111.972 |
| 10 | Unnamed Drainage | 41.02612 N, 111.978 |
| 11 | Unnamed Drainage | 41.02898 N, 111.984 |
| 12 | Unnamed Drainage | 41.03078 N, 111.989 |
| 13 | Unnamed Drainage | 41.03191 N, 111.992 |
| 14 | Kays Creek | 41.03923 N, 112.000 |
| 15 | Unnamed Drainage | 41.04463 N, 112.007 |
| 16 | Sugar Factory Drain | 41.04952 N, 112.016 |

## Table 5-1. Summary Impacts to Wat

| Type of Waters of the U.S. |
| --- |
| ***Wetlands*** |
| Direct impacts within the right-of-way (ac |
| Category I |
| Category II |
| Category III |
| **Total** |
| Wetlands within 200 foot of the right of w |