

Utah Division of Water Quality

***Preliminary recommendations for Changes to the
Standards for Quality for Waters of the State***

Triennial Review – 2008

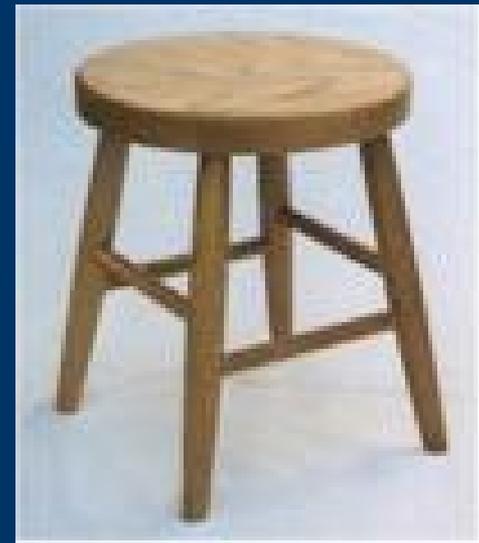
[DRAFT]

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Water Quality Standards

The Foundation of Protection

- Beneficial Use
 - 3A Cold Water Fishery
- Numeric Criteria
 - 4.6 ug/l Selenium Chronic
- Narrative Criteria
 - “become offensive”
 - “undesirable physiological responses”
- Antidegradation Policy
 - Maintaining assimilative capacity



#1: Codify the Triennial Review Rule Making Language

- Putting the procedure into rule.
 - The water quality standards shall be reviewed and updated at least once every three years.
 - The Executive Secretary shall seek input through a cooperative process from stakeholders representing state and federal agencies and various interest groups and develop a preliminary draft of changes.
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Rule Making Language, cont'd

- Proposed changes shall be solicited from EPA, DWQ Staff, and the public.
- Informal public meetings may be held to present preliminary proposed changes to the public for comments and suggestions.



Rule Making Language, cont'd

- Final proposed changes shall be presented to the Water Quality Board for their approval and authorization to initiate the formal rule-making.
 - Public hearings will be held to solicit formal comments from the public.
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Rule Making Language, cont'd

- The Executive Secretary shall incorporate appropriate changes and return to the Water Quality Board to petition for formal adoption of the proposed changes following the Division of Administrative Rules rule making procedures.
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#2: Use Classification for Recreation and Aesthetics

- Class 2A – Protected for frequent primary contact recreation such as swimming where there is a **high likelihood of ingestion of water or a high degree of bodily contact** with the water. Examples include, but are not limited to swimming, rafting, kayaking, driving, and water skiing.
 - Class 2B – Protected for infrequent primary contact recreation. Also protected for secondary contact recreation where there is a **low likelihood of ingestion of water or low degree of bodily contact** with the water. Examples include, but are not limited to wading, hunting, and fishing.
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#2: Primary & Secondary Recreation Definitions



#2: Primary & Secondary Recreation Definitions



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#3: Use Classifications of the Waters of the State

- San Juan River (Main Stem) from Lake Powell to state line.
- Colorado River (Main Stem) from Lake Powell to state line.
- Green River (Main Stem) from confluence with Colorado River to state line.
- Green River (Main Stem) from Utah-Colorado state line to Flaming Gorge Dam..
- Change all the above segments from 2B to 2A (Secondary Recreation to Primary Recreation)

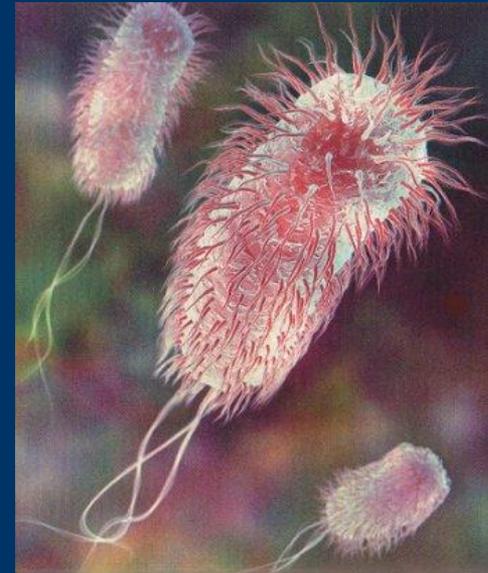


Changes to Classifications of the Waters of the State

- **Escalante River:** Change from 3C (non-game fishery) to 3B (warm water fishery).
 - Seven (7) tributaries to the Escalante River: Change from 3B to 3A Classification (cold water fishery).
 - **Saleratus Creek:** Add 3C to lower section and 3A to upper section [Bear River Drainage]
 - **State Canal:** Give same criteria as Jordan River and the Surplus Canal (3B)
 - Clarify that lakes and reservoirs greater than 10 acres are assigned by default to the classification of the stream with which they are associated unless otherwise designated.
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#4: Numeric Criteria: E. Coli

- Change maximum criteria from 940 to 668 (1C, 2B) and from 576 to 409 (2A)
- Measurement of E. coli using the Quanti-Tray/2000 procedure is approved as a field analysis. Other EPA approved methods may also be used.
- For water quality assessment purposes, up to 10% of representative samples may exceed the 668 per 100 ml criterion (for 1C and 2B waters) and 409 per 100 ml (for 2A waters).



#5: Numeric Criteria - TDS

- Total Dissolved Solids [TDS]
 - Remove Stockwatering @ 2000 mg/l
 - Set state-wide Agriculture [Class 4] @ 1200 mg/l to restore criterion to pre-2003 rules



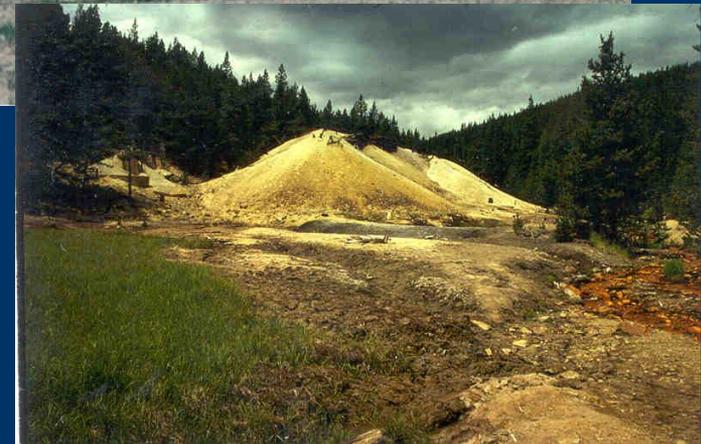
Numeric Criteria TDS (Footnote)

(4) Total dissolved solids (TDS) limits may be adjusted if such adjustment does not impair the designated beneficial use of the receiving water. The total dissolved solids (TDS) standards shall be at background where it can be shown that natural or un-alterable conditions prevent its attainment. In such cases rule making will be undertaken to modify the standard accordingly.



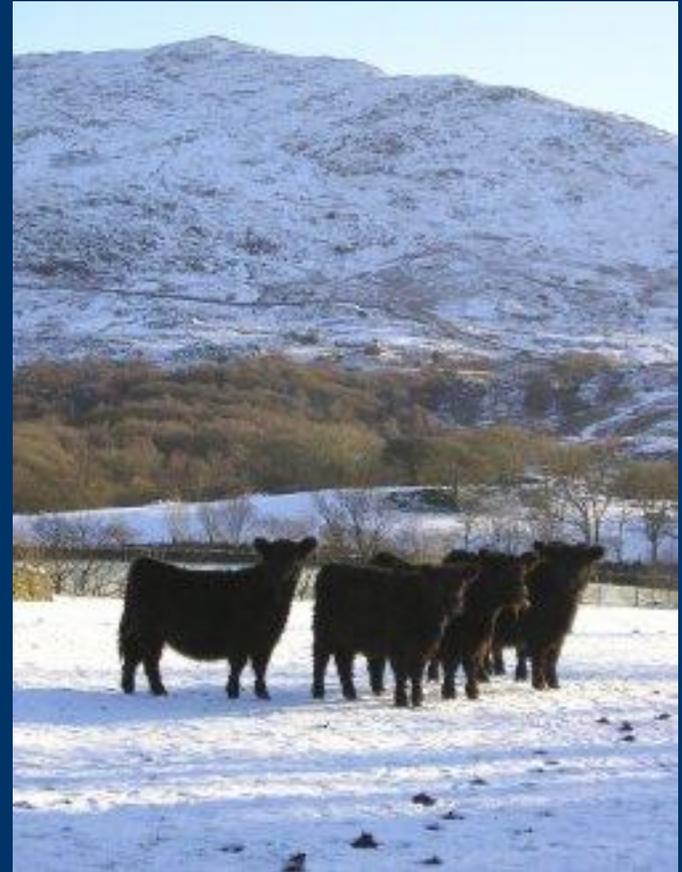
Numeric Criteria TDS (Footnote)

- (4) Site-specific criteria for total dissolved solids may be adopted by rulemaking where it is demonstrated that:
- (a) a less stringent criterion is appropriate because of **natural or unalterable conditions**, or



Numeric Criteria (Footnote)

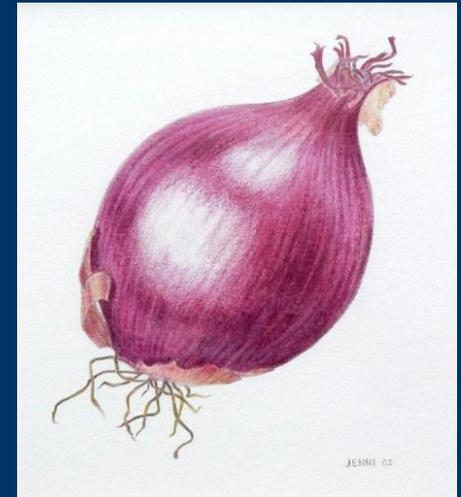
(4)(b) a less stringent, site-specific criterion and/or **date specified** criterion is protective of existing and attainable agricultural uses, or



Numeric Criteria (Footnote)

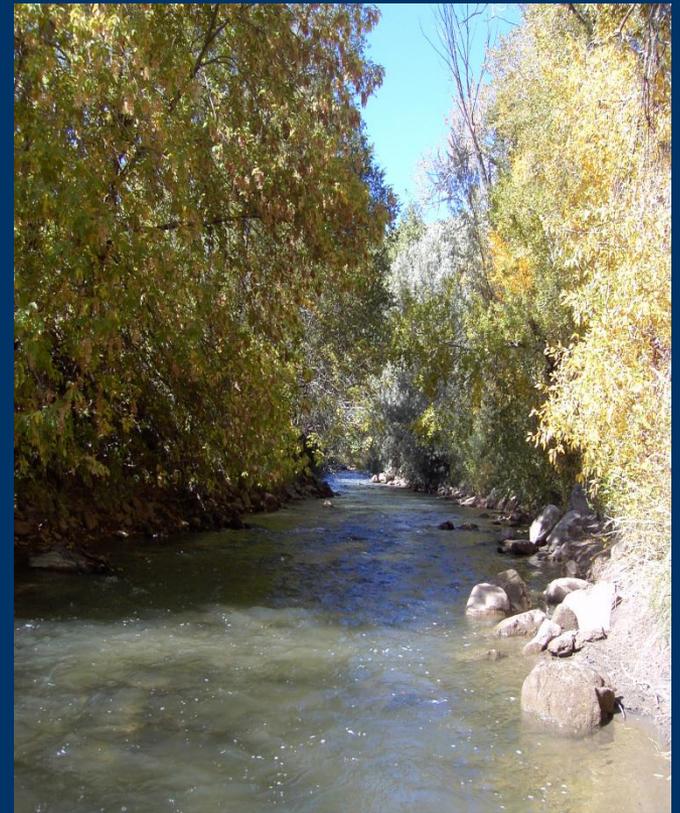
(4) (c) a more stringent criterion is attainable and necessary for the protection of sensitive crops.

For water quality assessment purposes, up to 10% of representative samples may exceed the standard.



Numeric Criteria, TDS

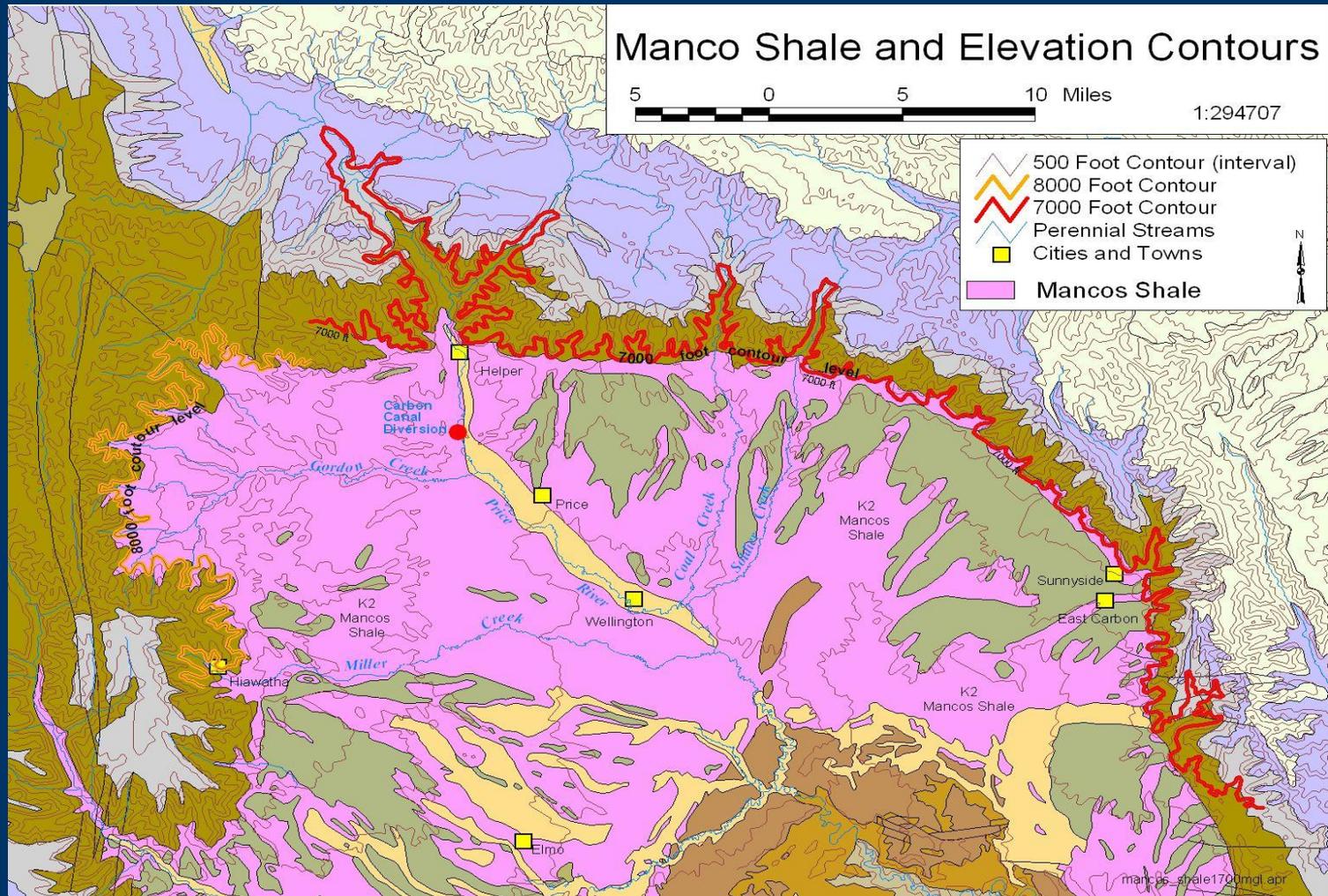
- Add Site Specific TDS Criteria for several areas where background is $> 1,200$ mg/l
 - Paria River,
 - Price River, etc.



Numeric Criteria, TDS

- Add Site Specific TDS Criteria for several areas where background is $> 1,200$ mg/l
 - Salt Creek to 19,000 mg/l
 - Crystal Springs, Honeyville, Utah
Robert Chamberlain
 - South Fork of Spring Creek
 - 1,600 mg/l – April 1 thru September 30
 - 2,400 mg/l – October 1 thru March 30
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Remove site specific TDS criteria at elevations above 7,000-7500 feet. Returns value to 1,200 mg/l



#5: Other Numeric Criteria, etc.

- Total Phosphorus
 - Clarify that total phosphorus in rivers, lakes and reservoirs is a pollution indicator.
- Toxics
 - Add Diazinon and Nonylphenol to the water quality standards.
- Laboratory Methods
 - Laboratories to use **approved methods**, rather than specifically described methods or instruments.



#5: Other Numeric Criteria, etc.

- Minimum Dissolved Oxygen

- (MG/L) (2)

	3A	3B	3C	3D
• 30 Day Average	6.5	5.5	5.0	5.0
• 7 Day Average	9.5/5.0	6.0/4.0		

- 1 Day Average

- Minimum

- Proposal: Change the wording from 1 Day Average to Minimum.



6: Antidegradation

- 3.2 High Quality Waters - Category 1
 - No UPDES permits granted, e.g., forests, etc.
 - 3.3 High Quality Waters – Category 2
 - UPDES permitted but limits set at background.
 - 3.4 Other Waters – Category 3
 - For all other waters of the state, UPDES permitted and degradation may occur, pursuant to the conditions and review procedures outlined below in Section 3.5.
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Antidegradation Policy

- State that UPDES permit limits may be set at the numeric standard at “**end of pipe**” where discharge is in a 303(d) listed water, etc.



Antidegradation, cont'd

- 3.5 Antidegradation Review (ADR)
- An antidegradation review will determine whether the proposed activity complies with the applicable antidegradation requirements for receiving waters that may be affected.
- An antidegradation review (ADR) may consist of two parts or levels. A Level I review evaluates the criteria in Section 3.5 b **to determine if any degradation is de minimis in nature** and therefore does not require a Level II review, as described in Section 3.5 c. In addition a Level I review is conducted to insure that existing uses will be maintained and protected.

Antidegradation, cont'd

- Both Level I and Level II reviews will be conducted on a **parameter-by-parameter** basis. A decision to move to a Level II review for one parameter does not require a Level II review for other parameters.
- Antidegradation reviews shall include opportunities for public participation as described in Section 3.5 e.

Antidegradation, cont'd

- a. Activities Subject to Antidegradation Review (ADR)
- 1. ~~For all State waters, antidegradation~~ Antidegradation reviews will be conducted ~~for~~ on all proposed federally regulated activities, such as those under Clean Water Act Sections 401 (FERC and other Federal actions), 402 (UPDES permits), and 404 (Army Corps of Engineers permits) affecting the waters of the State

Antidegradation, cont'd

[Level I Off-Ramps]

- b. An Anti-degradation Level II review is not required where any of the following conditions apply:
- ~~2. Discharge limits are established in an approved TMDL that is consistent with the current water quality standards for the receiving water (e.g., where TMDLs are established, changes in effluent limits that are consistent with the existing load allocation would not trigger an anti-degradation review),~~

[Note: Combining 2, 4, 7-10]

Antidegradation, cont'd



[Note: Combining Level I Off-ramps]

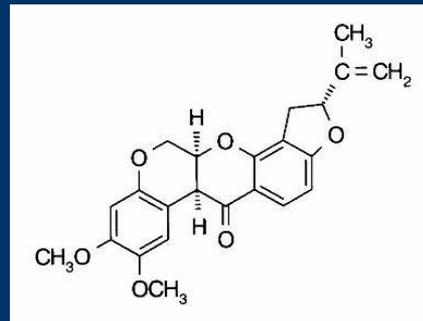
- 2. Assimilative capacity is not available or has previously been allocated, as indicated by water quality monitoring or modeling information. This includes situations where
 - (a) the water body is included on the current 303(d) list for the parameter of concern,
 - (b) existing water quality for the parameter of concern does not satisfy applicable numeric or narrative water quality criteria, or

Antidegradation, cont'd

- (c) discharge limits are established in an **approved TMDL** that is consistent with the current water quality standards for the receiving water (e.g., where TMDLs are established, changes in effluent limits that are consistent with the existing load allocation would not trigger an antidegradation review).

Antidegradation, cont'd

- 2. (c) Water quality impacts will be temporary and related only to sediment or turbidity and survival and ~~fish-spawning~~ development of aquatic fauna will not be impaired
- 4.(f) Impairment of the survival and development of aquatic fauna
- excluding fish removal efforts.



Antidegradation, cont'd

- ~~65. The affected waters are classified as 3C, 3D (and not 3A or 3B), or 3E waters, or are classified only as Class 4.~~
- [Antidegradation Level I Review off-ramp for use classification is eliminated.]

Antidegradation, cont'd.

Level I Mathematical Off-ramps – Wasteload Analysis for Permits

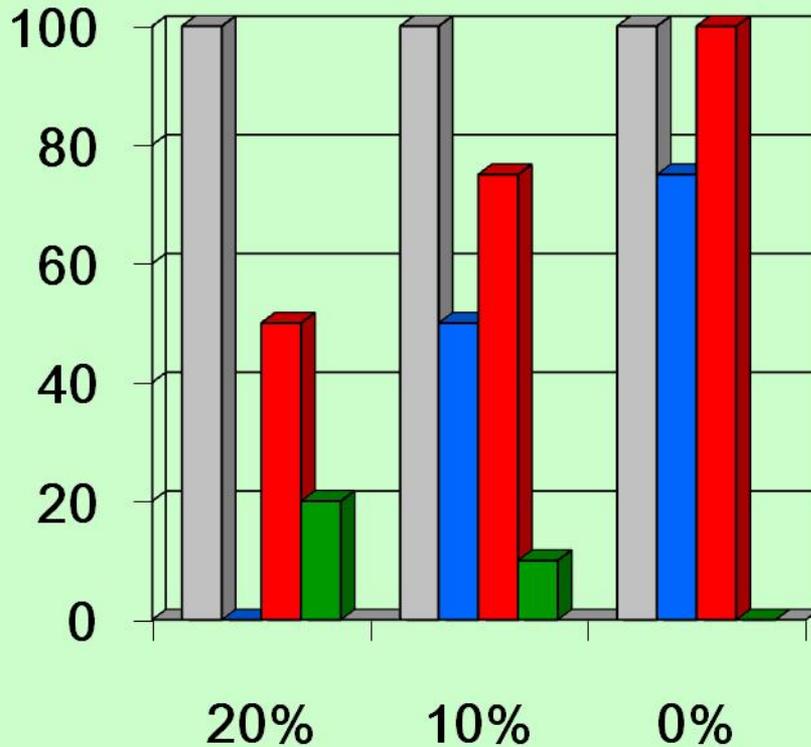
- ~~10. Water quality impacts are expected to be minor. For example: (a) for discharge permit renewals, if the increase in project loading over the prior permit is less than 20%; or (b) if the increase in pollutant loading to the stream is less than 20% over existing background.~~
 - ~~11. The volume of the discharge is small as compared to the flow of the receiving stream. In general, this would be considered where the ratio of the average stream flow to the discharged flow is expected to be greater than 100:1, the ratio of the 7Q10 (7 day-10 year) low flow to the discharge flow is expected to be greater than 25:1, and where the increase in concentration of the pollutants in the stream at 7Q10 at low flow is expected to be less than 10%, or based upon other site specific criteria.~~
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Antidegradation, cont'd.

Level I Mathematical Off-ramps – Wasteload Analysis for Permits

- 6. The proposed concentration after mix:
- (a) Would be equal to or less than 50% of the criterion, and the project would consume less than 20% of remaining assimilative capacity; or,
- (b) Is greater than 50% and less than 75% of the criterion, and the project would consume less than 10% of the remaining assimilative capacity.
- (c) Exception: Level II reviews are required if the proposed concentration after mix is equal to or greater than 75% of the criterion.

Level I Mathematical Off-Ramps



■ 100% ■ Lower Limit
■ Upper Limit ■ Allowed

- If No Changes in Permit - No Level II Required
- 20% Remaining Assimilative Capacity Can be Used if Conc. is $< 50\%$ of Standard
- 10% if between 50% and 75%
- 0% if $> 75\%$

Antidegradation, cont'd

- Application of Off-Ramps
 - Excel Spreadsheet
 - Wasteload Analysis

Antidegradation Level II Review (Information only)

- Less Degrading Alternatives
 - Innovative or alternative treatment options
 - More effective or higher treatment levels
 - Connections to existing facilities
 - Process changes or product material substitution
 - Seasonal discharges
 - Pollutant trading
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Antidegradation Level II Review (Information only)

- Less Degrading Alternatives (cont'd)
 - Other discharge locations
 - Land application
 - Total containment
 - Improved operation/maintenance
 - Other appropriate alternatives
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The Great Salt Lake

- Segmentation:
 - 5 Segments
 - 5A: Gilbert Bay [Primary and Secondary]
 - 5B: Gunnison Bay [Secondary]
 - 5C: Bear River Bay [Secondary]
 - 5D: Farmington Bay [Secondary]
 - 5E: Transitional (Mudflat) Wetlands [Secondary]
 - (a) Natural
 - (b) Effluent Dominated
 - Selenium:
 - [Tissue based: Brine Shrimp, Gull Eggs]?
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Questions?

