

Comparison of Issue Questions and Workgroup Recommendations

Issues #1-7

Note: Need to maintain consistency with Workgroup Report; Highlights indicate questions not answered or non-specific recommendations.

Issue Questions	Draft Workgroup Recommendations
Issue #1: What triggers an antidegradation review?	
<ul style="list-style-type: none"> • Which waters does antidegradation review apply to (i.e., surface waters, groundwaters, State waters, or federal waters)? • Should DEC consider groundwater in its antidegradation implementation methods or in a separate, future rulemaking tailored to groundwater? • What is the practical effect of groundwater not being protected for “fishable/swimmable” uses? 	<p>1. Antidegradation requirements and reviews should be restricted to waters of the U.S. in Alaska, as defined under the CWA. As needed, DEC should modify the state’s antidegradation policy to make the policy consistent with this recommendation. A minority of the workgroup feel that antidegradation analyses should apply to groundwater, which may require different implementation methods since groundwater is not protected for “fishable/swimmable” uses. DEC could consider groundwater in its implementation methods or in a separate, future rulemaking tailored to groundwater.</p>
<ul style="list-style-type: none"> • What CWA decisions does antidegradation apply to, e.g. 404 wetland permits, impaired water listings and total maximum daily loads (TMDLs)? • Should antidegradation reviews be conducted for non CWA activities? 	<p>2. Only activities regulated by DEC under CWA Sections 401, 402, and 404 should be subject to antidegradation requirements and reviews. This includes issuance of and coverage under APDES general and individual permits; the placement of dredged or fill material into waters of the U.S. under a US Army Corps of Engineers permit, which is usually overseen by DEC through the Section 401 water quality certification process; and other federally permitted activities subject to the Section 401 water quality certification process (e.g., FERC dam licensing).</p>
<ul style="list-style-type: none"> • Is a review needed for only new and increased discharge permits and certifications? Should the increase be permitted amount or discharged amount? • [Note: Confirm that no <i>de minimis</i> threshold 	<p>3. Tier 2 antidegradation requirements should apply only to new or expanded discharges. Tier 2 antidegradation requirements should not apply to re-issued permits that already have had an antidegradation review or have not changed in terms of flow, pollutant load, or water quality characteristics since the last</p>

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<p>would be used for triggering antidegradation review. See recommendation for Issue #7.]</p> <ul style="list-style-type: none"> • Should reissued permits require antidegradation analysis if the analysis was not performed previously and if there is no change to the discharge? • Is a review needed for reissued permits that have not had an antidegradation review and have not changed in flow, etc.? • Is a review needed if the discharge was not previously permitted? Does the need for a review depend on whether the discharge should have been previously permitted? 	<p>permit issuance.</p> <ol style="list-style-type: none"> a. Expanded discharges should be defined as those discharges where past flow patterns are altered and/or pollutant concentrations or total loads are increased beyond previously permitted amounts. Discharges are not automatically assumed to require an antidegradation review when a facility (e.g., treatment plant, not the discharge) is expanded. Previously permitted amounts are part of the baseline. b. If there was no previous permit for an existing discharge, then an antidegradation review is required including the following cases: <ol style="list-style-type: none"> i. If no permit was previously required for an existing discharge, ii. If a permit application was submitted but no permit was issued, or iii. If a permit was required, but an application was not submitted. <p>Furthermore, these previous non-permitted amounts would not be part of the baseline. Use of assimilative capacity would be prioritized based on application date.</p> c. Reissued permits that have not had an antidegradation review and have not changed in flow should be grandfathered because they are now part of baseline water quality. However, DEC should be able to require an alternatives analysis and require process, treatment, or other upgrades when it recognizes that there can be better performance at a reasonable cost. <p>4. Tier 1 antidegradation reviews and Tier 2 antidegradation reviews, if applicable, and public notice for individual APDES permits, individual water quality certifications, or individual CWA 404 permits should be conducted at the time of permit application review and permit drafting.</p>

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<ul style="list-style-type: none"> How does antidegradation apply to 404 wetland permit certifications? 	<p>5. DEC should use the US Army Corps of Engineers (USACE) 404(b)(1) analysis as a major reference while conducting its own independent antidegradation analysis for projects permitted under section 404 of the Clean Water Act (CWA). Other analyses related to economic or social development related to the project can supplement this information. (Note: The area under review is outside the fill area. No antidegradation analysis is necessary or should be required for the fill area.) All 401 certifications require antidegradation. No DEC antidegradation analysis is necessary or should be required for the fill area because the 404(b)(1) analysis satisfies the requirement for the fill area. (Note: Eric, Cam, and Amy will research whether the 404(b)(1) is relevant outside the fill area and whether construction BMPs could be referenced to meet the antideg requirement.)</p>
<ul style="list-style-type: none"> How does an antidegradation review apply to general permits? Should DEC reserve the right to require an antidegradation analysis at any time regardless of what is in the permit (e.g., if monitoring indicates impairment)? 	<p>6. For general permits, the antidegradation review and public notice procedures should be completed at the time the general permit is developed and issued or, as applicable, during reissuance.</p> <p>7. For general permits, DEC should incorporate into permits the circumstances under which DEC would do individual Tier 2 antidegradation analyses, to be conducted upon submittal of a Notice of Intent to Operate (NOI), for a given application for coverage under the general permit. Specifically, DEC should identify assumptions and conditions in the general permit and/or factsheet that describe when a Tier 2 antidegradation analysis at the NOI stage will be required and when it will not. This would make the antidegradation review process less ambiguous and more transparent to permittees and the public.</p> <ol style="list-style-type: none"> For example, a decision flow chart could be developed that includes: location of waterbody, number of discharges in the area, type of waterbody and the water quality of the waterbody. The decision step on whether a Tier 2 antidegradation review is required

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	<p>should involve consideration of cumulative impacts.</p> <p>c. DEC should reserve the right to require a Tier 2 antidegradation analysis at the NOI/authorization stage.</p> <p>d. A Tier 2 antidegradation review should not be required for a new discharge that complies with conditions in the general permit unless there is either evidence of potential cumulative effects, due to the presence of other nearby discharges, or there are certain details in the NOI that differ from conditions specified in the general permit.</p>
Issue #2: What information is needed to determine baseline water quality (BWQ)?	
<p>How much information is needed to determine BWQ?</p>	<ol style="list-style-type: none"> 1. DEC should retain the existing approach for determining BWQ under the current APDES permit program. Determinations of baseline water quality should be made on a case-by-case basis. The current flexibility in determining how much baseline water quality data is necessary should be retained. 2. DEC should consider the following factors when determining the amount of BWQ data necessary for the antidegradation analysis: available dilution for the proposed discharge, types of potential contaminants that would be present, and the sensitivity or vulnerability of the waterbody (e.g., the presence of salmon spawning).
<ul style="list-style-type: none"> • How should DEC consider other point and non-point source discharges? What about DEC future needs? 	<ol style="list-style-type: none"> 3. Nonpoint sources should be considered when evaluating assimilative capacity. 4. DEC should consider reasonable, foreseeable, future uses of the waterbody when considering assimilative capacity. 5. It should be made clear for the public in the permit fact sheet when all assimilative capacity for a parameter will be used.

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<ul style="list-style-type: none"> What is the obligation of the permittee to acquire baseline data? Does it depend on whether reasonable potential exists? Does it depend on the level of risk to water quality? 	<p>6. Factors that might trigger a need for additional BWQ include: available dilution for the proposed discharge, types of potential contaminants that might be present, and the sensitivity or vulnerability of the waterbody (e.g., the presence of salmon spawning). (Note: Ron Wolfe’s baseline proposal goes into this in more depth. Has the workgroup adopted this proposal? The proposal has not been integrated into the workgroup recommendations yet.)</p>
<ul style="list-style-type: none"> Is statistical analysis needed? 	
<ul style="list-style-type: none"> How do water quality exceedances determine the tier? What percentage of samples must exceed water quality criteria? Is the exceedance persistent? How does this relate to the water quality criteria averaging period? 	
<ul style="list-style-type: none"> How is seasonal variation in water quality addressed? 	
<ul style="list-style-type: none"> How can costs be minimized? 	<p>3. For waters with little or no data, DEC should use representative waterbodies as surrogates with the understanding that most of the State’s waters are not impacted by human activities.</p> <p>4. DEC should use a rebuttable presumption that all waters in Alaska should be protected at the Tier 2 level in terms of baseline water quality.</p> <p>5. DEC should assume that baseline is zero in situations where it makes sense (e.g., the presence of bark in an area proposed for a log transfer facility).</p>

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Issue #3: How are Outstanding National Resource Waters (ONRW) or Tier 3 waters designated?	
<ul style="list-style-type: none"> • What protections apply to ONRWs beyond EPA requirements? • Should Alaska adopt an intermediate level of protection, i.e. Outstanding State Resource Waters (OSRW) or Tier 2.5? How would water quality protections differ in a Tier 2.5 versus Tier 3 (ONRW) waterbody? 	<p>1. The present levels of tier protection in state and federal antidegradation policy are adequate and appropriate. No Tier 2.5 is necessary.</p>
<ul style="list-style-type: none"> • Should existing permits be grandfathered? 	<p>2. When establishing an ONRW, existing permits should be grandfathered, but not allowed any new or increased discharge.</p>
<ul style="list-style-type: none"> • What waters are eligible for ONRW status? 	<p>3. ONRWs should be waters that are unique for Alaska, not necessarily unique as compared to the rest of the U.S.</p>
<ul style="list-style-type: none"> • What criteria should ONRWs meet? 	<p>(Note: The Issue #3 straw person included a list of submittal information and criteria for an ONRW nomination.)</p>
<ul style="list-style-type: none"> • Who can nominate? 	<p>4. Any member of the public can nominate an ONRW as long as there is a clear list of information that must be included in the nomination and state agencies are involved in vetting the nominations. One workgroup member thinks that only state agencies should have authority to nominate an ONRW.</p>
<ul style="list-style-type: none"> • What process should be used to decide? 	<p>5. A legislative bill should be drafted to clarify authority for designating ONRWs and, as needed, provide funding (e.g. for a multi-agency board).</p> <p>6. A multi-agency board should be created to vet nominations. The board should include DEC, Department of Natural Resources (DNR), Department of Fish and Game (DFG), the Department of Transportation and Public Facilities (DOT&PF), and the Department of Commerce, Community, and Economic Development (DCCED).</p>
<ul style="list-style-type: none"> • Who makes the final decision? 	<p>7. The state legislature should be involved in approving ONRWs, either (1)</p>

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	through direct action on nominations that have been reviewed and forwarded by DEC or a multi-agency or other board, or (2) by delegating decision-making authority to DEC or a board through legislative action.
Issue #4: Tier 2 analysis: How should DEC evaluate the economic/social benefits of a project?	
<ul style="list-style-type: none"> • What factors should be considered? • How should DEC evaluate whether the economic and social benefit is important? 	<ol style="list-style-type: none"> 1. The workgroup listed the parameters that should be considered during the economic and social impact analyses: Examples of important economic development include: <ul style="list-style-type: none"> • Employment; <ul style="list-style-type: none"> ○ Salary impacts ○ Seasonality of jobs • Tax base impacts, expands leases and royalties; • Commercial activities; • Access to resources; or • Access to transportation network Examples of important social development include: <ul style="list-style-type: none"> • Access to community services; • Recreational opportunities; • Access to education and training; or • Public health and safety • Infrastructure improvements 2. Applicant could just demonstrate economic importance alone (i.e., without considering “important” social development). DEC could judge “importance” based only on economic data. Applicant can also demonstrate “importance” based on solely social factors (e.g. public health).

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	<p>3. DEC should take advantage of intergovernmental reviews when working through the technical portions of the alternatives analysis. DEC can look to others in areas where DEC lacks expertise. DEC will not be doing cost-benefit analyses. There is no justification for weighing hard and soft costs against each other. DEC must deal only with what is in the record and not drill down to find more or hire economists, sociologists, etc.</p>
<ul style="list-style-type: none"> • What level of review and documentation is needed? • Should level of review and documentation vary based on potential risk? 	<p>4. The level of detail in socioeconomic analysis should vary with the risk of pollution/size of facility. DEC should retain discretion in how to determine the necessary level of detail, but use factors such as major/minor discharger categories already in use for NPDES permitting. DEC should provide their rationale and general criteria for determining the level of analysis to ensure consistency.</p> <p>5. Applicants should submit relevant and appropriate data for DEC's consideration.</p>
<p>Issue #5: Tier 2 analysis: What level of alternatives analysis is necessary?</p>	

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<ul style="list-style-type: none"> • What is needed to quantify the lowering of water quality and whether it is necessary? 	<ol style="list-style-type: none"> 1. DEC should use the term “practicable” instead of “feasible” or “most effective and reasonable”. 2. DEC should use the following list when considering and discussing the most practicable alternatives to the proposed discharge, in the order listed below. Practicality considerations include available and capable approaches after taking into consideration cost, existing technology, and logistics in light of overall project purposes. <ol style="list-style-type: none"> a. Non-discharge approaches b. Process changes c. Relocation of discharge d. Seasonal discharges e. New technologies f. Other methods
<ul style="list-style-type: none"> • What standards are used to determine whether the methods of pollution prevention, control, and treatment are the most effective and reasonable? 	<ol style="list-style-type: none"> 2. DEC should use a narrative rather than a numeric cost threshold (%) when defining the pollution control measures deemed to be the most practicable or the most effective and reasonable. 3. DEC should treat new and existing facilities differently.
<ul style="list-style-type: none"> • How should economic and technical feasibility of alternatives be considered? • When do alternatives go beyond the “highest statutory and regulatory requirements”? 	<ol style="list-style-type: none"> 4. The applicant should be required to present a range of alternatives. DEC should not require a Professional Engineer to complete the alternatives analysis. In practice, the alternatives analysis should consist of the following summarized information: <p><i><u>Step 1: Consider Practicable Alternatives</u></i></p> <p>Consider less degrading, practicable alternatives, such as one or more of the following:</p> <ol style="list-style-type: none"> a. Non-discharge approaches <ol style="list-style-type: none"> i. Land application / infiltration of the discharge

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	<ul style="list-style-type: none"> ii. Total containment of the discharge iii. Reducing disturbed / impervious surface area (i.e., for stormwater permitted projects) iv. Wastewater recycling / reuse (e.g., closed loop systems, irrigation/washing reuse, etc.) b. Process changes <ul style="list-style-type: none"> i. Reduction in scale of proposed discharge or activity ii. Pollution prevention measures (e.g., raw materials substitution) iii. Water conservation practices iv. Improved operation and maintenance of existing facilities c. Relocation of the discharge (i.e., to receiving water with greater assimilative capacity) d. Seasonal or controlled discharge options to minimize discharge during critical water quality periods e. New technologies <ul style="list-style-type: none"> i. Advanced oxidation technologies ii. Physical filter barriers (e.g., membrane technology) iii. Advanced chemical treatment iv. Wetland or other tertiary treatment f. Other methods <ul style="list-style-type: none"> i. Pollution trading with other point or nonpoint sources in the watershed ii. Other pollution offset approaches <p><u>Step 2: Analyze Cost-Effectiveness (Cost versus Performance) and Ancillary Environmental Impacts of Alternatives</u></p> <ul style="list-style-type: none"> a. Identify and list the practicable and non-practicable alternatives

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	<ul style="list-style-type: none"> b. Briefly characterize the practicable alternatives <ul style="list-style-type: none"> i. Relative capital, operation / maintenance, and other costs ii. Technological issues (e.g., engineering, scientific, reliability, O&M, etc.) iii. Logistical / other issues c. Discuss any ancillary environmental impacts of the practicable alternatives <ul style="list-style-type: none"> i. Sensitivity of stream or groundwater uses, need for low-flow augmentation ii. Nature of pollutants, dilution ratio for pollutants, discharge timing and duration iii. Effects on endangered species iv. Potential to generate secondary water quality impacts (stormwater, hydrology) v. Siting of plant and collection facilities vi. Non-water quality and cross media environmental impacts: odor, noise, energy consumption, air emissions, and solid waste generation <p><u>Step 3: Identify the Preferred Alternative</u></p> <p>Based on the information collected and analyses described in Steps 1 and 2, identify the preferred alternative. This will be the least degrading practicable alternative, and will be the focus of the subsequent permit application to ADEC.</p> <p><u>Step 4: Document Alternatives Analysis</u></p> <p>The alternatives analysis submitted by the applicant should document the</p>

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	alternatives considered and the process used to identify the practicable alternatives and the preferred alternative. The applicant should defend its application and respond to requests for information. DEC should review the application and document its decision.
<ul style="list-style-type: none"> • Can other alternative evaluations , e.g. NEPA environmental impact statements, CWA 404 permit reviews, meet the need? 	5. DEC should consider any socioeconomic analyses, including those that are performed in relevant environmental impact statements or environmental assessments.
Issue #6: How are waters ranked as low (Tier 1) and high quality (Tier 2)?	
<ul style="list-style-type: none"> • What is the basis for tier ranking? <ul style="list-style-type: none"> ○ Waterbody by waterbody ○ Pollutant by pollutant ○ Hybrid approaches 	<ol style="list-style-type: none"> 1. DEC should use the parameter-by-parameter approach for applying Tier 1 and Tier 2 protection, and the waterbody-by-waterbody approach for applying Tier 3 protection only. Under this approach, <ol style="list-style-type: none"> a. Waters will be protected at a Tier 1 level for parameters that are demonstrated to equal to or be lower than water quality criteria. b. Waterbodies will be protected at the Tier 2 level as a default with a rebuttable presumption that all parameters are better than water quality criteria. c. Where the quality of water exceeds levels necessary to support beneficial uses (e.g., the waterbody is not impaired for all uses), that quality will be maintained and protected on a parameter-by-parameter basis. d. Designated ONRWs will be protected at the Tier 3 level for all parameters. 2. DEC may require an applicant to provide data on parameters that are not in the discharge but are affected by the discharge. 3. One workgroup member suggested DEC should consider a Tier 1.5 for wetlands (i.e., DEC should develop criteria and use designations for the wide variety of wetlands in Alaska).

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<ul style="list-style-type: none"> When a waterbody/parameter is near the water quality criteria, how is this designated? or should this be addressed in the Tier 2 analysis? 	
Issue #7: Should DEC define significant and de minimus degradation?	
<ul style="list-style-type: none"> How can assimilative capacity be calculated given the limited water quality data in Alaska? 	
<ul style="list-style-type: none"> What about cumulative degradation from multiple discharges? 	
<ul style="list-style-type: none"> Presumptive compliance – should certain categories of facilities be exempt from analysis? 	
<ul style="list-style-type: none"> As an alternative to de minimus exemptions, could the level of detail in the analysis be tied to the level of potential degradation? 	<ol style="list-style-type: none"> The Workgroup recommended that DEC not adopt a <i>de minimis</i> approach for antidegradation reviews, since the amount of work on the part of the applicant and DEC to demonstrate that a <i>de minimis</i> exemption from an antidegradation review is warranted will likely involve just as much time as the antidegradation review itself.