

Water Quality Standards Triennial Review

Utah Division of Water Quality [Internal Review]
January 8, 2008

Water Quality Standards Workgroup
January 16, 2008

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Issues

- Triennial Review Rule Making Language
- Total Dissolved Solids [TDS]
- Use Classification
 - Primary/Secondary Recreation
- E. coli
- Antidegradation
- Great Salt Lake Use Classifications

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Triennial Review Rule Making Language

- The water quality standards shall be reviewed and updated at least once every three years.
- The Executive Secretary shall develop a preliminary draft of changes and seek input through a cooperative process from stakeholders representing state and federal agencies and various interest groups.

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Rule Making Language, cont'd

- Proposed changes shall be presented to the Water Quality Board for their information prior to holding informal public meetings to solicit input from the public.
- Informal public meetings shall be held to present preliminary proposed changes to the public for comments and suggestions.

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Rule Making Language, cont'd

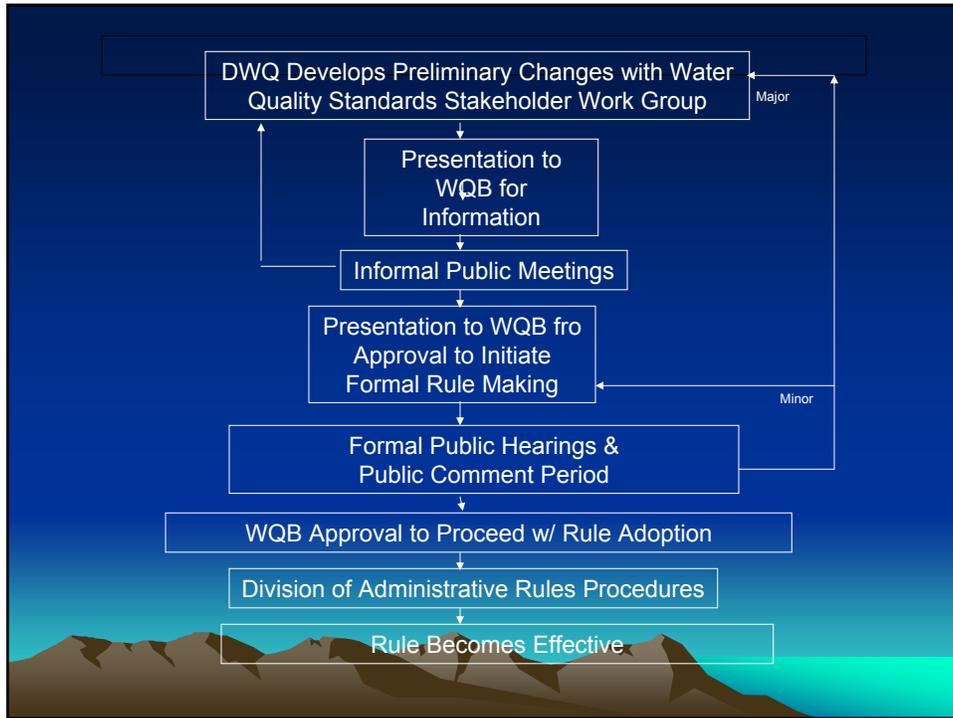
- Final proposed changes shall be presented to the Water Quality Board for their approval and authorization to initiate the formal rule- making.
- Public hearings will be held to solicit formal comments from the public.

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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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Total Dissolved Solids [TDS]

- TABLE 2.14.1 NUMERIC CRITERIA FOR DOMESTIC, RECREATION, AND AGRICULTURAL USES

Parameter	Domestic Source	Recreation and Aesthetics		Agriculture culture
	1C	2A	2B	4

- INORGANICS
- (MAXIMUM MG/L)
- Total Dissolved Solids (4)

•	Irrigation	1200		
•	Stock Watering	2000		

Total Dissolved Solids [TDS], Cont'd

- ~~(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.~~

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Total Dissolved Solids [TDS], Cont'd

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

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Total Dissolved Solids [TDS], Cont'd

- (b) where a more stringent criterion is demonstrated to be attainable and necessary for the protection of sensitive crops, or
- (c) where a less stringent, site-specific criterion is demonstrated to be protective of existing and attainable agricultural uses.

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Total Dissolved Solids [TDS], Cont'd

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

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E. coli

- TABLE 2.14.1 NUMERIC CRITERIA FOR DOMESTIC, RECREATION, AND AGRICULTURAL USES

Parameter	Domestic Source	Recreation and Aesthetics		Agriculture
	1C	2A	2B	4

- BACTERIOLOGICAL

- (30-DAY GEOMETRIC MEAN) (NO.)/100 ML) (7)

E. coli	206	126	206	
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- MAXIMUM(NO.)/100 ML) (7)

E. coli	940	576	940	
	668	409	668	

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E. coli: Footnote #7

- Where the criteria are exceeded and there is a reasonable basis for concluding that the **indicator bacteria** E. coli are primarily from wildlife, e.g., in National Wildlife Refuges and State Waterfowl Management Areas, the criteria may be considered attained, provided the density attributable to **human** non-wildlife sources is less than the criteria. Exceedences of **bacteriological numeric criteria** E. coli from nonhuman nonpoint sources will generally be addressed through appropriate Federal, State, and local nonpoint source programs.

E. Coli, cont'd: Footnote #7

- 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). For small datasets, where exceedences of these criteria are observed, follow-up ambient monitoring should be conducted to better characterize water quality..

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Use Classification Primary/Secondary Recreation

- 6.2 Class 2 -- Protected for recreational use and aesthetics.
- a. Class 2A -- Protected for primary contact recreation such as swimming.
- b. Class 2B -- Protected for secondary contact recreation such as boating, wading, or similar uses.

Use Classification Primary/Secondary Recreation

- Class 2A -- Protected for primary contact recreation such as swimming. [Current]
- Class 2A -- Protected for frequent primary contact recreation 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, diving, and water skiing.

Use Classification Primary/Secondary Recreation

- b. Class 2B -- Protected for secondary contact recreation such as boating, wading, or similar uses. [Current]
- Class 2B -- Protected for infrequent primary contact recreation. Also protected for secondary contact recreation where there is a low likelihood of ingestion of water and a low degree of bodily contact with the water. Examples include, but are not limited, to wading, hunting, and fishing.

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, point source discharges are allowed and degradation may occur, pursuant to the conditions and review procedures outlined below: in Section 3.5.

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 not de minimis in nature and therefore requires 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.

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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**

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Antidegradation, cont'd [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 4, 7-10]

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Antidegradation, cont'd

[Note: Combining 4, 7-10]

- 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

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Antidegradation, cont'd

- 2. (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).

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- 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.—only as 3E or 4.

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Antidegradation, cont'd

- 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.

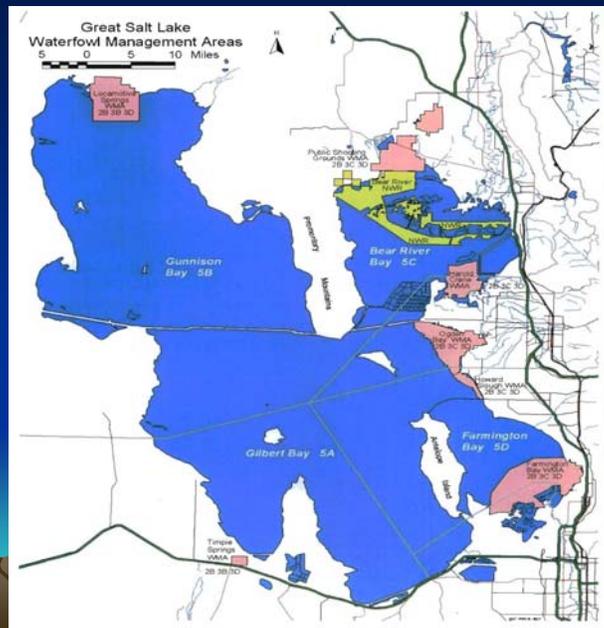
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Antidegradation, cont'd

- Application of Off-Ramps
 - Excel Spreadsheet

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Great Salt Lake Segmentation



- 6.5 Class 5 -- The Great Salt Lake. Protected for primary and secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary aquatic organisms in their food chain, and mineral extraction.

Great Salt Lake Use Designations

- 6.5 Class 5 -- The Great Salt Lake.
- Class 5A Gilbert Bay
- Geographical Boundary — All open waters at or below 4,202-foot elevation south of the Union Pacific Causeway, excluding all of Farmington Bay south of the Antelope Island Causeway and salt evaporation ponds.
- Beneficial Uses — Protected for primary and secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain.

Great Salt Lake Use Designations, cont'd

- Class 5B Gunnison Bay
- Geographical Boundary — All open waters at or below 4,202-foot elevation north of the Union Pacific Causeway and west of the Promontory Mountains, excluding salt evaporation ponds.
- Beneficial Uses — Protected for secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain.



Great Salt Lake Use Designations, cont'd

- Class 5E Transitional Wetlands along the Great Salt Lake Shoreline
- Geographical Boundary — All wetlands below the 4,202-foot elevation to the current lake elevation of the open water of the Great Salt Lake. The geographical areas of these transitional wetlands change corresponding to the fluctuation of lake elevation.



Great Salt Lake Use Designations, cont'd

- 5E(1) – Transitional wetlands receiving their source water from naturally occurring springs, streams, or impounded wetlands.
- Beneficial Uses – Protected for secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain

Great Salt Lake Use Designations, cont'd

- 5E(2) – Transitional wetlands receiving their source water from municipal wastewater treatment facilities or industrial waste water treatment facilities.
- Beneficial Uses – Protected for secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain.