Utah Antidegradation Review Implementation Guidance

Version 1.2

5/21/2013

DRAFT for COMMENT

Do not cite or quote
This draft has not been approved by DWQ management

Utah Department of Environmental Quality
Division of Water Quality

TABLE OF CONTENTS

1.0 INTRODUCTION 1

2.0 THE ANTIDEGRADATION PROCESS 1

2.1 Assigning Protection Categories 2
2.1.1 Category 1 Waters 2
2.1.2 Category 2 Waters 2
2.1.3 Category 3 Waters 2
2.2 Procedures for Assigning Protection Categories 3
2.2.1 Material to Include with a Nomination 3
2.2.2 Considerations for Appropriate Data and Information to Include with Nominations to Increase Protection of Surface Waters 3
2.2.3 Considerations for Appropriate Data and Information for Consideration to Decrease Protection of Surface Waters 4
2.2.4 Public Comment Process for Proposed Reclassifications 4
2.2.5 Reclassification Decision Making Process 5

3.0 ANTIDEGRADATION REVIEW GENERAL PROCEDURES 6

3.1 Overview of Antidegradation Review Procedures 6
3.2 Level I Antidegradation Reviews 6
3.3 Level II Antidegradation Reviews 8
3.3.1 Activities that are Considered to be New or Expanded Actions 8
3.3.2 Actions Regulated by the DWQ 8
3.3.3 Activities that are not Considered to Result in Degradation or Additional Degradation 9
3.3.4 Activities that are Considered to be Temporary and Limited 9
3.4 Responsibilities for Completing Level II ADR Documentation 10
3.5 Timing of Level II ADRs and Interim Submittals 10
3.6 Public and Interagency Participation in ADRs ..... 14~~13~~
3.6.1 Public Notification Process ..... 14~~13~~
3.6.2 Intergovernmental Coordination and Review ..... 15~~13~~

4.0 IDENTIFICATION OF THE PARAMETERS OF CONCERN ..... 16~~14~~

4.1 Determination of the Parameters of Concern ..... 16~~14~~
4.1 Ranking the Parameters of Concern ..... 17~~15~~

5.0 ALTERNATIVES ANALYSIS OF LEVEL II ADRS ..... 19~~17~~

5.1 Development of a Scope of Work for Level II ADR Alternatives Analysis ..... 19~~17~~
5.2 Establishing the Baseline Treatment Alternative ..... 20~~18~~
5.3 General Considerations for Selecting Treatment Alternatives for Consideration ..... 20~~18~~
5.4 Special Project-Specific Scoping Considerations ..... 21~~19~~
5.5 Finalizing the Alternatives Work Plan ..... 22~~19~~
5.6 Materials to be Submitted with Alternative Analyses ..... 23~~20~~
5.7 Procedures for Evaluating the Preferred Alternative ..... 23~~20~~
5.7.1 Applicant Ranking of Treatment Alternatives ..... 23~~20~~
5.7.2 Review and Selection of the Preferred Alternative ..... 24~~22~~
5.7.3 Opportunity for Public Comment and Review of the Preferred Alternative ..... 27~~23~~

6.0 IMPLEMENTATION PROCEDURES FOR DEVELOPMENT OF A STATEMENT OF SOCIAL, ENVIRONMENTAL, AND ECONOMIC IMPORTANCE (SEEI) ..... 28~~24~~

6.1 Regulatory Framework ..... 29~~25~~

6.2 IMPORTANT CONSIDERATIONS IN DEVELOPING SEEIS ..... 30~~26~~
6.2.1 Effects on Public Need/Social Services ..... 30~~26~~
6.2.2 Effects on Public Health/Safety. ..... 30~~26~~
6.2.3. Effect on Quality of Life. ..... 30~~26~~
6.2.4. Effect on Employment ..... 30~~26~~
6.2.5 Effect on Tax Revenues ..... 31~~27~~
6.2.6 Effect on Tourism ..... 31~~27~~
6.2.7 Preservation of assimilative capacity ..... 31~~27~~
6.2.8 Other Factors ..... 31~~27~~
6.3 REVIEW AND APPROVAL OF SEEIS ..... 31~~27~~
6.4 PUBLIC COMMENT PROCEDURES ..... 31~~27~~

7.0 SPECIAL PERMIT CONSIDERATIONS ..... 33~~28~~

7.1 INDIVIDUAL STORMWATER PERMITS ..... 33~~28~~
7.2 GENERAL PERMITS ..... 33~~28~~
7.3 §401 CERTIFICATIONS ..... 33~~28~~

8.0 ISSUES FOR FUTURE ITERATIONS OF THE IMPLEMENTATION GUIDANCE ..... 34~~29~~

8.1 PLANNED FUTURE ADDITIONS TO THE GUIDANCE ..... 34~~29~~

1.0 INTRODUCTION

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 (both numeric and narrative), and 3) antidegradation policy and procedures. The intent of the antidegradation component of our standards is to protect existing uses and to maintain 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 feasible option to minimize degradation is explored. Also, the policy requires that alternative management options and the environmental and socioeconomic benefits of proposed projects are made available to concerned stakeholders.

This document provides the implementation procedures for Utah's antidegradation rules. Utah's Division of Water Quality (hereafter DWQ) is required by Federal Code (40 CFR §131.12(a)) to develop an antidegradation policy and implementation procedures. These procedures and associated rules (UAC R317-2-3) meet these requirements. The implementation procedures discussed in this document were developed in a collaborative process among stakeholders to identify procedures that would meet the intent of antidegradation rules, while avoiding unnecessary regulatory burdens.

This first draft of implementation procedures focuses on Utah Pollution Discharge Elimination System (UPDES) permits except for general permits. General permits must meet ADR requirements and implementation procedures for general permits will be forthcoming in future drafts of this guidance. Section 7.0 summarizes the portions of the guidance that are incomplete. The absence of guidance for these topics does not negate or delay the requirements for antidegradation reviews required under UAC R317-2-3.

2.0 THE ANTIDEGRADATION PROCESS

Antidegradation reviews (ADRs) are required, as part of the permitting process, for any action that has the potential to degrade water quality. Activities subject to ADRs include any activities that require a permit or water quality certification pursuant to federal law. The ADR process involves: 1) classification of surface waters into protection categories, and 2) documenting that activities likely to degrade water quality are necessary and that all State and Federal procedures have been followed to ensure that reasonable steps are taken to minimize degradation.

The overarching goal of ADRs is summarized in rule R317.2.3.1 as follows:

> *"Waters whose existing quality is better than the established standards for the designated uses will be maintained at high quality unless it is determined by the Board, after appropriate intergovernmental coordination and public participation in concert with the Utah continuing planning process, allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. However, existing instream water uses shall be maintained and protected. No water quality degradation is allowable which would interfere with or become injurious to existing instream water uses."*

2.1 Assigning Protection Categories

Utah's surface waters are assigned to one of three protection categories that prescribe generally permissible water quality actions. These levels of protection are determined by their existing biological, chemical and physical integrity, and by the interest of stakeholders in protecting current conditions. Antidegradation procedures are differentially applied to each of these protection categories on a parameter-by-parameter basis.

2.1.1 Category 1 Waters

Category 1 waters (as listed in R317-2-12.1) are afforded the highest level of protection from activities that are likely to degrade water quality. This category is reserved for waters of exceptional recreation or ecological significance, or that have other qualities that warrant exceptional protection. Once a waterbody is assigned Category 1 protection, future discharges of wastewater into these waters are not permitted. However, permits may be granted for other activities (e.g., road construction, dam maintenance) if it can be shown that water quality effects will be temporary and that all appropriate Best Management Practices (BMPs) have been implemented to minimize degradation of these waters.

2.1.2 Category 2 Waters

Category 2 waters (as listed in R317-2-12.2) are also afforded a high level of protection, but discharges to these waters are permissible, provided no degradation of water quality will occur or where pollution will result only during the actual construction activity, and where best management practices will be employed to minimize pollution effects. In practice, this means that all wastewater parameters should be at or below background concentrations of the receiving water for activities that are not temporary and limited. As a result of this stipulation, the Level I and Level II ADR provisions discussed in these implementation procedures are not required for Category 2 waters.

2.1.3 Category 3 Waters

All surface waters of the State are Category 3 waters unless otherwise designated as Category 1 or 2 in UAC R317-2-12. Discharges that degrade water quality are permitted for Category 3 waters provided that 1) existing uses are protected, 2) the degradation is

necessary, 3) the activity supports important social or economic development in the area where the waters are located, and 4) all statutory and regulatory requirements are met in the area of the discharge. Antidegradation rules also apply for any proposed new or expanded discharge that is likely to degrade water quality. ADRs require that these proposed actions demonstrate that such proposed projects are necessary to accommodate social and economic development, and that all reasonable alternatives to minimize degradation of water quality have been explored. These implementation procedures provide details about how ADRs are implemented to meet these requirements.

2.2 Procedures for Assigning Protection Categories

The intent of Category 1 and Category 2 protection classes is to protect high quality waters. Any person or DWQ may nominate a surface water to be afforded Category 1 or 2 protections by submitting a request to the Executive Secretary of the Water Quality Board. DWQ generally considers nominations during the triennial review of surface water quality standards. The nominating party has the burden of establishing the basis for reclassification of surface waters, although DWQ may assist, where feasible, with data collection and compilation activities.

2.2.1 Material to Include with a Nomination

The nomination may include a map and description of the surface water; a statement in support of the nomination, including specific reference to the applicable criteria for unique water classification, and available, relevant and recent water quality or biological data. All data should meet the minimum quality assurance requirements used by DWQ for assessing waters of the State. A description of these requirements can be found in the most recent *Integrated Report Part 1 Water Quality Assessment*.

2.2.2 Considerations for Appropriate Data and Information to Include with Nominations to Increase Protection of Surface Waters

The Water Quality Board may reclassify a waterbody to a more protected category, following appropriate public comment. Evidence provided to substantiate any of the following justifications that a waterbody warrants greater protection may be used to evaluate the request:

- The location of the surface water with respect to protections already afforded to waters (e.g. on federal lands such as national parks or national wildlife refuges).
- The ecological value of the surface water (e.g., biological diversity, or the presence of threatened, endangered, or endemic species)
- Water quality superior to other similar waters in surrounding locales.
- The surface water is of exceptional recreational or ecological significance because of its unique attributes (e.g., Blue Ribbon Fishery)
- The surface water is highly aesthetic or important for recreation and tourism.

- The surface water has significant archeological, cultural, or scientific importance.
- The surface water provides a special educational opportunity.
- Any other factors the Executive Secretary considers relevant as demonstrating the surface water's value as a resource.

The final reclassification decision will be based on all relevant information submitted to or developed by DWQ.

2.2.3 Considerations for Appropriate Data and Information for Consideration to Decrease Protection of Surface Waters

The intent of Category 1 and Category 2 protections is to prevent future degradation of water quality. As a result, downgrades to surface water protection categories are rare. However, exceptional circumstances may exist where downgrades may be permitted to accommodate a particular project. For instance, in Utah most surface waters in the upper portions of National Forests are afforded Category 1 protection, which may not be appropriate in specific circumstances. Project proponents may request a classification with lower protection; however, it is their responsibility to provide sufficient justification. Examples of situations where a reclassification with less stringent protections might be appropriate follow:

- Failure to complete the project will result in significant and widespread economic harm.
- Situations where the surface water was improperly classified as a Category 1 or Category 2 water because the surface water is not a high quality water (as defined by the criteria outlined in 2.2.2).
- Water quality is more threatened by not permitting a discharge (e.g., septic systems vs. centralized water treatment).

Requests for downgrades to protection should provide the most complete and comprehensive rationale that is feasible. The request for a reduction in protection may also be considered in concert with the alternatives evaluated through an accompanying Level II ADR. Proposed projects affecting high quality waters may require more comprehensive analysis than projects affecting lower quality waters.

2.2.4 Public Comment Process for Proposed Reclassifications

All data and information submitted in support of reclassification will be made part of the public record. In addition to public comment, the DWQ will hold at least one public meeting in the area near the nominated water. If the issues related to reclassification are regional or statewide in nature or of broader public interest, the Division will consider requests for public meetings in other locations. Comments received during this meeting will be compiled and considered along with the information submitted with the nomination.

2.2.5 Reclassification Decision Making Process

The final reclassification decision will be based on all relevant information submitted to or developed by the DWQ. All data will be presented and discussed with the Water Quality Standards Workgroup. DWQ then submits its recommendations regarding reclassifications to the Water Quality Board who makes a formal decision about whether to proceed with rulemaking to reclassify the waterbody. The proposed reclassification is a rule change, and as such will trigger public notice and comment procedures.

3.0 ANTIDEGRADATION REVIEW GENERAL PROCEDURES

3.1 Overview of Antidegradation Review Procedures

ADR reviews for Category 3 waters are conducted at two levels, which are referenced in R317-2-3 as Level I and Level II reviews. Figure 1 provides an overview of the overall ADR process.

Level I reviews are intended to ensure that proposed actions will not impair "existing uses". Level II ADRs assure that degradation is necessary and that the proposed activity is economically and socially important. Level II ADRs are required for any activity that is not temporary and limited in nature and is likely to result in degradation of water quality. The central tenet of these reviews is to ensure that the discharge is necessary, water quality standards will not be violated, and that alternatives to minimize degradation are considered.

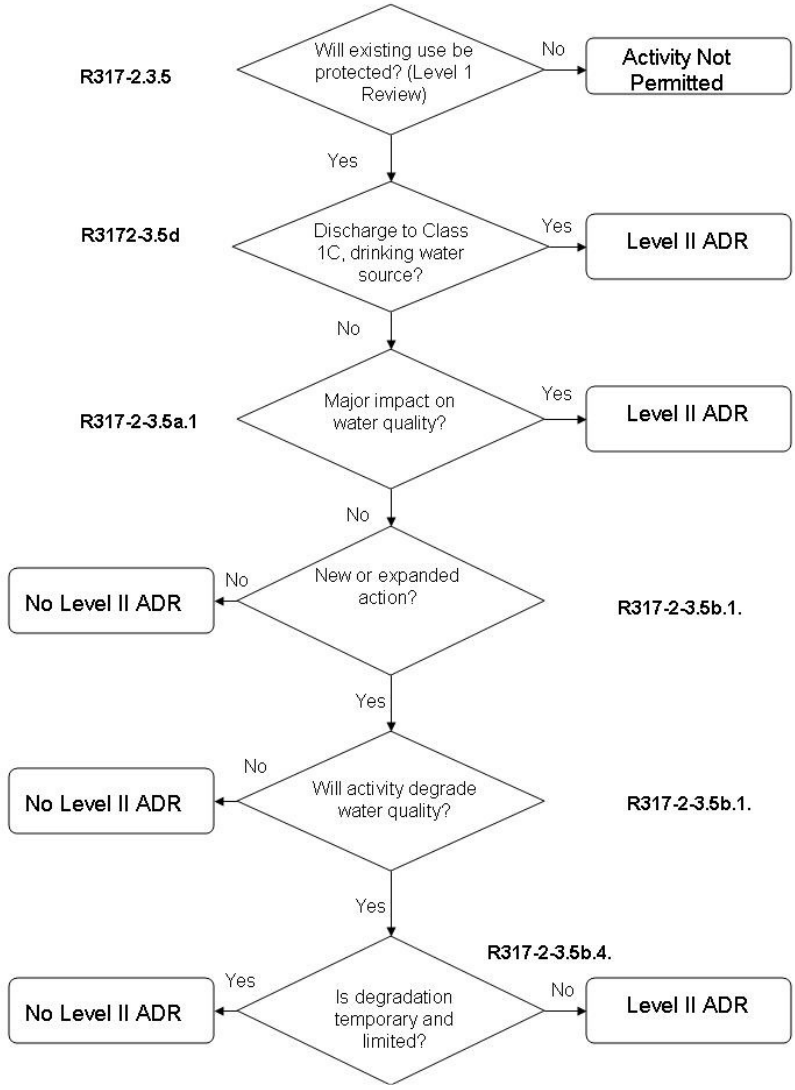
3.2 Level I Antidegradation Reviews

Level I reviews are intended to ensure that proposed actions will not impair "existing uses". Existing uses means those uses actually attained in a water body on or after November 28, 1975 (UAC R317-1), whether or not they are included in the water quality standards. 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" criteria would be those for Class 3a (cold water fish and organisms in their necessary food chain).

Neither State nor federal regulations permit impairment 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 currently designated uses (R317-2-13). DWQ is currently unaware of any discrepancies between the existing uses and the designated beneficial use classes in R317-2-6.

Water quality permits will not be issued if the proposed project will impair existing uses.

DWQ staff conduct Level I reviews as the first step in any permitting action by comparing the concentration predicted by the waste load analyses after mixing to the water criterion for the designated uses (R317-2-13) and more restrictive existing uses. The permit applicant is responsible for submitting adequate data for DWQ to conduct the Level I ADR. More information and permit applications are available at http://www.waterquality.utah.gov/UPDES/updes_f.htm .



197 •

198 Figure 1. The general process for determining whether a Level II ADR is required for DWQ
199 UPDES permit. Expanded actions are increases in loads or concentrations (Section 3.3.1).
200 Special considerations for other permits are discussed in Section 3.6.

201

3.3 Level II Antidegradation Reviews

A Level II ADR is required if the receiving water is designated with a 1C Drinking Water Source Use or the Executive Secretary determines that the discharge may have a major impact on water quality. Otherwise, all of the following conditions must apply before a Level II ADR is required for a proposed activity: 1) it must be a new or expanded action, 2) it must be an action that is regulated by the DWQ, and 3) the action must have a reasonable likelihood of degrading water quality. Additional details for each of the preceding requirements are provided below.

3.3.1 Activities that are Considered to be New or Expanded Actions

New actions refer to facilities that are being proposed for construction, or actions that are initiated for the first time. Expanded refers to a change in permitted or design concentration or flow and corresponding pollutant loading. Examples of expanded actions include:

- An increase in permitted concentrations;
- An increase in permitted flow;

New or expanded actions could include increases in discharge concentration resulting from the construction of new or expanded industrial or commercial facilities. In general, Level II ADRs will be conducted for POTWs based on the design basis of the facility, so subsequent Level II reviews would typically only occur during facility planning and design for construction. Periods when treatment systems are being designed, redesigned, or expanded are often ideal opportunities for implementing new technologies or evaluating long-term strategies for pollution control. The intent of this provision is that any POTW capacity expansion would qualify as an action potentially subject to a Level II ADR.

Comment [C1]: Proposing to delete because if flow or concentration increases, a review is not dependant on a new parameter being added to permit.

A permit authorizes a facility to discharge pollutants without explicit permit limits as long as those pollutants are constituents of wastestreams, operations, or processes that were clearly identified during the permit application process, regardless of whether or not they were specifically identified as present in the facility discharges (*see* memorandum from Robert Perciasepe, Assistant Administrator for Water, to Regional Administrators and Regional Counsels, July 1, 1994, at Pages 2-3). These pollutants are generally treated the same as pollutants with explicit permit limits with regards to ADRs, *i.e.,* if a renewing permit maintains the *status quo*, no additional ADR is required. However, the Executive Secretary of the Utah Water Quality Board can require a Level II ADR for any project, including renewing permits, if the proposed activity could potentially degrade water quality.

3.3.2 Actions Regulated by the DWQ

Activities subject to ADR requirement include all activities that require a permit or certification under the Clean Water Act. Special considerations for General Permits, §401 Certifications, and Stormwater Permits are provided below.

3.3.3 Activities that are not Considered to Result in Degradation or Additional Degradation

Level II ADRs are not required for projects that are not likely to result in degradation of the receiving water. Nor are Level II ADRs typically required for projects when the permit is being renewed with no increase in permitted flow or concentrations. Permits that are being renewed met the ADR requirements when the permit was originally issued and are not required to conduct additional ADRs in the absence of an increase in degradation. A regulated discharge activity may not be considered to result in degradation if:

- Water quality will not be further degraded by the proposed activity (R317-2-3.5.b(1)). Examples include1:
    a. The proposed concentration-based effluent limit is less than or equal to the ambient concentration in the receiving water during critical conditions; or
    b. A UPDES permit is being renewed and the proposed effluent concentration and loading limits are equal to or less than the concentration and loading limits in the previous permit; or
    c. A UPDES permit is being renewed and new effluent limits are to be added to the permit, but the new effluent limits are based on maintaining or improving upon effluent concentrations and loads that have been observed, including variability; or
- The activity will result in only temporary and limited degradation of water quality (see Section 3.3.4); or
- Additional treatment is added to an existing discharge and the facility retains their current permit limits and design capacity; or
- The activity is a thermal discharge that has been approved through a Clean Water Act §316(a) demonstration.

Comment [c2]: Please provide feedback on the value of this exception.

For some parameters, assimilative capacity is used when concentrations in the discharge are less than ambient concentrations. For instance, if the pH in a discharge is 6 and ambient pH is 7, assimilative capacity for pH will be used and pH may be a parameter of concern for a Level II ADR.

3.3.4 Activities that are Considered to be Temporary and Limited

This portion of the guidance is incomplete and the reader should contact DWQ for assistance in the interim to determine if the activity will be considered temporary and limited. A level II review may not be required if the Executive Secretary determines degradation from a discharge qualifies as temporary and limited following a review of

[1] At the time this guidance was prepared, UAC R317-2-3.5.b.1.(d) contains an additional example. This additional example was disapproved by USEPA during the standards approval process and DWQ will remedy this discrepancy in future rulemaking. If a permit was issued relying on the disapproved example, EPA could disapprove the permit. Therefore, the example in question is not included in the Implementation Guidance.

information provided by the applicant (R317-2-3.5b(3) and (4)). The information provided by applicant should include:

- length of time during which water quality will be lowered. As a general rule of thumb, temporary means days or months not years;
- percent change in ambient conditions;
- pollutants affected;
- likelihood for long-term water quality benefits to the segment (e.g., as may result from dredging of contaminated sediments);
- whether fish spawning, or survival and development of aquatic fauna will be affected (excluding fish removal efforts);
- degree to which achieving the applicable Water Quality Standards during the proposed activity may be at risk; and
- potential for any residual long-term influences on existing uses.

U.S. Fish and Wildlife Service and the Utah Division of Wildlife Resources should be consulted to determine if the timing of the project potentially will affect fish spawning. Clean Water Act Section 402 general permits, CWA Section 404 nationwide and general permits, or activities of short duration may be deemed to have temporary and limited effects on water quality. See Section 3.6 for additional detail.

3.4 Responsibilities for Completing Level II ADR Documentation

Early and frequent communication should occur between applicants and DWQ staff. The applicant is responsible for compiling the information required for the selection of Parameters of Concern (Section 4.0), Alternatives Analysis (Section 5.0), and the Statement of Environmental, Social, or Economic Development (Section 6.0) and selecting the preferred option. The applicant is also responsible for recommending the parameters of concern and the preferred alternative to DWQ. However, DWQ staff will assist where possible and provide timely comments to draft material to avoid delays in the permitting process. Much of this information is compiled for other purposes such as a Facility Plan. The suggested process for conducting Level II ADRs is shown in Figure 2.

3.5 Timing of Level II ADRs and Interim Submittals

ADR issues should be considered as early in the permitting or design process as possible. Properly timed Level II ADRs are the most efficient use of time and resources. For instance, many discharges already consider many of the requirements of Level II alternative analyses (Section 5.0) while planning for construction of new facilities or upgrades/expansion to existing facilities. Early planning also allows time to develop an optional work plan which clearly defines a scope of work for developing alternatives. The work plan minimizes miscommunication between DWQ staff and applicants and documents decision points critical to the ADR. The work plan may be put out for public comment, at the applicant's discretion, so that stakeholder concerns can be addressed

early in the process, which is much easier and less time consuming than addressing concerns at the end of the permitting process. Finally, early notification provides sufficient time for the DWQ and applicants to work together to ensure that sufficient data are available to generate defensible permit limits. The DWQ suggests that whenever possible applicants initiate ADR processes one year or longer prior to the desired date of a permit. The actual time required to complete the ADR is dependent on the complexity of the ADR.

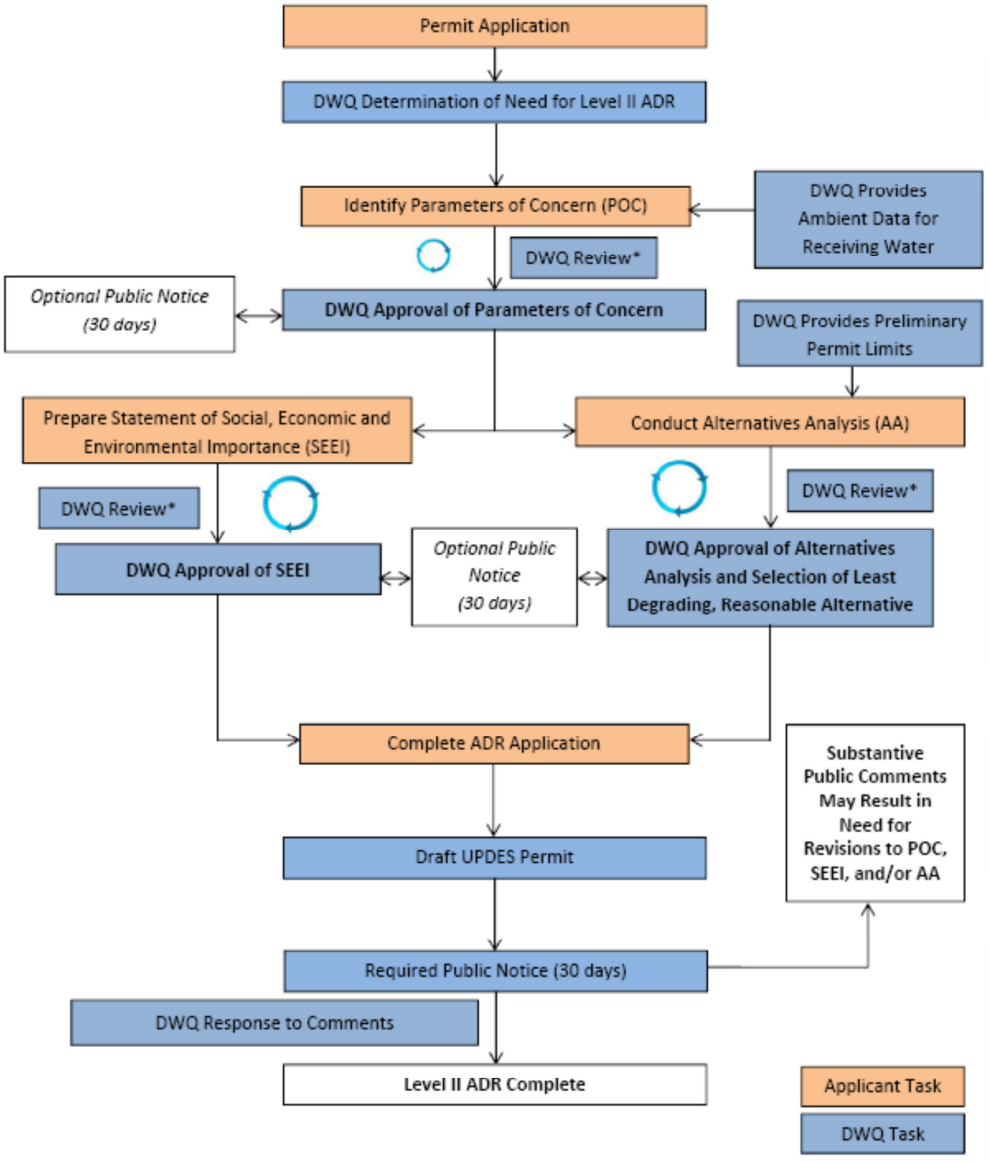


Figure 2. Process for completing a Level II Antidegradation Review (ADR).

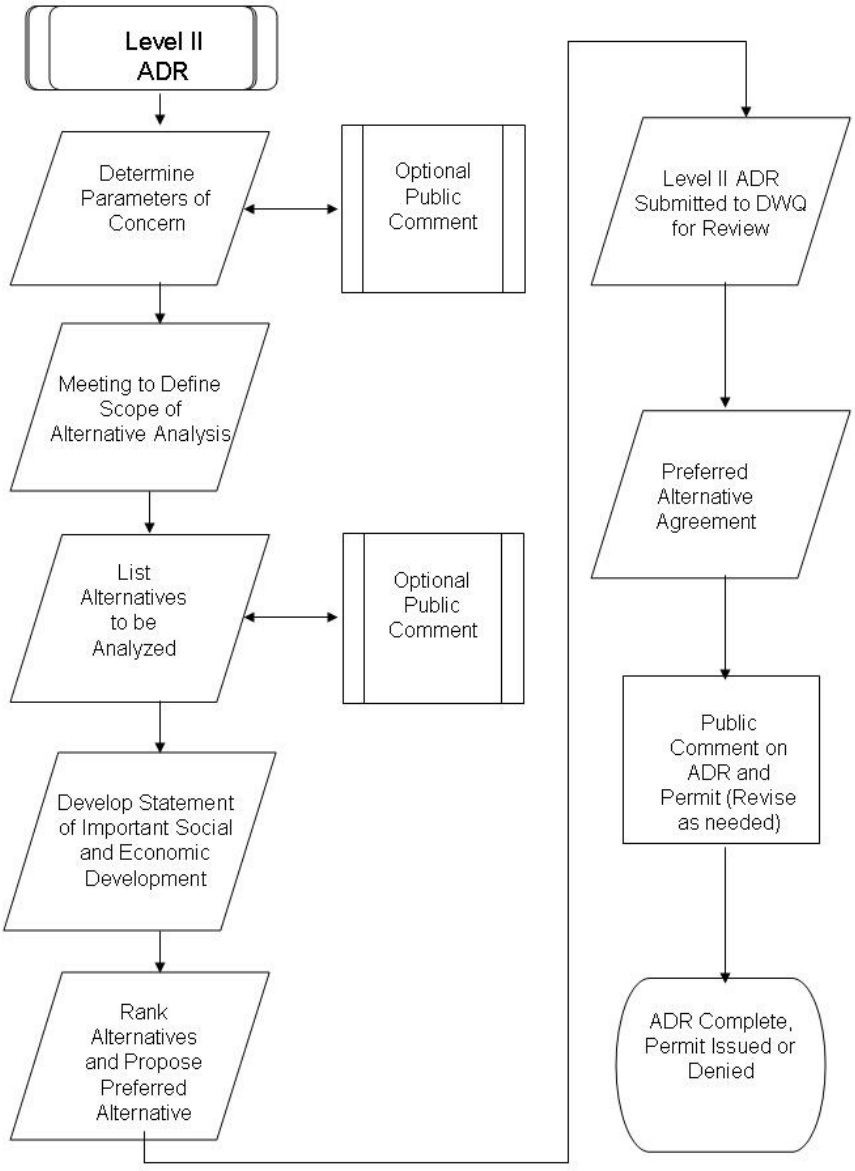


Figure 2. Suggested process for completing a Level II Antidegradation Review (ADR).

3.6 Public and Interagency Participation in ADRs

Public participation is ~~an important~~a required part of the ADR process. Public notice of antidegradation review findings, solicitations of public comment and maintenance of antidegradation review documents as part of the public record help ensure that interested parties can be engaged and involved throughout the review process. In addition, intergovernmental coordination and review is required prior to any action that allows degradation of water quality of a surface water.

3.6.1 Required Public Notification ~~Process~~

~~Ultimately, t~~The completed and signed ADR and associated documentation will be made available for public comment through the processes required for UPDES permits (Figure 2). Typically, the required public notice will occur with the draft UPDES permit just prior to issuance. For POTWs that obtain funding from DWQ for construction, the ADR will be public noticed with the Environmental Assessment document and determination.

DWQ is responsible for responding to comments from the mandatory public comment period. The applicant may be required to conduct additional evaluation if substantive comments are received.

3.6.2 Optional Public Notification

T~~However, t~~he applicant may opt for earlier reviews upon completion of a work plan that defines the parameters of concern and the alternatives to be considered for the Level II ADR alternatives analysis. The primary purpose of these optional early reviews is to identify stakeholder project concerns early in the permitting process when the comments can be addressed most efficiently. If an early review is conducted, concerned members of the public should use this work plan comment period to identify general concerns with the proposed activity, additional parameters of concern that warrant consideration, or additional treatment alternatives that should be considered. Figure 2 identifies decision points in the process when DWQ recommends that the applicant solicit optional public comments.

DWQ will facilitate any optional public comment opportunities by making the documents available on DWQ's website and the State's Public Notice website. ~~Responding to comments for any optional public comment opportunities is the responsibility of the applicant.~~ For the optional public comment periods, DWQ can be the recipient of the comments but the applicant has the responsibility of addressing the comments. A comment response document is not required, but DWQ recommends that the applicant respond to the comments in writing. If DWQ is not the recipient of the comments, the applicant should share the comments received with DWQ in a timely manner. DWQ responds to comments for the mandatory public comment period prior to issuing the permit.

3.6.~~2~~3 Intergovernmental Coordination and Review

Intergovernmental coordination is required prior to approving a regulated activity that would degrade a surface water. This coordination will be conducted at a level deemed appropriate by the Executive Secretary and will include any governmental agency requesting involvement with the ADR.

4.0 IDENTIFICATION OF THE PARAMETERS OF CONCERN

Parameters of concern are evaluated in the Level II ADR. Only parameters in the discharge that exceed, or potentially exceed, ambient concentrations in the receiving water should be considered in selecting the parameters of concern.

4.1 Determination of the Parameters of Concern

The initial starting point should be the priority pollutants (EPA Form 2c http://www.waterquality.utah.gov/UPDES/EPAForm2C.pdf), but other parameters may be added or removed depending on the nature of the proposed project and the characteristics of the receiving water. The following are considerations for selecting parameters of concern:

1. Are there any parameters in the effluent or expected to be in the effluent that exceed ambient concentrations in the receiving water?

   Ambient concentrations are determined by DWQ at critical conditions and provided to the applicant. Typically, ambient conditions are based onthe most recent 10 years of data. Critical condition for bioaccumulative toxics is considered the 80th percentile concentration and for conventional pollutants and non-bioaccumulative toxics the average concentration. The applicant may elect to collect water quality data to reduce uncertainty and assist DWQ in determining existing ambient concentrations.

   The effluent concentrations are the permitted effluent limits or discharge concentration of the baseline treatment alternative. For parameters that do not warrant permit effluent limits based on DWQ's reasonable potential analysis, the 80th percentile of the effluent concentrations should be used. If no discharge data is available for the baseline treatment alternative, the concentration should be estimated based on pilot studies, literature values, manufacturers guidelines and/or best professional judgement.

   In cases when the available data are limited, comparisons between effluent/permitted and ambient concentrations may be conducted using methods that minimize type II errors, *i.e.,* erroneously concluding that a pollutant will not degrade water quality.

2. Is the parameter already included in an existing permit?

3. Are parameter concentrations and/or loads exceeding or projected to exceed the current permitted load or design basis?

4. Are there any parameters that are considered to be important by DWQ or the general public? For instance, nutrients or bioaccumulative compounds may be of concern for some surface waters. For discharges to Class 1C drinking water sources, any substances potentially deleterious to human health may be considered.

5. Are there parameters in the effluent that are known to potentially degrade the existing beneficial uses of the receiving water?

6. Is the receiving water listed as impaired for any parameters? Parameters for which the receiving water is listed as impaired and have an ongoing or approved TMDL are not considered as part of the ADR and are addressed through the TMDL program.

The applicant, working with DWQ, should review all available data, from the discharge and the receiving water, and prepare a list of parameters which will be evaluated. DWQ will provide any available data from the receiving water to the applicant. The list of parameters of concern and supporting rationale should be submitted to DWQ. DWQ will review the list and provide preliminary approval pending public comment. Meetings between the applicant and DWQ are anticipated to be the most efficient way to resolve differences regarding parameters to be considered in the Level II ADR.

Once the list of parameters of concern has been agreed to between DWQ and the applicant, the list could be made available to the public by DWQ for an optional comment period (see Section 3.7.1). After a 30-day comment period, the list may be refined or approved. This list and associated rankings will form the basis for further activities of the ADR and will ultimately be used to select the least degrading project alternative (Section 5).

4.1 Ranking and Weighting the Parameters of Concern

If there is more than one parameter of concern, ~~T~~the parameters of concern ~~may~~ need to be ranked~~, or~~ and weighted, in order to determine overall water quality degradation of a given treatment alternative. Ranking and weighting factor considerations are provided below. The basis of the ranking and weighting should be developed in consultation with DWQ and be documented in the ADR application.

1. For toxic POCs, using the EPA's toxic weighting factors (TWF) to calculate toxic weighted pound equivalents (TWPE) for the POCs may be appropriate. EPA derives TWFs from chronic aquatic life criteria (or toxic effect levels) and human health criteria (or toxic effect levels) established for the consumption of fish in order to account for differences in toxicity across pollutants and to provide the means to compare mass loadings of different pollutants. Other factors may be more appropriate for ranking toxic POCs than TWF on a case-by-case basis depending on site specific considerations such as the available assimilative capacity for each toxicant or downstream impacts associated with a particular toxicant.

2. For non-toxic POCs, ranking and weighting factors should reflect the relative potential impact of the POC on the beneficial uses of the receiving water. As this determination involves application of best professional judgment, the weighting factors will need to be developed in consultation with DWQ.
3. In the case where both toxic and non-toxic POCs are identified, ranking and weighting will be based on best professional judgment based on site specific considerations.

An example of a table of ranked and weighted POCs is provided below.

Parameter	Rank	Weight
Total Phosphorus	1	40%
BOD	2	30%
TSS	3	20%
Total Copper	4	10%
		100%

Formatted Table

5.0 ALTERNATIVES ANALYSIS ~~OF~~ FOR LEVEL II ADR~~S~~

~~As the name suggests, t~~The alternatives analysis requires, to the extent practicable~~feasible~~, documentation of the costs and water quality benefits of alternative treatment options. The purpose of ~~an~~ the alternatives analysis is to evaluate whether there are any reasonable non-degrading or less degrading alternatives for the proposed activity.

5.1 Establishing the Baseline Treatment Alternative

The Alternatives Analysis requires selecting the baseline treatment alternative, which is defined as the treatment alternative that meets water quality standards and water quality based permit effluent limits established by the wasteload analysis or TMDL and any other categorical limits or secondary standards. The cost of the baseline treatment alternative must be estimated for the purpose of assessing the cost reasonableness of less degrading alternatives.

Formatted: Heading 2, None, Space Before: 0 pt, After: 0 pt, Don't keep with next

5.~~2~~1 Develop~~ment of~~ing a Scope of Work for ~~Level II ADR~~ Alternatives Analysis

The intent of this section is to ~~provide~~ outline a collaborative process to define the~~a~~ scope of work for a Level II review which allows for analysis and document preparation.

5.2.1 Collaborative Scoping

The first suggested step in the scoping process will be to convene a meeting between the applicant, project consultants, and DWQ to identify less degrading treatment alternatives to be considered and the level of detail appropriate for the alternatives analysis.

~~review t~~The requirements for the scope of the alternatives analysis are found in R317-2-3.5~~ as shown below~~:

> *"For proposed UPDES permitted discharges, the following list of alternatives should be considered, evaluated and implemented to the extent feasible:*
>
> *(a) innovative or alternative treatment options*
> *(b) more effective treatment options or higher treatment levels*
> *(c) connection to other wastewater treatment facilities*
> *(d) process changes or product or raw material substitution*
> *(e) seasonal or controlled discharge options to minimize discharging during critical water quality periods*
> *(f) pollutant trading*
> *(g) water conservation*
> *(h) water recycle and reuse*
> *(i) alternative discharge locations or alternative receiving waters*
> *(j) land application*
> *(k) total containment*

(l) improved operation and maintenance of existing treatment systems
(m) other appropriate alternatives…

~~*An option more costly than the cheapest alternative may have to be implemented if a substantial benefit to the stream can be realized. Alternatives would generally be considered feasible where costs are no more than 20% higher than the cost of the discharging alternative, and (for POTWs) where the projected per connection service fees are not greater than 1.4% of MAGI (median adjusted gross household income), the current affordability criterion now being used by the Water Quality Board in the wastewater revolving loan program. Alternatives within these cost ranges should be carefully considered by the discharger. Where State financing is appropriate, a financial assistance package may be influenced by this evaluation, i.e., a less polluting alternative may receive a more favorable funding arrangement in order to make it a more financially attractive alternative."*~~

~~5.2 Establishing the Baseline Treatment Alternative~~

~~The Alternatives Analysis requires selecting the baseline treatment alternative, which is defined as the treatment alternative that meets water quality standards and water quality based permit effluent limits established by the wasteload analysis. The cost of the baseline treatment alternative must be estimated for the purpose of assessing the cost reasonableness of less degrading alternatives.~~

5.2.2~~3~~ General Considerations for Selecting Treatment Alternatives for ~~Consideration~~Evaluation

Formatted: Heading 3, Indent: Left: 0", Hanging: 0.5"

The number of alternatives to be considered and the extent of planning details for alternative analyses may depend on the nature of the facility, size of the proposed discharge, the magnitude of degradation, and the characteristics of the receiving water. This section outlines screening procedures for determining reasonable alternatives that are appropriately scaled to the proposed project. The alternatives specified here are guidelines and may be modified from public comments or at the Executive Secretary's discretion.

~~For many projects, the Facility Plan documents the selection of the preferred treatment option and may be sufficient to meet the alternatives analysis requirement of the ADR depending on the specific parameters of concern.~~ The following guidelines should be considered when defining the scope of work for the alternatives analysis:

1. The feasibility of all alternatives should be examined before inclusion in the options to be reviewed in more detail. If an option is initially determined not to be feasible, it ~~should~~ does not need to be considered further. ~~As an example, before pollutant trading is considered, willing partners in such trading should be identified or the potential for trading should exist.~~

2. Innovative or alternative treatment options should be limited to proven or successfully piloted processes.

3. The treatment options subject to review should focus on those which have the greatest potential for water quality improvement for the parameters of concern. Flexibility to modify the treatment process to address potential future changes in waste streams or treatment requirements should also be considered.

4. When an instream need for the discharge water is deemed by the Executive Secretary to be of significant importance to the beneficial use (i.e., if removal of the discharge would result in a detrimental loss of stream flow), evaluation of reuse, land disposal or total containment may be unnecessary.

5. Alternatives may be ranked in order of potential for parameter reduction. Preference should be given to processes that have the greatest overall effect on water quality. Typically, these highest ranked processes will have the greatest reduction in pollutant load and affect the greatest number of parameters of concern.

6. Before improved operations and maintenance are considered as a way to prevent degradation, specific operation or maintenance activities should be identified. If Executive Secretary and the applicant agree, a third party may be used to assess potential for operations and maintenance improvements.

~~*5.4 Special Project-Specific Scoping Considerations*~~

Formatted: Heading 3

For many projects, the Facility Plan documents the selection of the preferred treatment option and may be sufficient to meet the alternatives analysis requirement of the ADR depending on the specific parameters of concern.

~~The number of alternatives to be considered and the extent of planning details for alternative analyses may depend on the nature of the facility, size of the proposed discharge, the magnitude of degradation, and the characteristics of the receiving water. This section outlines screening procedures for determining reasonable alternatives that are appropriately scaled to the proposed project. The alternatives specified here are guidelines and may be modified from public comments or at the Executive Secretary's discretion.~~

All discharges requiring a permit must be provided with a level of treatment equal to or exceeding the requirements in R317-3 for technology based effluent limitations. As provided in R317-3~~2~~, minimum technology based treatment requirements for POTWs consist of secondary treatment and applicable limitations and standards. The technology based review for POTWs in the Clean Water State Revolving Fund (SRF) process is accomplished through the Facility~~'s~~ Plan and Environmental Assessment. The requirements of the process include an investigation of project need, alternatives, effluent limitations, future conditions, and an Environmental Assessment. The technology based review for POTWs subject to the SRF process generally is satisfied on

completion of the Facility Plan, Environmental Assessment, public participation, and DWQ approval. ~~-~~The technology based review for POTWs that are not in the SRF process is conducted through the UPDES permitting process.

The technology based review for non-POTW facilities likewise is conducted during the UPDES permitting and technology based requirements are applied when the permit is drafted. DWQ has adopted categorical standards for discharges from various types of industries. Existing industrial discharges are required to achieve the best conventional pollutant control technology for conventional pollutants and the best available technology for nonconventional and toxic pollutants. Certain new industrial discharges are required to comply with new source performance standards based on the best available demonstrated control technology. Effluent limitations for parameters or industries not covered by the categorical standards and limitations are established on a case-by-case basis, based on best professional judgment. The technology review is complete when the Executive Secretary approves the draft permit.

If a Level II review was conducted for the facility for a previous renewal and a Level II review is required for permit reissuance, and if the previous Level II review was based on the design basis of the facility, the applicant should include a written statement certifying that: 1) all alternative treatment processes remain applicable and that the applicant is not aware of alternatives that were not previously considered, 2) that reasonable alternative operation and maintenance procedures are not available that would reduce degradation of the receiving water if implemented.

5.2.3~~5~~ Finalizing the Alternatives ~~Work Plan~~Analysis Scope of Work

Formatted: Heading 3

Once a scope of work is agreed to between DWQ and the applicant, the applicant can proceed with completing the alternatives analysis.

The applicant may wish to public notice the scope of work for the alternatives analysis. In this case, the scope of work should be documented in a work plan. The work plan can be made available to the public and can be published on the State Public Notice website at the applicant's discretion. ~~The scope of work may be modified in response to public comments, at the applicant's discretion.~~ This public comment period may be held concurrent with the comment period for the parameters of concern, both of which are ~~at the applicant's discretion~~optional.

~~For the optional public comment periods, DWQ can be the recipient of the comments but the applicant has the responsibility of addressing the comments. A comment response document is not required, but DWQ recommends that the applicant respond to the comments in writing. If DWQ is not the recipient of the comments, the applicant should share the comments received with DWQ in a timely manner.~~

Additional alternatives may be identified during the public comment period or during evaluation of the alternatives. These possible changes to the scope ~~to~~ of the alternatives analyses should be reviewed by the Applicant and DWQ for inclusion in the work plan, as needed.

5.~~3~~7 Procedures for ~~Evaluating~~ Selecting the Preferred Alternative

Formatted: Heading 3

~~*5.6 Materials to be Submitted with Alternative Analyses*~~

~~For the DWQ to fairly evaluate alternative treatments, the following information should be provided 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 constituents, and a description of the discharge location.~~

~~3. A description of the reliability of the system.~~

~~4. A ranking of each alternative in terms of its relative ability to minimize degradation to the receiving water (see Section 5.6).~~

~~5. A ranking of each alternative as to how adaptable it would be to potentially changing regulatory requirements.~~

~~**5.7 Procedures for Evaluating the Preferred Alternative**~~

5.~~3~~7.~~1~~1 ~~*Applicant*~~ *Ranking of Treatment Alternatives by Degradation*

The alternatives should be ranked from the least-degrading to the most-degrading alternative, as determined from the ~~established and~~ ranked and weighted pollutants of concern and the treatment effectiveness of each alternative. Creating a ranked hierarchy of alternatives helps to simplify the applicant's selection of ~~a "preferred"~~the least degrading, reasonable alternative. The applicant will need to estimate the mass of each parameter removed by each treatment alternative based on the best available information.~~By ranking alternatives in this way, the applicant can avoid having to perform a detailed economic analysis on the universe of available alternatives, instead focusing efforts on only the "top" or least-degrading alternative. In a following step the applicant either selects the "top" alternative as the "preferred" alternative or conducts a more detailed review to justify eliminating that alternative from further consideration (e.g., the option would be too costly).~~

~~The applicant should identify situations in which different alternatives are more or less degrading for individual pollutants. In these cases, the applicant should identify and document its rationale regarding the alternative that – on the whole – is least-degrading. For example, alternative A might be least-degrading for TDS, but result in a more degradation than alternative B for selenium. If there were a downstream impairment for TDS, that might influence a decision that the overall least-degrading alternative in our example was alternative A. On the other hand, if there was no impairment downstream and the assimilative capacity reduction for TDS was 10 percent~~

~~and the selenium reduction in assimilative capacity was 75 percent, the preferred alternative might be alternative B.~~

For more complex evaluations of alternatives, the ranking of alternatives ~~c~~should be based on the development of a matrix giving the weighting of each parameter of concern ~~against each other~~ and the ~~rating of benefit the alternative has for the individual parameter of concern~~mass of pollutant removed by each alternative. ~~The rankings and a description of the rationale for parameter weightings and overall rankings should be compiled and submitted to the DWQ.~~ The following is an example rating matrix that could be used ~~in this process~~to rank alternatives from least-degrading to more degrading:

Parameters of Concern Removed (Pounds/Year)								
Alternatives	P-1	Weight	P-2	Weight	P-3	Weight	Total Weighted	Ranking
Alternative 4	15	50%	15	30%	20	20%	16.0	1
Alternative 5	8	50%	30	30%	10	20%	15.0	2
Alternative 2	15	50%	10	30%	20	20%	14.5	3
Alternative 1	10	50%	20	30%	15	20%	14.0	4
Alternative 3	20	50%	5	30%	10	20%	13.5	5
Baseline	10	50%	8	30%	15	20%	10.4	6

~~Also, below is an example scale for determining the benefit of each alternative for the given parameter of concern.~~

~~Ratings:~~	~~-~~
~~Minor Improvement~~	~~1~~
~~Modest Improvement~~	~~2~~
~~Reasonable Improvement~~	~~3~~
~~Good Improvement~~	~~4~~
~~Excellent Improvement~~	~~5~~

5.3.2~~7.2~~ ~~Review~~ Evaluation ~~and Selection of the Preferred~~of Feasibility of Alternatives

After ranking the alternatives by degradation, the applicant will need to evaluate whether it would be reasonable to select a less degrading alternative. The factors that determine if an alternative is reasonable are cost effectiveness and affordability. Cost effectiveness and affordability are addressed in the rule (R317-2-3.5.c), which states:

"An option more costly than the cheapest alternative may have to be implemented if a substantial benefit to the stream can be realized. Alternatives would generally be considered feasible where costs are no more than 20% higher than the cost of the discharging alternative, and (for POTWs) where the projected per connection service fees are not greater than 1.4% of MAGI (median adjusted gross household income), the current affordability criterion now being used by the Water Quality Board in the wastewater revolving loan program. Alternatives within these cost ranges should be carefully considered by the discharger. Where State financing is appropriate, a financial assistance package may be influenced by this evaluation, i.e., a less polluting alternative may receive a more favorable funding arrangement in order to make it a more financially attractive alternative."

Additional guidance on how to evaluate cost effectiveness and affordability are provided in the sections below.

5.3.2.1 Evaluation of Cost Effectiveness

An alternative must be cost effective to be considered reasonable. Cost effectiveness should be evaluated in two ways: overall cost increase and unit cost of pollutant removal in comparison to the baseline treatment alternative.

The total cost increase of each alternative needs to be estimated. The cost estimate is typically based on a concept level design with limited engineering; sufficient detail in the cost estimate should be provided so that the basis can be verified. The estimate should be the Net Present Value (NPV) of the 20-year life-cycle cost including land acquisition, capital cost, and operation and maintenance (O&M) costs. For simplicity, it is assumed that the discount rate equals the inflation rate in order to estimate operation and maintenance costs in today's dollars, i.e. NPV of O&M equals 20 times O&M annual cost.

The unit cost of pollutant removal is calculated using the total cost of the alternative and the equivalent pollutant mass removed that was previously determined. An example table is provided below:

Alternative	Total Cost	Total Cost Increase	Pollutant Removal (lb)	Unit Cost ($/lb/yr)	Unit Cost Increase	Cost Effective
Alt 1	$1,100	10%	14	$78.57	-18.3%	Yes
Alt 2	$1,400	40%	14.5	$96.55	0.4%	No
Alt 3	$1,300	30%	13.5	$96.30	0.1%	No
Alt 4	$2,000	100%	16	$125.00	30.0%	No
Alt 5	$1,500	50%	15	$100.00	4.0%	No
Baseline	$1,000		10.4	$96.15		

5.3.2.2 Evaluation of Affordability

Although a 20% total cost increase is generally considered the threshold for both cost effectiveness and affordability, less degrading alternatives that are determined to be cost effective may be evaluated for affordability.

For public sector discharges, alternatives where the projected per connection service fees are not greater than 1.4% of the median adjusted gross household income are generally considered affordable. This is the affordability criterion currently being used by the Water Quality Board for the wastewater revolving loan program. Secondary socioeconomic factors that can be considered to evaluate affordability for public-sector discharges include debt indicators (such as bond rating and overall net debt), socioeconomic indicators (such as unemployment rate), and financial management indicators (such as property tax revenue and property tax collection rate).

For private sector discharges, the determination of the affordability of less degrading alternatives will be based on an evaluation of the effect on profitability, liquidity, solvency and leverage of the entity in comparison to industry benchmarks. Worksheets to assist with the calculation of these economic indicators are available by request.

~~**The applicant will recommend the preferred alternative to DWQ. DWQ will review the ratings developed by the applicant or their consultant. The Alternatives should be listed from the one showing the most improvement to the one showing the least improvement for water quality from the scores in the matrix. The costs for each alternative should be listed with its ranking and the rankings should then be evaluated.**~~

5.3.2.3 Other Considerations

In ~~determining the selected~~selecting the preferred alternative, the following additional items should be considered and evaluated:

~~1. Alternative Operations and Maintenance (O&M) scenarios should be considered in the ranking process. An Alternative O&M scenario will generally be considered feasible if the annual cost increase is no more than 10% of the annual operating cost or 20% of the 20-year present worth, whichever is less.~~

~~2. In considering alternatives, the review should consider the current zoning requirement surrounding the facility being evaluated.~~

1. The review of the selected alternative should also include factors such as reliability, maintainability, operability, sustainability, and adaptability to potentially changing discharge requirements.

2. When different alternatives have similar potential to reduce degradation of water quality, other ancillary water quality benefits should be considered such as maintenance or enhancement of instream flow or habitat.

~~3.~~ Optional mitigation projects may also be included with any selected alternative when it is deemed to be cost effective and environmentally beneficial. If the

discharger includes a mitigation project with an alternative, consideration should be given to the expected net benefits to water quality of both the discharge and mitigations when ranking project alternatives.

~~4.~~3. ~~The review of the selected alternative should also include factors such as reliability, maintainability, operability, sustainability, and adaptability to potentially changing discharge requirements.~~

~~5.~~4. Also included in the review should be consideration of the sensitivity of receiving water and its potential for overall improvement.

5.3.3 Selecting the Preferred Alternative

Based on all of the factors considered, the applicant will recommend the preferred alternative to DWQ for review and approval.

For the DWQ to fairly evaluate treatment alternatives, the following information should be provided for each alternative process:

1. A technical description of the treatment process.
2. Rank alternatives from least degrading to most degrading based on the mass of pollutants removed.
3. Evaluation of cost effectiveness, including estimation of total cost and unit cost for pollutant removal.
4. Evaluation of affordability, if necessary.
5. Evaluation of the reliability, maintainability, operability, sustainability, and adaptability of each alternative.

5.4 ~~Opportunity for Public Comment and Review~~Optional Public Notice of the ~~Preferred~~ Alternatives Analysis

Once the preferred alternative is selected, an optional public comment period may be conducted ~~by being posted on the DWQ website and being noticed in the State of Utah Public Notice Website~~ (see Section 3.~~7.1~~6.2). If no optional reviews are conducted, the public has an opportunity to comment during the mandatory UPDES public comment period.

6.0 IMPLEMENTATION PROCEDURES FOR DEVELOPMENT OF A STATEMENT OF SOCIAL, ENVIRONMENTAL, AND ECONOMIC IMPORTANCE (SEEI)

Beyond the alternatives analysis, the second key component of a Level II ADR is a Statement of Social, Environmental, and Economic Importance (SEEI). The SEEI 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). This portion of the ADR provides the project proponent the opportunity to document that the overall benefits of the project outweigh any negative consequences to water quality. As a result, the project proponent is best served by making this portion of the ADR as thorough as possible. At a minimum this portion of the review should contain the following:

1. A description of the communities directly affected by the proposed project, including factors such as: rate of employment, personal or household income, poverty level, population trends, increasing production, community tax base, etc.

2. 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.

3. An estimate of any social and economic costs of the project, including any impacts on commercial or recreational uses.

4. 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.

5. Documentation of local government support.

As with the Alternatives Analysis portion of the ADR, the size and scope of the SEEI should be commensurate with the size of the proposed project. The applicant may reference existing documents that address alternatives such as Environmental Impact Statements. Also, it is in the best interest of the project proponent to make the SEEI as thorough as possible if the project is likely to be controversial.

6.1 Regulatory Framework

The need for SEEIs comes from 40 CFR 131.12(a)(2), which states, "Where the quality of waters exceeds levels necessary to support fish, shellfish, and wild life and recreation in and on the water, the quality shall be maintained and protected unless the State find, …, that allowing lower water quality is necessary to accommodate social or economic development in the area in which the waters are located…" (emphasis added).

Accordingly, UAC R317-2-3.5(c)4 specifically calls for SEEI demonstrations:

> *"Although it is recognized that any activity resulting in a discharge to surface waters will have positive and negative aspects, information must be submitted by the applicant that any discharge or increased discharge will be of economic or social importance in the area.*
>
> *The factors addressed in such a demonstration may include, but are not limited to, the following:*
>
> *(a) employment (i.e., increasing, maintaining, or avoiding a reduction in employment);*
>
> *(b) increased production;*
>
> *(c) improved community tax base;*
>
> *(d) housing;*
>
> *(e) correction of an environmental or public health problem; and*
>
> *(f) other information that may be necessary to determine the social and economic importance of the proposed surface water discharge."*

6.2 Important Considerations in developing SEEIs

The DWQ anticipates that the specific information provided in the SEEI will vary depending on the nature of the project and the community or communities that will be affected by the proposed activity. Nonetheless, this section provides guidance for some of the social and economic considerations that the applicant may want to include with the SEEI portion of the Level II ADR. Many of the decisions relating to the social and economic considerations are local in nature and the local government agencies should be consulted to determine directions that are appropriate.

The SEEI is about demonstrating that the degradation will support important social and economic development in the local area. The SEEI is not about the economic benefits to an individual or corporation. Instead, the SEEI is intended to support an informed public discussion and decision about the pros and cons of allowing water quality degradation. If the lowering of water quality resulting from the preferred alternative is not in the overriding public interest, then a less-degrading alternative must be selected or the permit may be denied. If the lowering of water quality is found to be in the overriding public interest, this finding is documented and submitted for public comment along with the draft permit incorporating the preferred alternative.

6.2.1 Effects on Public Need/Social Services

Identify any public services, including social services that will be provided to or required of the communities in the affected area as a result of the proposed project. Explain any benefits that will be provided to enhance health/nursing care, police/fire protection, infrastructure, housing, public education, etc.

6.2.2 Effects on Public Health/Safety

Identify any health and safety services that will be provided to or required of the communities in the affected area as a result of the proposed project. Explain any benefits that will be provided to enhance food/drinking water quality, control disease vectors, or to improve air quality, industrial hygiene, occupational health or public safety. One example is the construction of a central treatment plant to correct problems with failing septic systems. Another example might be removal or additions of toxic or bacteriological pollutants, which reduce life expectancy and increased illness rates.

6.2.3. Effect on Quality of Life

Describe the impacts of the proposed project on the quality of life for residents of the affected area with respect to educational, cultural and recreational opportunities, daily life experience (dust, noise, traffic, etc.) and aesthetics (viewscape).

6.2.4. Effect on Employment

Explain the impacts of the proposed project on employment practices in the affected area. Identify the number and type of jobs projected to be gained or lost as a result of

the proposed project. Will the proposed project improve employment or mean household income in the affected area?

6.2.5 Effect on Tax Revenues

Explain the impact of the proposed project on tax revenues and local or county government expenditures in the affected area. Will the project change property values or the tax status of properties? If yes, explain whether that change is a beneficial or detrimental to residents/businesses in the affected area.

6.2.6 Effect on Tourism

Discuss the effects the proposed project may have on the economy of the affected area by creating new or enhancing existing tourist attractions. Conversely, describe any impacts resulting from the elimination of or reduction in existing attractions.

6.2.7 Preservation of assimilative capacity

Review the pros and cons of preserving assimilative capacity for future industry and development. Applicants are encouraged to talk with local stakeholders such as planning, zoning, and economic development officials about their development plans, and should summarize the communities' position on utilizing assimilative capacity for the proposed project versus future plans or needs.

6.2.8 Other Factors

Provide any other information that would explain why it is necessary to lower water quality to accommodate this proposed project. This category should be used to address any social or economic factors not considered above.

6.3 Review and Approval of SEEIs

Important social, economic or environmental activity refers to an activity that is in the overriding public interest. The Executive Secretary will generally consider public projects to be necessary to accommodate social and economic growth unless compelling information exists to the contrary. DWQ may consult with local and State planning and zoning agencies to determine whether or not the project is consistent with the long-term plans of affected communities. Information obtained from local planning groups may be compiled with other material obtained through the ADR process. The Executive Secretary will make a determination. Appeals to the Executive Secretary's decision may be made consistent with the procedures for administrative appeals.

6.4 Public Comment Procedures

At a minimum the SEEI material will be submitted for public comment, along with all other Level II ADR materials, through the required public comment processes used for permit applications and renewals. However, as described in Section 3.5, the applicant may include a cursory, or preliminary, SEEI with the work plan, because much of the

900 information described in SEEI reports help explain the greater socioeconomic context
901 within which the project takes place.

902

7.0 SPECIAL PERMIT CONSIDERATIONS

Most of the implementation procedures discussed in this document are clearly applicable to UPDES permitting procedures. However, the DWQ also issues other types of permits, which have special ADR considerations. This portion of the guidance is incomplete and the reader should contact DWQ for assistance regarding these permits in the interim.

7.1 Individual Stormwater Permits

This portion of the guidance is incomplete and the reader should contact DWQ for assistance in the interim. Stormwater permits are subject to an ADR unless the impact to water quality is temporary and limited.

7.2 General Permits

A number of discharges to surface waters are authorized under general UPDES permits issued by the DWQ:

- Animal Feeding Operations (AFOs),
- Construction dewatering or hydrostatic testing,
- Municipal stormwater,
- Industrial stormwater,
- Drinking water treatment plants,
- Private on-site wastewater treatment systems,
- Construction sites one acre or larger,
- Coal mining operations and,
- Discharge of treated groundwater.

The Executive Secretary will determine the need for a Level II ADR for General Permits on a case-by-case basis until this implementation guidance is updated to fully address General Permits. New and reissued General Permits may require evaluation of the potential for degradation as a result of the permitted discharges if the discharges are not temporary and limited. DWQ anticipates expanding and revising the ADR guidance for general permits in future iterations.

7.3 §401 Certifications

Section 404 of the Clean Water Act regulates the placement of dredged or fill material into the "waters of the United States," including small streams and wetlands adjacent or connected to "waters of the United States." The U.S. Army Corps of Engineers (USACE) administers the §404 permit program dealing with these activities (e.g., wetland fills, in-stream sand/gravel work, etc.) in cooperation with the EPA and in consultation with other public agencies.

Section 73-3-29 of the Utah Code requires any person, governmental agency, or other organization wishing to alter the bed or banks of a natural stream to obtain written

authorization from the State Engineer prior to beginning work. The Stream Alteration Program was implemented in 1972 in order to protect the natural resource value of the state's streams and protect the water rights and recreational opportunities associated with them. In 1988, the U.S. Army Corps of Engineers issued Regional General Permit 40 (GP-40) which allows an applicant to obtain both state approval and authorization under Section 404 of the Clean Water Act though a single application process. Although not all stream alteration activities qualify for approval under GP-40, many minimal impact projects can be approved under this joint permit agreement.

These activities are subject to ADR requirements (R317-2-3.5.a.1.). This portion of the guidance is incomplete and the reader should contact DWQ for assistance regarding ADRs for these permits in the interim.

8.0 ISSUES FOR FUTURE ITERATIONS OF THE IMPLEMENTATION GUIDANCE

As discussed in Section 1.0, the initial versions of this guidance focus on UPDES permits with the exception of general permits. For the topics listed below in Section 7.1, the guidance is incomplete. The existing guidance provided for these topics represents DWQ's current thinking but is incomplete and should be applied with caution. For activities requiring ADRs, but not yet completely addressed in guidance, the permittee should consult DWQ for assistance. These ADRs will be conducted on a case-by-case basis consistent with the requirements of R317-2-3.

8.1 Planned Future Additions to the Guidance

1. Glossary. A glossary of that defines important terms used in the guidance will be added to future iterations.
2. Acronym Key. A key that identifies the acronyms used in the guidance will be added to future iterations.
3. References. References will be added to future iterations of the guidance.
4. Temporary and Limited. Guidance on how to determine if a discharge qualifies as temporary and limited will be added to future iterations.
5. General permits and 401 Certifications. General Permits that are subject to ADR requirements include:
   Animal Feeding Operations (AFOs),
   Construction dewatering or hydrostatic testing,
   Municipal stormwater,
   Industrial stormwater,
   Drinking water treatment plants, Private on-site wastewater treatment systems
   Stream alteration permits,
   Construction sites one acre or larger,
   Coal mining operations and,
   Discharge of treated groundwater.