

ANTIDegradation REVIEW FORM

UTAH DIVISION OF WATER QUALITY

Instructions

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, the Division of Water Quality (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 permits 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 Part C and determine the parameters of concern (POC) in Part D. Once the POCs are agreed upon by DWQ, the alternatives analysis and selection of preferred alternative in Part 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 must be signed, dated, and submitted to DWQ.

For additional clarification on the antidegradation review process and procedures, please contact Nicholas von Stackelberg (801-536-4374) or Jeff Ostermiller (801-536-4370).

Antidegradation Review Form

Part A: Applicant Information

Facility Name: Provo Water Reclamation

Facility Owner: Provo City

Facility Location: 1686 South East Bay Blvd. Provo UT 84606

Form Prepared By: Mark Ogren

Outfall Number: 001

Receiving Water: Mill Race

What Are the Designated Uses of the Receiving Water (R317-2-6)?

Domestic Water Supply: None

Recreation: 2B - Secondary Contact

Aquatic Life: 3B - Warm Water Aquatic Life

Agricultural Water Supply: 4

Great Salt Lake: None

Category of Receiving Water (R317-2-3.2, -3.3, and -3.4): Category 3

UPDES Permit Number (if applicable): UT0021717

Effluent Flow Reviewed: Design 21 MGD

Typically, this should be the maximum daily discharge at the design capacity of the facility. Exceptions should be noted.

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.

Part 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 receiving water or downstream water is a Class 1C drinking water source.

Yes A Level II ADR is required (Proceed to Part C of the Form)

No (Proceed to Part B2 of the Form)

B2. 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 Part B3 of the Form)

No No Level II ADR is required and there is no need to proceed further with review questions.

B3. 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, an 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 Part B4 of the Form)

No No Level II ADR is required and there is no need to proceed further with review questions.

B4. 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 reasons used to justify this determination in Part B4.1 and proceed to Part G. No Level II ADR is required.
- No** A Level II ADR is required (Proceed to Part C)

B4.1 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:
- b) The percent change in ambient concentrations of pollutants:
- c) Pollutants affected:
- d) Likelihood for long-term water quality benefits:
- e) Potential for any residual long-term influences on existing uses:
- f) Impairment of fish spawning, survival and development of aquatic fauna excluding fish removal efforts:

Additional justification, as needed:

Level II ADR

Part 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 Part G of the form.

Optional Report Name:

Part 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 this 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.

Part C: The proposed project is raising the effluent limits for ammonia and BOD, which have been determined by the wasteload analysis to be protective of the designated uses of the receiving waters. No changes to the treatment process or operations are proposed, and the additional allowable degradation would only occur during upset conditions. Upset conditions are not anticipated to occur or only occur very infrequently; therefore, additional assimilative capacity would not be used through raising the effluent limits. There will not be any social or economic benefits for adjusting Provo's effluent limits. Less strict limits will allow Provo to direct their resources towards nutrient removal and allow for any unforeseen process upsets.

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

The proposed limits are comparable to other local POTWs discharging to Utah Lake. There would not be any environmental impact on the Mill Race and/or Utah Lake.

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

No social or economic impact is projected by allowing secondary effluent standards from Provo's Water Reclamation facility.

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

The current treatment process at the plant protects the assimilative capacity of the receiving waters and downstream affected communities. There are seven (7) POTW's with secondary effluent standards that currently discharge to Utah Lake. Provo's effluent will not affect the communities around Utah Lake. The Mill Race ditch is not a natural waterway. It was developed for diverting river water for surface irrigation and industrial processes in Provo City. Those uses are no longer practiced. Today the ditch is used to collect and convey storm water away from the City to Utah Lake.

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

None, no additional structures or equipment will be required. Provo will be able to meet Secondary Effluent Standards.

Part 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 Concentration
1	BOD		Limit 25-35 mg/L
2	Ammonia		Limit 3-8 mg/L
3	D.O.		Limit 5.0-6.0 mg/L
4			
5			

Pollutants Evaluated that are not Considered Parameters of Concern:

Pollutant	Ambient Concentration	Effluent Concentration	Justification
W.E.T			Needs to be kept at 87%

Part E. Alternative Analysis Requirements of a 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 Part F)

No or Does Not Apply (Proceed to E2)

E2. Attach as an appendix to this form a report that describes the following factors for all alternative treatment options (see 1) a technical description 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: *Modify last sentence to read "No additional degradation of Mill Race is anticipated to result from raising the permit limits for BOD and ammonia, as no changes to the treatment process or operations are proposed." The higher discharge limits were a result of a newly calculated Waste load analysis. Provo's Water Reclamation Plant is/has achieved lower discharge concentrations than the new permit allows. No change in Plant operations will occur, the high quality effluent will continue with low pollutant concentrations. The Secondary Standard limits will allow Provo a buffer in the event of an up-set process condition. No degradation of the Mill Race has occurred and none is foreseen in the future.*

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 (WLA) and any secondary or categorical effluent limits.

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

Alternative	Feasible	Reason Not Feasible/Affordable
Pollutant Trading	Not Applicable	
Water Recycling/Reuse	Not Applicable	
Land Application	Not Applicable	
Connection to Other Facilities	Not Applicable	
Upgrade to Existing Facility	Not Applicable	
Total Containment	Not Applicable	
Improved O&M of Existing Systems	Not Applicable	
Seasonal or Controlled Discharge	Not Applicable	
New Construction	Not Applicable	
No Discharge	Not Applicable	

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

Not Applicable

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

Yes

No

If no, what were less degrading feasible alternative(s)? **Not Applicable**

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.

Not Applicable

Part 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.

No

Yes

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

No

Yes

Report Name: Not Applicable

Part G. Certification of Antidegradation Review

G1. Applicant Certification

The form should be signed by the same responsible person who signed the accompanying permit application or certification.

Based on my inquiry of the person(s) who manage the system or those persons directly responsible for gathering the information, the information in this form and associated documents is, to the best of my knowledge and belief, true, accurate, and complete.

Print Name: BART SIMONS

Signature: Bart Simons

Date: 12-10-15

G2. DWO Approval

To the best of my knowledge, the ADR was conducted in accordance with the rules and regulations outlined in UACR-317-2-3.

Water Quality Management Section

Print Name: JODI GARDBERG

Signature: Jodi Gardberg

Date: 12/17/2015