UPDES Permit Information

Overview of Draft UPDES Permit for
Kane Creek Preservation and Development
UPDES Permit No. UT0026204

Utah Department of Environmental Quality
Division of Water Quality

Moab Public Hearing

Thursday August 3, 2023 6:00 pm

UTAH DEPARTMENT of ENVIRONMENTAL QUALITY

What is a UPDES Permit?

*"**U**tah **P**ollutant **D**ischarge **E**limination **S**ystem"*

License for a facility to discharge a specified amount of pollutant into a receiving water.

2 types of UPDES Permits:

- Municipal Permits (POTWs, Public/Private Sewer Plants)
- Industrial Permits (Anything not Municipal)

~130 Individual UPDES Permits statewide
(~half of each type, 3 in Moab area)

Basis for Issuing UPDES Permits

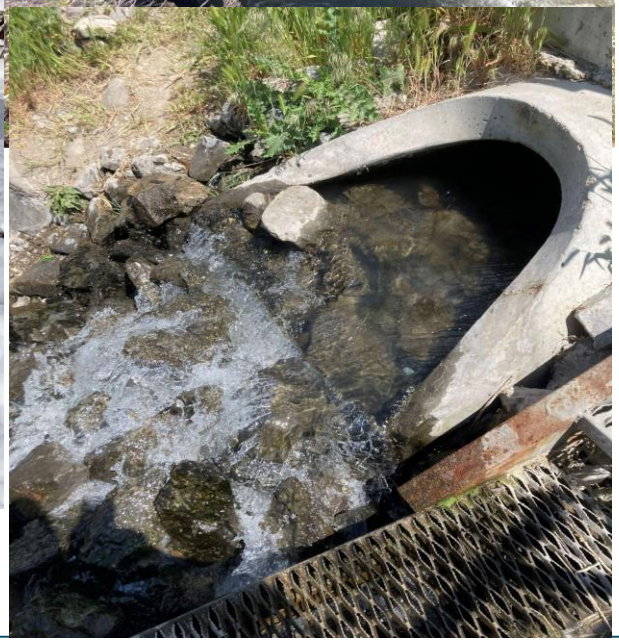
Utah Water Quality Act (UCA 19-5-107)

Except as provided by the Act or rules made thereunder, it is unlawful for any person to ***discharge*** a pollutant into waters of the state or to cause pollution which constitutes a menace to public health and welfare, or is harmful to wildlife, fish or aquatic life, or impairs domestic, agricultural, industrial, recreational, or other beneficial uses of water, or to place or cause to be placed any wastes in a location where there is probable cause to believe it will cause pollution.

Applicability of UPDES Permits (UAC R317-8-2)

The UPDES Program requires permits for the ***discharge*** of pollutants from any point source into waters of the state. The program also applies to owners or operators of any treatment works treating domestic sewage which are required to obtain a UPDES Permit in accordance with UAC R317-8-8.

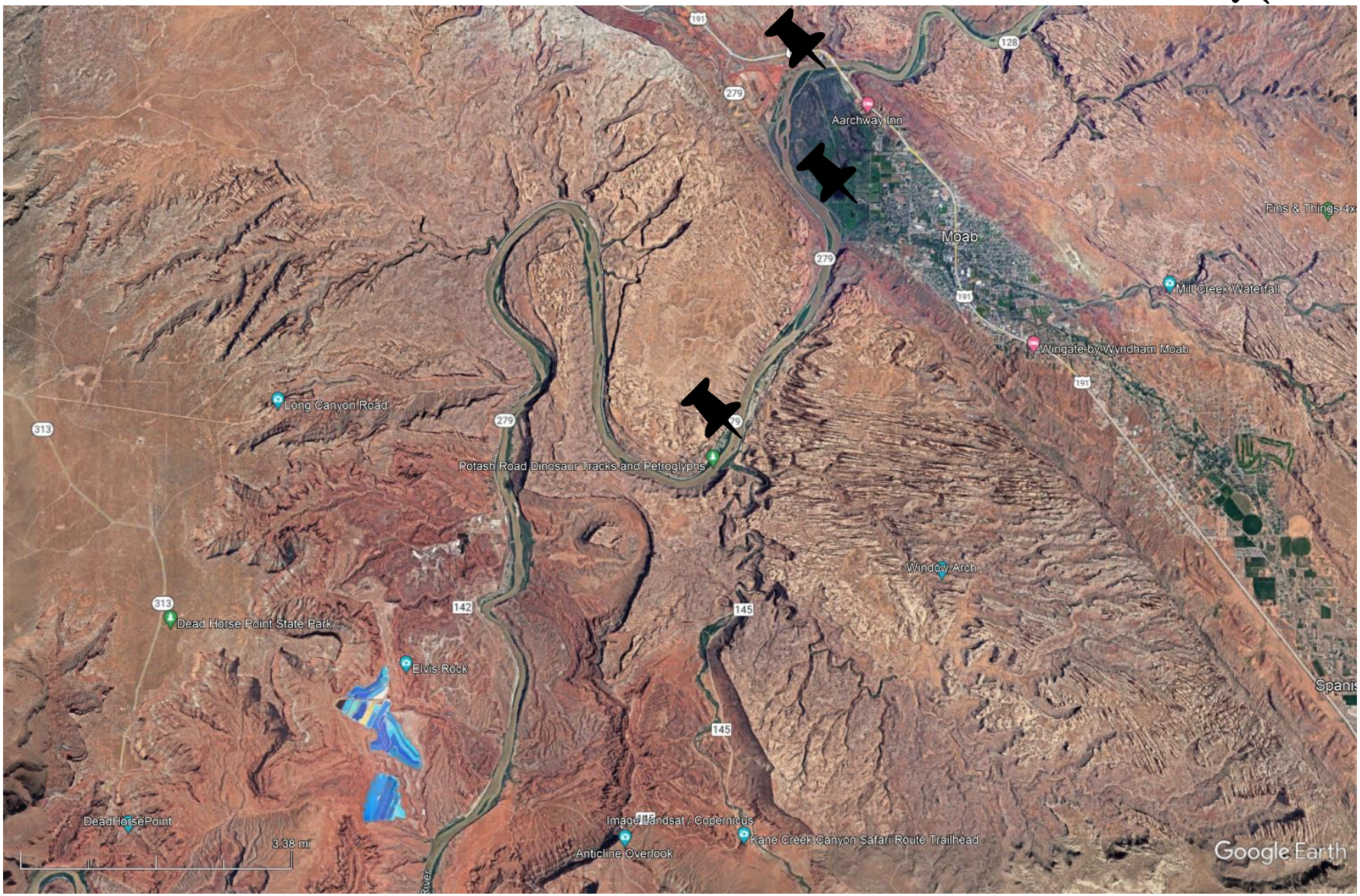
What does a UPDES Permit Discharge look like?



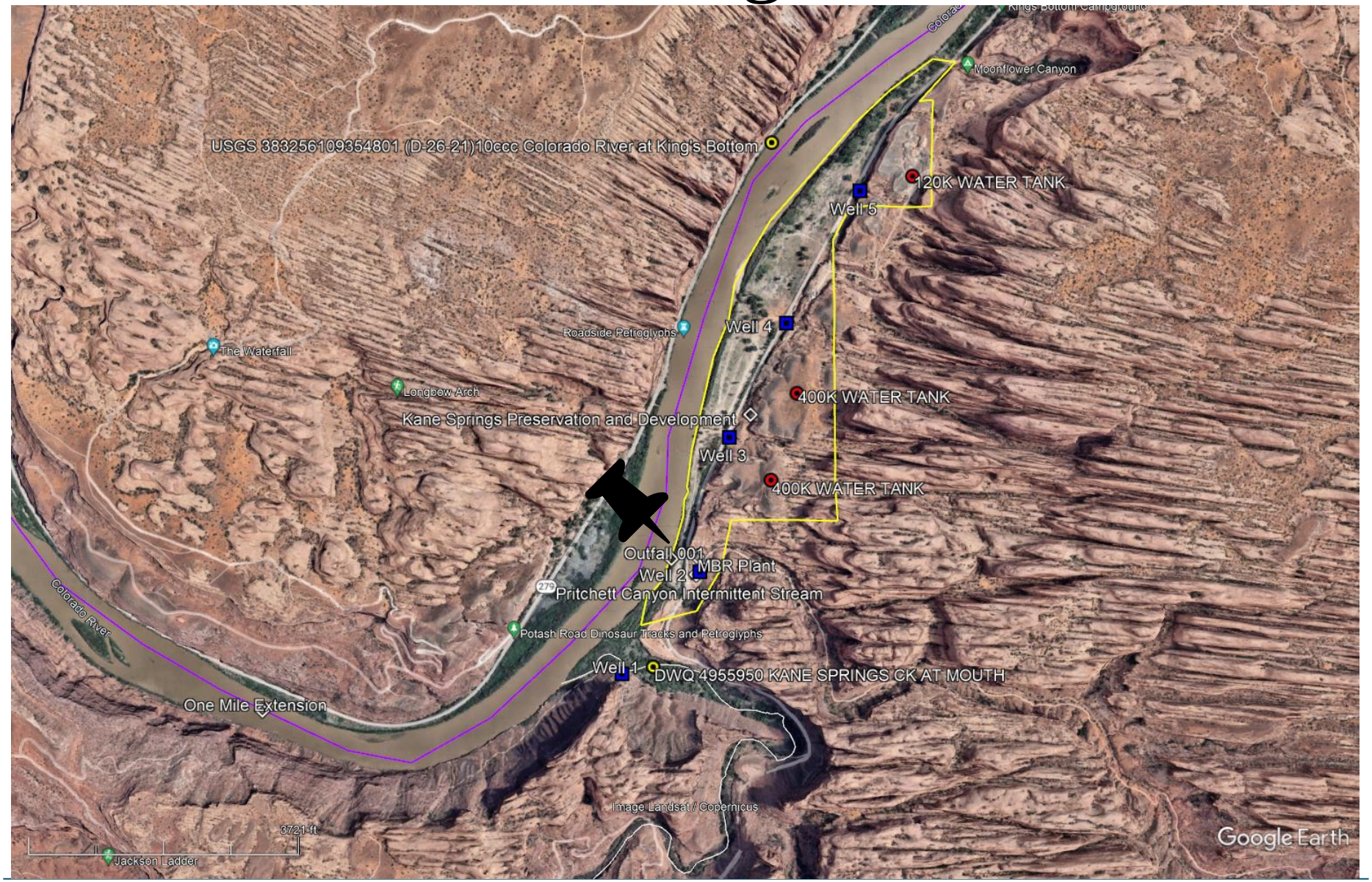
Municipal POTW Examples:

Industrial Permit Examples include many Mining, Manufacturing, Drinking Water Plants, Power Plants, Oil & Gas Refineries, etc., and Ice Cream!

Moab & the Colorado River



Permit Discharge Location



Protective of Receiving Waters

The Colorado River is classified according to *Utah Administrative Code (UAC) R317-2-13* with the following Beneficial Uses:

Class 1C -- Protected for domestic purposes with prior treatment by treatment processes as required by the Utah Division of **Drinking Water**.

Class 2A -- Protected for frequent primary **contact recreation** where there is a high likelihood of ingestion of water or a high degree of bodily contact with the water. Examples include, but are not limited to, swimming, rafting, kayaking, diving, and water skiing.

Class 3B -- Protected for **warm water species of game fish** and other warm water aquatic life, including the necessary aquatic organisms in their food chain.

Class 4 -- Protected for **agricultural uses** including irrigation of crops and stock watering.

- UPDES Permits discharging to the Colorado River must be protective of these beneficial uses when developing permit discharge limits.
- Effluent criteria protective of both early life stages for aquatic wildlife & any potential endangered species.

How do we do that in a Permit?

Permit Limits are derived from multiple sources:

- Utah Water Quality Standards (UAC R317-2) - *ex. pH limits*
- Utah Secondary Treatment Standards (UAC R317-1-3) - *ex. TSS/BOD limits*
- Technology Based Effluent Limitations (UAC or CFR) - *ex. Phosphorus limit*
- Colorado River Basin Salinity Control Forum Policies - *ex. TDS limit*
- TMDL Studies (Total Maximum Daily Load allocations) - *ex. Selenium limit*
- Antidegradation Reviews for protection of beneficial uses based upon performance of selected treatment option (UAC R317-2-3) - *ex. Nitrogen limit, Turbidity limit, and reduced limits for TSS/BOD/E-coli.*
- Wasteload Analysis Modeling, which incorporates all of the above to generate effluent limits for protection of receiving waters - ex. *Ammonia limits*
- Best Professional Judgement of the permitting authority if no limits are otherwise derived - *ex. Oil & Grease limitations (not currently in rule)*

When multiple limits apply, the most stringent limits are included in the permit

What are the UPDES Permit Limits?

Parameter, Units	Effluent Limitations [1]				
	Maximum Monthly Avg	Maximum Weekly Avg	Yearly Average	Daily Minimum	Daily Maximum
Total Flow, MGD [2, 3]	0.27	--	--	--	Report
BOD_5, mg/L [4]	10	20	--	--	--
BOD_5 Min. % Removal	85	--	--	--	--
TSS, mg/L [4]	10	20	--	--	--
TSS Min. % Removal	85	--	--	--	--
pH, Standard Units	--	--	--	6.5	9.0
Turbidity, NTU [5]	Report/5.0 [5]	--	--	--	--
E. coli. No/100mL	2.2	--	--	--	--
TDS Increase, mg/L [6]	Report/400 [6]	--	--	--	--
Total Phosphorus, mg/L [4]	Report	--	1.0	--	--
Total Nitrogen, mg/L [4]	Report	--	10	--	--
Ammonia, mg/L [4]	2.2	--	--	--	13.3
Total Selenium, g/day	Report	--	2.35	--	--
Oil & Grease, mg/L [7]	--	--	--	--	10.0 [7]

Permit Comparisons

Parameter, Units	Effluent Limitations [1]					Moab POTW	Courthouse Wash
	Maximum Monthly Avg	Maximum Weekly Avg	Yearly Average	Daily Minimum	Daily Maximum		
Total Flow, MGD [2,3]	0.27	--	--	--	Report	1.75	0.3
BOD_5, mg/L [4] BOD_5 Min. % Removal	10 85	20 --	-- --	-- --	-- --	25/35 Same	25/35 Same
TSS, mg/L [4] TSS Min. % Removal	10 85	20 --	-- --	-- --	-- --	25/35 Same	25/35 Same
pH, Standard Units	--	--	--	6.5	9.0	Same	Same
Turbidity, NTU [5]	Report/5.0	--	--	--	--	No Limit	No Limit
E. coli. No/100mL	2.2	--	--	--	--	126/157	126/157
TDS Increase, mg/L [6]	Report/400	--	--	--	--	Same	NA
Total Phosphorus, mg/L [4]	Report	--	1.0	--	--	2.5	No Limit
Total Nitrogen, mg/L [4]	Report	--	10	--	--	No Limit	No Limit
Ammonia, mg/L [4]	2.2	--	--	--	13.3	No Limit	6.5-9.1
Total Selenium, g/day	Report	--	2.35	--	--	26.1	No Limit
Oil & Grease, mg/L [7]	--	--	--	--	10.0 [7]	Same	Same

Sampling Requirements

Self-Monitoring and Reporting Requirements [1]			
Parameter	Frequency	Sample Type	Units
Total Flow [2, 3]	Continuous	Recorder	gpd
BOD_5, Influent	Monthly	Composite	mg/L
Effluent [4]	Monthly	Composite	mg/L
TSS, Influent	Monthly	Composite	mg/L
Effluent [4]	Monthly	Composite	mg/L
E. coli	Monthly	Grab	No./100mL
pH	Monthly	Grab	SU
Turbidity [5]	Monthly	Grab	NTU
TDS, Source Water	Monthly	Grab	mg/L
Effluent [6]	Monthly	Grab	mg/L
Oil & Grease [7]	Monthly	Visual/Grab	mg/L
Total Phosphorus (as P) [8]			
Influent	Monthly	Composite	mg/L
Effluent	Monthly	Composite	mg/L
Ammonia (as N), Effluent [8]	Monthly	Composite	mg/L
Orthophosphate, (as P) [8]			
Effluent	Monthly	Composite	mg/L
Total Kjeldahl Nitrogen, TKN (as N) [8]			
Influent	Monthly	Composite	mg/L
Effluent	Monthly	Composite	mg/L
Nitrate, NO_3, Effluent [8]	Monthly	Composite	mg/L
Nitrite, NO_2, Effluent [8]	Monthly	Composite	mg/L
Total Metals, Effluent [9]	Quarterly	Grab/Composite	mg/L

General Conclusions

- Draft Permit effluent limits: most are more restrictive than other nearby UPDES Permits, thus further protecting WQ.
- Effluent criteria protective of early life stages for aquatic wildlife & endangered species (No Mixing Zone in this case)
- UPDES Permits are issued for a period of 5 years and are re-evaluated prior to re-issuance.
- Permit includes Monthly Sampling and Reporting requirements.

Permit Compliance

What happens when a permit limit is exceeded, or other non-compliance event?

- Permittee must notify DWQ within 24-hrs of any permit violation.
- All violations are tracked and evaluated by DWQ.
- Multiple violations can be referred to DWQ Compliance & Enforcement Section for further action.
- Enforcement tools include issuing administrative penalties of up to $10,000/day per violation as per UAC R317-1-8.
- Permittee is responsible for any environmental harm caused by non-compliance events.
- DWQ conducts routine permit compliance inspections.

Other Facility Information

- Permit Applicant and Responsible Official is Kane Creek Preservation and Development, LLC.
- Proposed Wastewater facility under sponsorship of Utah Public Service Commission (body of politic).
- Wastewater treatment plant to be located in northernmost elevated portion of property.
- Peak flow: 270,000 gal/day & Avg flow:135,000 gal/day. (Moab POTW peak flow: 1.75 MGD)
- 4-5 groundwater wells to supply 200-800 gpm for onsite water supply.
- Wastewater to be treated to a Type I Reuse Standard (UAC 317-3-11.4) for future reuse on site as drip irrigation. Reuse permitting approvals are required through DWQ.

Not Part of UPDES Permit Actions

The UPDES program with the Division of Water Quality does not have the authority to regulate beyond governing statute and regulations. Examples include,

- Facility siting, setbacks, zoning, planning, or conditional use permitting
- Land use or land development
- Land fill permitting (ex. Fed. 404 program)
- Floodplain or flood control decisions (incl. FEMA)
- Water rights or water use (except for reuse)
- Noise or nuisance issues
- Air quality or odor issues
- Utilities and easement decisions

Recap

- This draft UPDES Permit is for the discharge of treated wastewater to the Colorado River.
- Discharges must meet permit effluent limits to be protective of Water Quality and the beneficial uses.
- DWQ's UPDES Permit Program is part of the overall DEQ mission to safeguard and improve Utah's water through balanced regulation.

For More Information - UPDES Permit

- Kane Creek Proposed UPDES Discharge Permit Info:
  - https://deq.utah.gov/public-notices-archive/water-quality-public-notices#kcp
- UAC R317-8 Utah Pollutant Discharge Elimination System(UPDES) Regulations:
  - https://adminrules.utah.gov/public/rule/R317-8/Current%20Rules?searchText=R317
- Utah Environmental Water Quality Act:
  - https://le.utah.gov/xcode/Title19/Chapter5/19-5.html
- Utah DEQ/DWQ UPDES Permit contacts:
  - Jeff Studenka, jstudenka@utah.gov, 385-602-7303
  - Dan Hall, dhall@utah.gov, 801-536-4356
  - Chris Shope, cshope@utah.gov, 801-536-4309

  For Press Inquires, DEQ Public Information Officer:
  - Matt McPherson, mmcpherson@utah.gov, 385-245-4603

THANK YOU!