

UPDES Industrial Permit Application

Part X. Antidegradation Review

The objective of antidegradation rules and policies is to protect existing high quality waters and set forth a process for determining where and how much degradation is allowable for socially and/or economically important reasons. In accordance with Utah Administrative Code (UAC R317-2-3), an antidegradation review (ADR) is a permit requirement for any project that will increase the level of pollutants in waters of the state. The rule outlines requirements for both Level I and Level II ADRs, as well as public comment procedures. This review form is intended to assist the applicant and Division of Water Quality (DWQ) staff in complying with the rule but is not a substitute for the complete rule in R317-2-3.5. Additional details can be found in the *Utah Antidegradation Implementation Guidance* and relevant sections of the guidance are cited in this review form.

ADRs should be among the first steps of an application for a UPDES permit because the review helps establish treatment expectations. The level of effort and amount of information required for the ADR depends on the nature of the project and the characteristics of the receiving water. To avoid unnecessary delays in permit issuance, DWQ recommends that the process be initiated at least one year prior to the date a final approved permit is required.

DWQ will determine if the project will impair beneficial uses (Level I ADR) using information provided by the applicant and whether a Level II ADR is required. The applicant is responsible for conducting the Level II ADR. For the permit to be approved, the Level II ADR must document that all feasible measures have been undertaken to minimize pollution for socially, environmentally or economically beneficial projects resulting in an increase in pollution to waters of the state.

For permit requiring a Level II ADR, this antidegradation form must be completed and approved by DWQ before any UPDES permit can be issued. Typically, the ADR form is completed in an iterative manner in consultation with DWQ. The applicant should first complete the statement of social, environmental and economic importance (SEEI) in Section C and determine the parameters of concern (POC) in Section D. Once the POCs' are agreed upon by DWQ, the alternatives analysis and selection of preferred alternative Section E can be conducted based on minimizing degradation resulting from discharge of the POCs. Once the applicant and DWQ agree upon the preferred alternative, the review is considered complete, and the form is submitted to DWQ.

What are the designated uses of the receiving water (R317-2-6)?

- Domestic Water Supply
- Recreation
- Aquatic Life
- Agricultural Water Supply
- Great Salt Lake

Antidegradation Category 1, 2 or 3 of receiving water (R317-2-3.2, -3.3, and -3.4):

Category 3E- Severely Habitat limited

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Effluent flow reviewed: *typically, this should be the maximum daily discharge at the design capacity of the facility. Exceptions should be noted.*

The site is currently discharging water at 2 locations.

Outfall 1 (Rosewood Park) is discharging water at a rate of 50 gpm.

Outfall 2 (Warm Springs Road) is discharging water at a rate of 85 gpm.

What is the application for? (Check all that apply)

- A UPDES permit for a new facility, project, or outfall.
- A UPDES permit renewal with an expansion or modification of an existing wastewater treatment works.
- A UPDES permit renewal requiring limits for a pollutant not covered by the previous permit and/or an increase to existing permit limits.
- A UPDES permit renewal with no changes in facility operations.

Section B. Is a Level II ADR required?

This section of the form is intended to help applicants determine if a Level II ADR is required for specific permitted activities. In addition, the Executive Secretary may require a Level II ADR for an activity with the potential for major impact on the quality of waters of the state (R317-2-3.5a.1).

B1. The UPDES permit is new or is being renewed and the proposed effluent concentration and loading limits are higher than the concentration and loading limits in the previous permit and any previous antidegradation review(s).

- YES – (Proceed to B3 of the Form)
- NO – No Level II ADR is required and there is no need to proceed further with the review questions.
Continue to the Certification Statement and Signature page.

B2. Will any pollutants use assimilative capacity of the receiving water, i.e. do the pollutant concentrations in the effluent exceed those in the receiving waters at critical conditions? For most pollutants, effluent concentrations that are higher than the ambient concentrations require an antidegradation review? For a few pollutants such as dissolved oxygen, and antidegradation review is required if the effluent concentrations are less than the ambient concentrations in the receiving water. (Section 3.3.3 of Implementation Guidance)

- YES – (Proceed to B4 of the Form)
- NO – No Level II ADR is required and there is no need to proceed further with the review questions.
Continue to the Certification Statement and Signature page.

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B3. Are water quality impacts of the proposed project temporary and limited (Section 3.3.4 of Implementation Guidance)? Proposed projects that will have temporary and limited effects on water quality can be exempted from a Level II ADR.

- YES – Identify the reason used to justify this determination if B4.1 and proceed to Section G. No Level II ADR is required.
- NO – A Level II ADR is required (Proceed to Section C)

B3.1 Complete this question only if the applicant is requesting a Level II review exclusion for temporary and limited projects (See R317-2-3.5(b)(3) and R317-2-3.5(b)(4)). For projects requesting a temporary and limited exclusion please indicate the factor(s) used to justify this determination (check all that apply and provide details as appropriate) (Section 3.3.4 of Implementation Guidance):

- Water quality impacts will be temporary and related exclusively to sediment or turbidity and fish spawning will not be impaired.

Factors to be considered in determining whether water quality impacts will be temporary and limited:

a) The length of time during which water quality will be lowered:	Estimated 4 years
b) The perfect change in ambient concentrations of pollutants:	Zero Change
c) Pollutants affected:	Total Dissolved Solids,
d) Likelihood for long-term water quality benefits:	None
e) Potential for any residual long-term influences on existing uses:	None
f) Impairment of fish spawning, survival and development of aquatic fauna excluding fish removal efforts:	Unknown

Additional justification, as needed:

This application is for temporary construction dewatering associated with three phases of construction. The total duration of the Phase 1 project will be 3 months from 10/2023 - 01/2024. Phase 2 Construction will be a duration of 10/2023 to 5/2025. Phase 3 will extend from 5/2025 to 5/2026.



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Level II ADR

Section C, D, E, and F of the form constitute the Level II ADR Review. The applicant must provide as much detail as necessary for DWQ to perform the antidegradation review. Questions are provided for the convenience of applicants; however, for more complex permits it may be more effective to provide the required information in a separate report. Applicants that prefer a separate report should record the report name here and proceed to Section G of the form.

Option Report Name: NA

Section C. Is the degradation from the project socially and economically necessary to accommodate important social or economic development in the area in which the waters are located? *The applicant must provide as much detail as necessary for DWQ to concur that the project is socially and economically necessary when answering the questions in the section. More information is available in Section 6.2 of the Implementation Guidance.*

C1. Describe the social and economic benefits that would be realized through the proposed project, including the number and nature of jobs created and anticipated tax revenues.

The expansion and refurbishing of the Salt Lake City sewer lines will provide additional capacity to and increase safety of the Salt Lake City sewer system. This will allow for the continued population and economic growth of Salt Lake City and Utah's population. Failure to complete this project will drastically hinder new and redevelopment of Salt Lake City. Additionally, failure of the existing infrastructure could put Utah's groundwater and surface waters at risk of a catastrophic sewer overflow.

C2. Describe any environmental benefits to be realized through implementation of the proposed project.

The existing sewer infrastructure has reached the end of it's design life, and as such is at risk of failure if the proposed project is not implemented. Failure of the existing sewer infrastructure would eventually result in a below-grade leaching of untreated sewer influent to groundwater, and eventually an above ground sanitary sewer overflow. This project replaces and refurbishes the sewer infrastructure in this area and will drastically reduce the risk of ground and surface waters of the State.

C3. Describe any social and economic losses that may result from the project, including impacts to recreation or commercial development.

In it's current condition and being listed as a Category 3E water, the NW drain is rarely if ever used for recreation, and any impact would be minimal and temporary. The area which the NW drain runs through is not highly desirable for development and is unlikely to be developed in it's existing condition.

C4. Summarize any supporting information from the affected communities on preserving assimilative capacity to support future growth and development.

Currently the NW drain is listed as a Category 3E, Severely habitat-limited water. Additional waterway modifications would be required beyond water quality standards to support any future growth around the waterway. No plans to develop or improve the NW drain are currently known.



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C5. Please describe any structures or equipment associated with the project that will be placed within or adjacent to the receiving water.

None.

C6. Will the discharge potentially impact a drinking water source, e.g., Class 1C waters? Depending upon the locations of the discharge and its proximity to downstream drinking water diversions, additional treatment or more stringent effluent limits or additional monitoring, beyond that which may otherwise be required to meet minimum technology standards or in stream water quality standards, may be required by the Director in order to adequately protect public health and the environment (R317-2-3.5 d.).

- YES
- NO

Section D. Identify and rank (from increasing to decreasing potential threat to designated uses) the parameters of concern. Parameters of concern are parameters in the effluent at concentrations greater than ambient concentrations in the receiving water. The applicant is responsible for identifying parameter concentrations in the effluent and DWQ will provide parameter concentrations for the receiving water. More information is available in Section 3.3.3 of the Implementation Guidance.

Parameters of Concern:			
Rank	Pollutant	Ambient Concentration	Effluent Concentration¹
1.	Arsenic*	NA	0.0032 mg/L
2.	TDS ²	NA	5460 mg/L
3.	TSS	NA	7 mg/L
4.			
5.			

*Receiving waters are both classified as 3E (Unnamed Ditch and NW drain), severely habitat limited with no metals or TDS limits. Additionally, Farmington Bay of GSL is the final receiving water body of the NW canal, which has elevated arsenic concentrations.

¹ DMR Data submitted for August 2023

²Historic sulfur hot springs in the areas contribute to high TDS in the groundwater of the proposed project.



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Pollutants Evaluated that are not Considered Parameters of Concern:

Pollutant	Ambient Concentration	Effluent Concentration	Justification
1.			
2.			
3.			
4.			
5.			

Section E. Alternative Analysis Requirements of Level II Antidegradation Review. *Level II ADRs require the applicant to determine whether there are feasible less-degrading alternatives to the proposed project. More information is available in Section 5.5 and 5.6 of the Implementation Guidance.*

E1. The UPDES permit is being renewed without any changes to flow or concentrations. Alternative treatment and discharge options including changes to operations and maintenance were considered and compared to the current processes. NO economically feasible treatment or discharge alternatives were identified that were not previously considered for any previous antidegradation review(s).

- YES – (Proceed to Section F)
- NO or Does Not Apply (Proceed to E2)

E2. Attach as an appendix to this form a report that describes that following factors for all alternative treatment options (see 1) a technical descriptions of the treatment process, including construction costs and continued operation and maintenance expenses, 2) the mass and concentration of discharge constituents, and 3) a description of the reliability of the system, including the frequency where recurring operation and maintenance may lead to temporary increases in discharged pollutants. Most of this information is typically available from a Facility Plan, if available.

Report Name: NA

E3. Describe the proposed method and cost of the baseline treatment alternative. The baseline treatment alternative is the minimum treatment required to meet water quality based effluent limits (WQBEL) as determined by the preliminary or final wasteload analysis (WLC) and any secondary or categorical effluent limits.

No additional report attached because the only feasible baseline treatment alternative is the existing system which pumps nuisance groundwater to an on-site settling tank, with a hold time of approximately 6 hours before being discharged.

*****Cost to operate weir tanks needed*****



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E4. Were any of the following alternatives feasible and affordable?

Alternative	Feasible	Reason Not Feasible/Affordable
Pollutant Trading	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	No trading mechanism available
Water Recycling/Reuse	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Transport and treatment of water to reuse standards prohibitive
Land Application	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Limited project ROW
Connection to Other Facilities	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Permit constraints of SLC WRF
Upgrade to Existing Facility	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	No existing facility for temporary discharge
Total Containment	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Volume of containment and limited project ROW prohibitive
Improved O&M of Existing Systems	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	No existing facility for temporary discharge
Seasonal or Controlled Discharge	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Volume of discharge too great to have seasonal discharge
New Construction	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	New construction project with temporary discharge
No Discharge	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	High Groundwater table requires excavations to be dewatered

E5. From the applicant's perspective, what is the preferred treatment option?

Continue to treat total suspended solids with existing settling tank operation with monitored discharge.

Water tight shoring used in construction of dewatering pits to minimize nuisance flows to be dewatered.



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E6. Is the preferred option also the least polluting feasible alternative?

YES NO

If No, what were less degrading feasible alternative(s)?

If land were available, infiltrating to groundwater would be least degrading. This option is not feasible due to project ROW constraints and cost to develop an infiltration system for the volume of water to be discharged.

If No, provide a summary of the justification for not selecting the least polluting feasible alternative and if appropriate, provide a more detailed justification as an attachment.

Discharge will be temporary to the NW canal which is classified as a Type 3E - Severely Habitat limited water, with little to no recreational or social use.

Temporary discharge with existing sulfur hot springs in the area which influence TDS concentrations of groundwater.

Section F. Optional Information

F1. Does the applicant want to conduct optional public review(s) in addition to the mandatory public review? Level II ADRs are public noticed for a thirty day comment period. More information is available in Section 3.7.1 of the Implementation Guidance.

YES NO

F2. Does the project include an optional mitigation plan to compensate for the proposed water quality degradation?

YES NO

Report Name: _____



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Part XI. Certification Statement and Signature

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment of knowing violations.

Derek Velarde

Digitally signed by Velarde, Derek
 Date: 2023.10.07 11:40:24 -06'00'

Assistant Chief Engineer

10/3/2023

PRINT Signatory Authority

Signature

Title

Date

The Division of Water Quality may request addition information.

Important: The UPDES Permit Application will not be considered complete unless you answer every question. If an item does not apply to you, enter "Not Applicable" to show that you considered the question.

The UPDES Permit Application, must be signed as follows:

- 1) For a corporation, a responsible corporate officer shall sign the NOT, a responsible corporate officer means:
 - a. A President, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation; or
 - b. The manager of one or more manufacturing, production, or operating facilities, if
 - i. The manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental statutes and regulations;
 - ii. The manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and
 - iii. Authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- 2) For a partnership of sole proprietorship, the general partner or the proprietor, respectively; or
- 3) For a municipality, state or other public agency, either a principal executive officer or ranking elected official shall sign the application; in this subsection, a principal executive officer of any agency means:
 - a. The chief executive officer of the agency; or
 - b. A senior executive officer having responsibility for the overall operations of a principal geographic unit or division of the agency.

Where to File the UPDES Permit Application form:

Please submit the original form with a signature in ink to the below address. Remember to retain a copy for your records.

UPDES sent by mail:

**Division of Water Quality
 195 North 1950 West
 PO Box 144870
 Salt Lake City, UT 84114-4870**

OFFICE USE ONLY

Date received: ____ / ____ / ____ **Received by:** _____ **Document No:** _____

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