

## **Antidegradation Reviews Frequently Asked Questions**

### **What are antidegradation reviews and why are they conducted?**

The central goals of the Clean Water Act and the Utah Water Quality Act are to protect, maintain, and restore the quality of Utah's waters. One way in which this is accomplished is through Utah's water quality standards, which consist of: 1) designated uses (e.g., aquatic life, drinking water, recreation), 2) water quality criteria (numeric and narrative parameters), and 3) antidegradation policy and procedures. The intent of the antidegradation component of our standards is to protect existing instream uses and high quality waters. Our water quality criteria create a floor below which uses become impaired, whereas our antidegradation policy protects water quality in waters where the quality is already better than the criteria.

Utah's antidegradation policy (UAC R317-2-3) does not prohibit degradation of water quality, unless the Water Quality Board has previously considered the water to be of exceptional recreational or ecological significance (Category 1 or Category 2 waters). Instead the policy creates a series of rules that together ensure that when degradation of water quality is necessary for social and economic development, every possible way to minimize degradation are explored. Also, the policy requires that these management options and expected benefits are conveyed to Utah's citizens. Overall, our antidegradation policies provide a framework where DWQ can discuss openly, with all of our stakeholders, the costs and benefits of any action that degrades the quality of our waters. In short, this policy provides the information necessary to create a dialogue about how best to balance social and economic development with environmental protection.

### **What is generally involved in an antidegradation review?**

Antidegradation reviews are required, as part of the discharge permitting process, for any action that has the potential to degrade water quality. These reviews are conducted at two levels, referenced in rule as Level I and Level II reviews. The findings of both Level I and Level II reviews are documented and made available for public comment.

Level I reviews are intended to ensure that the action will not degrade "existing uses". Legally, existing uses are defined as the most sensitive use that has been attained in a waterbody since 1975, whether or not the use is also a designated use. For instance, if a

stream currently only contains warm water fish species, whereas it supported a trout fishery at some point after 1975, the “existing use” would be 3a (cold water fish and organisms in their foodweb). Both state and federal regulations do not permit degradation of an existing instream use, and the Level I review simply asks whether there are existing uses with protection requirements that are more stringent than the designated uses. If there are such existing uses, they must be protected. The Level I review also evaluates whether the proposed activity is *de minimis* (temporary or limited impact; see “How can I determine if my permit requires a Level II review?” below).

Level II reviews are conducted for waters where water quality is better than the criteria assigned to protect designated uses. The central tenet of these reviews is that within a given designated use class there is a range of water quality values that are sufficiently protective and while water quality is permitted to degrade to the standard, degradation should be minimized. The four main components of a Level II review are: 1) a statement of the economic and social importance of the proposed activity; 2) a determination of the water quality parameters of concern; 3) an alternatives analysis; and 4) a public notification. Further description of the components of a Level II review is provided below and in subsequent FAQs.

The statement of economic and social importance evaluates the societal benefits of the proposed activity by documenting factors such as: employment, production, tax revenues, housing, and correction of other societal concerns (i.e., health or environmental concerns). Level II reviews assure that degradation is necessary and that the proposed activity is economically and socially important.

The parameters of concern are those water quality constituents that are of better quality in the receiving water than in the discharge; i.e. that degrade water quality.

The alternatives analysis requires the evaluation of the costs and environmental benefits of alternative treatment options. The purpose of an alternatives analysis is to identify the least degrading, feasible treatment alternative.

### **Who conducts the analyses and prepare the documentation required by antidegradation reviews?**

Level I reviews are conducted by DWQ staff. If a Level II review is required, the proponent of the project provides the following for DWQ review: a statement of the social and economic importance, a list of parameters of concern, an alternatives analysis, and any proposed mitigations. DWQ staff resources are available to assist project proponents as they prepare their materials. Coordination with DWQ staff is critical to ensure that each review covers, in sufficient detail, all appropriate material.

### **When in the permitting process are antidegradation reviews conducted?**

Antidegradation reviews are the first step in the permitting process because these reviews help define the design specifications of each proposed project. For UPDES permits, DWQ strongly recommends that project proponents initiate the permitting process at least one year before the project commences.

### **How can I determine if my permit will require a Level II review?**

The questions in Part B of the Antidegradation Review Application assist the project proponent with identifying whether a Level II review is required. In addition, DWQ staff are available to work directly with project proponents to determine whether a Level II review is required.

A Level II review is required for all new and renewed UPDES permits that discharge into waters protected as drinking water sources (Class 1C). A Level II review is required for all new UPDES permits. For UPDES permit renewals, a Level II review is generally required if the facility is modified and/or the permit has higher effluent limits.

### **How does DWQ determine if an activity is "*de minimis*," therefore not requiring a Level II antidegradation review?**

Utah Administrative Code (UAC R317-2-3-3.5-b1) allows for antidegradation reviews to be discontinued where water quality effects will be temporary and limited (*de minimis*). The applicant will need to provide evidence that the water quality effects are temporary and limited. Part B of the Antidegradation Review Application lists the factors to be considered. For instance, temporary projects that contribute only sediment to a stream are generally excluded from Level II reviews provided that fish spawning will not be affected by the activity. Based on the information provided, DWQ staff determines whether a Level II review will be required for the proposed project.

### **How much time and effort does a project proponent need to devote to Level II reviews?**

Recall that the central goals of the antidegradation review process are to ensure protection of existing instream uses and high quality waters by minimizing the environmental degradation of proposed projects. While all Level II reviews have the same requirements, the extent of documentation required to meet these requirements will vary depending on the specific characteristics of each project and the characteristics of the receiving water. For instance, large and expensive projects may require a more exhaustive alternatives analysis than smaller projects. Similarly, project proponents are advised to provide more details if the receiving water is of particular ecological or recreational importance. Simply put, antidegradation reviews provide a formal structure for project proponents to document the importance of their project, and to show that every possible effort has been made to minimize potential adverse environmental consequences. DWQ will assist each applicant by outlining specific expectations of each Level II review.

### **What is required for the review of the social and economic importance of the proposed project?**

The intent of this review is to document the social and economic costs and benefits of each proposed project. The section of the antidegradation review provides the project proponent the opportunity to demonstrate that the overall social and economic benefits of the project outweigh any negative consequences to the environment. As a result, it is in the best interest of the proponent to make this review as thorough as possible. At a minimum this portion of the review should contain the following:

- 1) An estimate of important social and economic benefits that would be realized by the project, including the number and nature of jobs created and projected tax revenues generated.
- 2) An estimate of any social and economic costs of the project, including any impacts on commercial or recreational uses of the project.
- 3) A description of environmental benefits of the project and associated mitigation efforts (if any). For instance, if a project would result in an increase in stream flow that would provide additional habitat and a net benefit to stream biota, this benefit would be documented in this section of the review.

### **How are the parameters of concern identified?**

Parameters of concern are those water quality constituents that are of better quality in the receiving water than in the discharge. DWQ staff will typically perform the analysis required to characterize ambient conditions in the receiving water. The project proponent will need to estimate the quality of the discharge for each parameter considered. Based on a comparison of ambient and discharge quality, DWQ staff will work with the project proponent to identify which constituents should be considered as parameters of concern. In instances where there is some doubt as to either the quality of the receiving water and/or discharge, DWQ encourages that constituents be listed as parameters of concern in order to ensure that the review considers all potential water quality degradation resulting from the activity.

### **What is involved in the alternatives analysis required by a Level II review?**

Level II reviews require that DWQ evaluate whether there are any “reasonable” non-degrading or less degrading alternatives to each proposed project. These evaluations are made by evaluating evidence provided by the project proponent. A full range of alternatives should be evaluated by the project proponent. Utah Administrative Code provides examples of some alternatives to be considered:

- innovative or alternative treatment options,
- more effective treatment options or higher treatment levels,
- connection to other wastewater treatment facilities,
- process changes or product or raw material substitution,
- seasonal or controlled discharge options to minimize discharging during critical water quality periods,
- pollutant trading,
- water conservation, water recycle and reuse,
- alternative discharge locations or alternative receiving waters,
- land application,
- total containment, and
- improved operation and maintenance of existing treatment systems, or other appropriate alternatives.

Many of these alternatives can be addressed fairly easily by working with DWQ staff to evaluate the specific alternative that each project should consider.

In practice, evaluations of alternative treatment options, treatment levels, or treatment processes is the most technically challenging requirement of the alternatives analysis. In order for DWQ to fairly evaluate alternative treatments, we require the review to include the following for each alternative process:

- 1) A technical description of the treatment process, including construction costs and continued operation and maintenance expenses.
- 2) The mass and concentration of discharge parameters of concern.
- 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.

**How is the required treatment option selected among the alternatives described in the Level II review?**

DWQ may require a treatment option that is more costly than the cheapest alternative if the alternative project would provide a substantial environmental benefit to the receiving water. Alternatives would generally be considered feasible where costs are no more than 20% higher than the cost of the discharging alternative, and for Publicly Owned Treatment Works (POTWs) where the projected per connection service fees are not greater than 1.4% of the Median Adjusted Gross Household Income (MAGHI).

**Are mitigation efforts considered?**

Utah encourages, but does not require, that projects include a mitigation plan to compensate for any adverse environmental effects of the proposed activity. While mitigation efforts will not alter effluent limits, the effects of these activities can be included in the evaluation of the overall social and economic importance of a project (see below). In some cases, the submission of a mitigation plan with the antidegradation review may allow the Executive Secretary to authorize a proposed activity that would not otherwise be authorized. Also, while the initial permit limits will not be altered by these activities, permit renewals could be if the activities are successful in lowering background concentrations of pollutants. If a mitigation plan is submitted, it should include a description of the proposed activity, costs, and expected environmental benefits.

**What is involved with the public notification?**

The public will be provided notice and an opportunity to comment on the conclusions of all completed antidegradation reviews. Whenever possible, public notice on the antidegradation review conclusions will be combined with the public notice on the proposed permitting action. In the case of UPDES permits, public notice will be provided through the normal permitting process, as all draft permits are public noticed for 30 days, and public comment solicited, before being issued as a final permit. The Statement of Basis for the draft UPDES permit will contain information on how the ADR was addressed including results of the Level I and Level II reviews.

Optional public notification and comment periods can be conducted for scoping and/or presenting findings of each component of the antidegradation review (statement of social and economic importance, parameters of concern, and alternatives analysis). DWQ staff can assist with the optional public notices, including posting on the DWQ website. For proposed projects that are significant, complex and potentially contentious, DWQ encourages one or more optional public notices earlier in the review process to solicit community input.