State of Utah

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MEMORANDUM

TO: Water Quality Board

THROUGH: Walt Baker

FROM: Chris Bittner

DATE: September 12, 2011

SUBJECT: Proposed Revisions to Water Quality Standards (R317-2) from 2011 Triennial Review

Action Item

- Request Board approval to proceed with rulemaking on the proposed changes to Utah's Water Quality Standards (R317-2).

Background

In accordance with the requirements of the Clean Water Act, staff initiated the Triennial Review of Utah's Standards of Quality for Waters of the State in January 2011. Staff is requesting Board approval to proceed with rulemaking for the proposed changes shown as Attachment 1.

Attachment 1 is a mark-up of the present rule, R317-2, showing the proposed rule changes, with deletions in strikeout font and proposed additions in underlined font. In addition, the proposed changes are highlighted in green or yellow. Changes highlighted in green are judged by staff to be potentially substantive and the changes in yellow highlighting are considered to be non-substantive. Note that these categories are provided for the convenience of the Board and are not a determination of substantive and non-substantive in the context of Utah's Administrative Procedures Act. Attachment 2 provides supporting documentation and rationale for the proposed changes. All of the proposed changes have been vetted by the Water Quality Standards Workgroup.

If the Board approves the request to proceed with rulemaking, staff will file the changes with the Division of Administrative Rulemaking (DAR). DAR will publish the proposed changes in the October 15, 2011 bulletin. This begins the 30 day public comment period. Staff will compile

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comments received, prepare responses to the comments, and make any further changes to the rule deemed appropriate, in response to the public comments. The comments and responses will be presented to the Board, along with any subsequent recommended revisions to the proposed rule language, at future Board meetings.

Staff recommends submitting this rulemaking package, when complete, to USEPA to fulfill the Triennial Review requirement. Staff will continue to work on other revisions to the Standards of Quality for Waters of the State (R317-2) with the Water Quality Standards Workgroup at quarterly meetings. A summary of these topics is presented as Attachment 3. Attachment 3 is an update of the Table previously presented to the Board at the May 2011 meeting.

Supporting Documents

Attachment 1: Mark-up showing proposed changes to R317-2 Standards of Quality for Waters of the State of Utah DEQ

Attachment 2: Supporting documentation and rationale for proposed changes to R317-2.

Attachment 3: Workplan of revision topics for Waters Quality Standards

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Attachment 1

Mark Up of R317-2 Standards of Quality for Waters of the State Proposed Changes September 12, 2011

Yellow Highlighting for nonsubstantive changes
Green Highlighting for substantive changes
Highlighting is provided for the convenience of the reader and does not represent a formal determination by the Division of Water Quality.

R317. Environmental Quality, Water Quality.
R317-2. Standards of Quality for Waters of the State.
R317-2-1A. Statement of Intent.

Whereas the pollution of the waters of this state constitute a menace to public health and welfare, creates public nuisances, is harmful to wildlife, fish and aquatic life, and impairs domestic, agricultural, industrial, recreational and other legitimate beneficial uses of water, and whereas such pollution is contrary to the best interests of the state and its policy for the conservation of the water resources of the state, it is hereby declared to be the public policy of this state to conserve the waters of the state and to protect, maintain and improve the quality thereof for public water supplies, for the propagation of wildlife, fish and aquatic life, and for domestic, agricultural, industrial, recreational and other legitimate beneficial uses; to provide that no waste be discharged into any waters of the state without first being given the degree of treatment necessary to protect the legitimate beneficial uses of such waters; to provide for the prevention, abatement and control of new or existing water pollution; to place first in priority those control measures directed toward elimination of pollution which creates hazards to the public health; to insure due consideration of financial problems imposed on water polluters through pursuit of these objectives; and to cooperate with other agencies of the state, agencies of other states and the federal government in carrying out these objectives.

R317-2-1B. Authority.

These standards are promulgated pursuant to Sections 19-5-104 and 19-5-110.

R317-2-1C. Triennial Review.

The water quality standards shall be reviewed and updated, if necessary, at least once every three years. The Executive Secretary will seek input through a cooperative process from stakeholders representing state and federal agencies, various interest groups, and the public to develop a preliminary draft of changes. Proposed changes will be presented to the Water Quality Board for information. Informal public meetings may be held to present preliminary proposed changes to the public for comments and suggestions. Final proposed changes will be presented to the

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Water Quality Board for approval and authorization to initiate formal rulemaking. Public hearings will be held to solicit formal comments from the public. The Executive Secretary will 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' rulemaking procedures.

R317-2-2. Scope.

These standards shall apply to all waters of the state and shall be assigned to specific waters through the classification procedures prescribed by Sections 19-5-104(5) and 19-5-110 and R317-2-6.

R317-2-3. Antidegradation Policy.

3.1 Maintenance of Water Quality

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.

In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with Section 316 of the Federal Clean Water Act.

3.2 Category 1 Waters

Waters which have been determined by the Board to be of exceptional recreational or ecological significance or have been determined to be a State or National resource requiring protection, shall be maintained at existing high quality through designation, by the Board after public hearing, as Category 1 Waters. New point source discharges of wastewater, treated or otherwise, are prohibited in such segments after the effective date of designation. Protection of such segments from pathogens in diffuse, underground sources is covered in R317-5 and R317-7 and the Regulations for Individual Wastewater Disposal Systems (R317-501 through R317-515). Other diffuse sources (nonpoint sources) of wastes shall be controlled to the extent feasible through implementation of best management practices or regulatory programs.

~~Projects such as, but not limited to, construction of dams or roads will be considered~~ Discharges may be allowed where pollution will ~~be temporary and limited after consideration of the factors in R317-2-3.5 b.4.,~~ and where best management practices will be employed to minimize pollution effects.

Waters of the state designated as Category 1 Waters are listed in R317-2-12.1.

3.3 Category 2 Waters

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Category 2 Waters are designated surface water segments which are treated as Category 1 Waters except that a point source discharge may be permitted provided that the discharge does not degrade existing water quality. Discharges may be allowed where pollution will be temporary and limited after consideration of the factors in R317-2-3.5.b.4., and where best management practices will be employed to minimize pollution effects. Waters of the state designated as Category 2 Waters are listed in R317-2-12.2.

3.4 Category 3 Waters

For all other waters of the state, point source discharges are allowed and degradation may occur, pursuant to the conditions and review procedures outlined in Section 3.5.

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 is conducted to insure that existing uses will be maintained and protected.

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. Discussion of parameters of concern is those expected to be affected by the proposed activity.

Antidegradation reviews shall include opportunities for public participation, as described in Section 3.5e.

a. Activities Subject to Antidegradation Review (ADR)

1. For all State waters, antidegradation reviews will be conducted for 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). The Executive Secretary may conduct an ADR on any projects with the potential for major impact on the quality of waters of the state. The review will determine whether the proposed activity complies with the applicable antidegradation requirements for the particular receiving waters that may be affected.

2. For Category 1 Waters and Category 2 Waters, reviews shall be consistent with the requirement established in Sections 3.2 and 3.3, respectively.

3. For Category 3 Waters, reviews shall be consistent with the requirements established in this section

b. An Anti-degradation Level II review is not required where any of the following conditions apply:

1. Water quality will not be lowered by the proposed activity or for existing permitted facilities, water quality will not be further lowered by the proposed activity, examples include situations where:

(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

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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

~~(d) a new or renewed UPDES permit is being issued, and water quality based effluent limits are not required for a specific pollutant because it has been determined that the discharge will not cause, have reasonable potential to cause, or contribute to an exceedance of a State water quality standard for the pollutant~~

2. Assimilative capacity (based upon concentration) 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; or

(b) existing water quality for the parameter of concern does not satisfy applicable numeric or narrative water quality criteria; or

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

Under conditions (a) or (b) the effluent limit in an UPDES permit may be equal to the water quality numeric criterion for the parameter of concern.

3. Water quality impacts will be temporary and related only to sediment or turbidity and fish spawning will not be impaired,

4. The water quality effects of the proposed activity are expected to be temporary and limited. As general guidance, CWA Section 402 general permits, CWA Section 404 nationwide and general permits, or activities of short duration, will be deemed to have a temporary and limited effect on water quality where there is a reasonable factual basis to support such a conclusion. The 404 nationwide permits decision will be made at the time of permit issuance, as part of the Division's water quality certification under CWA Section 401. Where it is determined that the category of activities will result in temporary and limited effects, subsequent individual activities authorized under such permits will not be subject to further antidegradation review. Factors to be considered in determining whether water quality effects will be temporary and limited may include the following:

(a) Length of time during which water quality will be lowered.

(b) Percent change in ambient concentrations of pollutants of concern

(c) Pollutants affected

(d) Likelihood for long-term water quality benefits to the segment (e.g., dredging of contaminated sediments)

(e) Potential for any residual long-term influences on existing uses.

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(f) Impairment of the fish spawning, survival and development of aquatic fauna excluding fish removal efforts.

c. Anti-degradation Review Process

For all activities requiring a Level II review, the Division will notify affected agencies and the public with regards to the requested proposed activity and discussions with stakeholders may be held. In the case of Section 402 discharge permits, if it is determined that a discharge will be allowed, the Division of Water Quality will develop any needed UPDES permits for public notice following the normal permit issuance process.

The ADR will cover the following requirements or determinations:

1. Will all Statutory and regulatory requirements be met?

The Executive Secretary will review to determine that there will be achieved all statutory and regulatory requirements for all new and existing point sources and all required cost-effective and reasonable best management practices for nonpoint source control in the area of the discharge. If point sources exist in the area that have not achieved all statutory and regulatory requirements, the Executive Secretary will consider whether schedules of compliance or other plans have been established when evaluating whether compliance has been assured. Generally, the "area of the discharge" will be determined based on the parameters of concern associated with the proposed activity and the portion of the receiving water that would be affected.

2. Are there any reasonable less-degrading alternatives?

There will be an evaluation of whether there are any reasonable non-degrading or less degrading alternatives for the proposed activity. This question will be addressed by the Division based on information provided by the project proponent. Control alternatives for a proposed activity will be evaluated in an effort to avoid or minimize degradation of the receiving water. Alternatives to be considered, evaluated, and implemented to the extent feasible, could include pollutant trading, water conservation, water recycling and reuse, land application, total containment, etc.

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 MAGHI (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.

It must also be recognized in relationship to evaluating options that would avoid or reduce discharges to the stream, that in some situations it may be more beneficial to leave the water in the stream for instream flow purposes than to remove the discharge to the stream.

3. Special Procedures for 404 Permits.

For 404 permitted activities, all appropriate alternatives to avoid and minimize degradation should be evaluated. Activities involving a discharge of dredged or fill materials that are considered to have more than minor adverse affects on the aquatic environment are regulated by individual CWA Section 404 permits. The decision-making process relative to the 404 permitting program is contained in the 404(b)(1) guidelines (40 CFR Part 230). Prior to issuing a permit under the 404(b)(1) guidelines, the Corps of Engineers:

(a) makes a determination that the proposed activity discharges are unavoidable (i.e., necessary):

(b) examines alternatives to the proposed activity and authorize only the least damaging practicable alternative; and

(c) requires mitigation for all impacts associated with the activity. A 404(b)(1) finding document is produced as a result of this procedure and is the basis for the permit decision. Public participation is provided for in the process. Because the 404(b)(1) guidelines contains an alternatives analysis, the executive secretary will not require development of a separate alternatives analysis for the anti-degradation review. The division will use the analysis in the 404(b)(1) finding document in completing its anti-degradation review and 401 certification.

4. Does the proposed activity have economic and social importance?

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.

5. The applicant may submit a proposal to mitigate any adverse environmental effects of the proposed activity (e.g., instream habitat improvement, bank stabilization). Such mitigation plans should describe the proposed mitigation measures and the costs of such mitigation. Mitigation plans will not have any effect on effluent limits or conditions included in a permit (except possibly where a previously completed mitigation project has resulted in an improvement in background water quality that affects a water quality-based limit). Such mitigation plans will be developed and implemented by the applicant as a means to further minimize the environmental effects of the proposed activity and to increase its socio-economic importance. An effective mitigation plan may, in some cases, allow the Executive Secretary to authorize proposed activities that would otherwise not be authorized.

6. Will water quality standards be violated by the discharge?

Proposed activities that will affect the quality of waters of the state will be allowed only where the proposed activity will not violate water quality standards.

7. Will existing uses be maintained and protected?

Proposed activities can only be allowed if "existing uses" will be maintained and protected. No UPDES permit will be allowed which will permit numeric water quality standards to be exceeded in a receiving water outside the mixing zone. In the case of nonpoint pollution sources, the non-regulatory Section 319 program now in place will address these sources through application of best management practices to ensure that numeric water quality standards are not exceeded.

8. If a situation is found where there is an existing use which is a higher use (i.e., more stringent protection requirements) than that current designated use, the Division will apply the water quality standards and anti-degradation policy to protect the existing use. Narrative criteria may be used as a basis to protect existing uses for parameters where numeric criteria have not been adopted. Procedures to change the stream use designation to recognize the existing use as the designated use would be initiated.

d. Special Procedures for Drinking Water Sources

An Antidegradation Level II Review will be required by the Executive Secretary for discharges to waters with a Class 1C drinking water use assigned.

Depending upon the locations of the discharge and its proximity to downstream drinking water diversions, additional treatment or more stringent effluent limits or additional monitoring, beyond that which may otherwise be required to meet minimum technology standards or in stream water quality standards, may be required by the Executive Secretary in order to adequately protect public health and the environment. Such additional treatment may include additional disinfection, suspended solids removal to make the disinfection process more effective, removal of any specific contaminants for which drinking water maximum contaminant levels (MCLs) exists, and/or nutrient removal to reduce the organic content of raw water used as a source for domestic water systems.

Additional monitoring may include analyses for viruses, Giardia, Cryptosporidium, other pathogenic organisms, and/or any contaminant for which drinking water MCLs exist. Depending on the results of such monitoring, more stringent treatment may then be required.

The additional treatment/effluent limits/monitoring which may be required will be determined by the Executive Secretary after consultation with the Division of Drinking Water and the downstream drinking water users.

e. Public Notice

The public will be provided notice and an opportunity to comment on the conclusions of all completed antidegradation reviews. Where possible, public notice on the antidegradation review conclusions will be combined with the public notice on the proposed permitting action. In the case of UPDES permits, public notice will be provided through the normal permitting process, as all draft permits are public noticed for 30 days, and public comment solicited, before being issued as a final permit. The Statement of Basis for the draft UPDES permit will contain information on how the ADR was addressed including results of the Level I and Level II reviews. In the case of Section 404 permits from the Corps of Engineers, the Division of Water Quality will develop any needed 401 Certifications and the public notice will be published in conjunction with the US Corps of Engineers public notice procedures. Other permits requiring a Level II review will receive a separate public notice according to the normal State public notice procedures.

f. Implementation Procedures

The Executive Secretary shall establish reasonable protocols and guidelines (1) for completing technical, social, and economic need demonstrations, (2) for review and determination of adequacy of Level II ADRs and (3) for determination of additional treatment requirements. Protocols and guidelines will consider federal guidance and will include input from local governments, the regulated community, and the general public. The Executive Secretary will inform the Water Quality Board of any protocols or guidelines that are developed.

R317-2-4. Colorado River Salinity Standards.

In addition to quality protection afforded by these

regulations to waters of the Colorado River and its tributaries, such waters shall be protected also by requirements of "Proposed Water Quality Standards for Salinity including Numeric Criteria and Plan of Implementation for Salinity Control, Colorado River System, June 1975" and a supplement dated August 26, 1975, entitled "Supplement, including Modifications to Proposed Water Quality Standards for Salinity including Numeric Criteria and Plan of Implementation for Salinity Control, Colorado River System, June 1975", as approved by the seven Colorado River Basin States and the U.S. Environmental Protection Agency, as updated by the 1978 Revision and the 1981, 1984, 1987, 1990, 1993, 1996, 1999, 2002, 2005, ~~and~~2008, and 2011 ~~R~~reviews of the above documents.

R317-2-5. Mixing Zones.

A mixing zone is a limited portion of a body of water, contiguous to a discharge, where dilution is in progress but has not yet resulted in concentrations which will meet certain standards for all pollutants. At no time, however, shall concentrations within the mixing zone be allowed which are acutely lethal as determined by bioassay or other approved procedure. Mixing zones may be delineated for the purpose of guiding sample collection procedures and to determine permitted effluent limits. The size of the chronic mixing zone in rivers and streams shall not to exceed 2500 feet and the size of an acute mixing zone shall not exceed 50% of stream width nor have a residency time of greater than 15 minutes. Streams with a flow equal to or less than twice the flow of a point source discharge may be considered to be totally mixed. The size of the chronic mixing zone in lakes and reservoirs shall not exceed 200 feet and the size of an acute mixing zone shall not exceed 35 feet. Domestic wastewater effluents discharged to mixing zones shall meet effluent requirements specified in R317-1-3.

5.1 Individual Mixing Zones. Individual mixing zones may be further limited or disallowed in consideration of the following factors in the area affected by the discharge:

a. Bioaccumulation in fish tissues or wildlife,

b. Biologically important areas such as fish spawning/nursery areas or segments with occurrences of federally listed threatened or endangered species,

c. Potential human exposure to pollutants resulting from drinking water or recreational activities,

d. Attraction of aquatic life to the effluent plume, where toxicity to the aquatic life is occurring.

e. Toxicity of the substance discharged,

f. Zone of passage for migrating fish or other species (including access to tributaries), or

g. Accumulative effects of multiple discharges and mixing zones.

R317-2-6. Use Designations.

The Board as required by Section 19-5-110, shall group the waters of the state into classes so as to protect against controllable pollution the beneficial uses designated within each

class as set forth below. Surface waters of the state are hereby classified as shown in R317-2-13.

6.1 Class 1 -- Protected for use as a raw water source for domestic water systems.

a. Class 1A -- Reserved.

b. Class 1B -- Reserved.

c. Class 1C -- Protected for domestic purposes with prior treatment by treatment processes as required by the Utah Division of Drinking Water

6.2 Class 2 -- Protected for recreational use and aesthetics.

a. 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.

b. 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 a low degree of bodily contact with the water. Examples include, but are not limited to, wading, hunting, and fishing.

6.3 Class 3 -- Protected for use by aquatic wildlife.

a. Class 3A -- Protected for cold water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain.

b. Class 3B -- Protected for warm water species of game fish and other warm water aquatic life, including the necessary aquatic organisms in their food chain.

c. Class 3C -- Protected for nongame fish and other aquatic life, including the necessary aquatic organisms in their food chain.

d. Class 3D -- Protected for waterfowl, shore birds and other water-oriented wildlife not included in Classes 3A, 3B, or 3C, including the necessary aquatic organisms in their food chain.

e. Class 3E -- Severely habitat-limited waters. Narrative standards will be applied to protect these waters for aquatic wildlife.

6.4 Class 4 -- Protected for agricultural uses including irrigation of crops and stock watering.

6.5 Class 5 -- The Great Salt Lake.

a. Class 5A Gilbert Bay

Geographical Boundary -- All open waters at or below approximately 4,208-foot elevation south of the Union Pacific Causeway, excluding all of the Farmington Bay south of the Antelope Island Causeway and salt evaporation ponds.

Beneficial Uses -- Protected for frequent primary and secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain.

b. Class 5B Gunnison Bay

Geographical Boundary -- All open waters at or below approximately 4,208 foot elevation north of the Union Pacific Causeway and west of the Promontory Mountains, excluding salt evaporation ponds.

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Beneficial Uses -- Protected for infrequent primary and secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain.

c. Class 5C Bear River Bay

Geographical Boundary -- All open waters at or below approximately 4,208-foot elevation north of the Union Pacific Causeway and east of the Promontory Mountains, excluding salt evaporation ponds.

Beneficial Uses -- Protected for infrequent primary and secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain.

d. Class 5D Farmington Bay

Geographical Boundary -- All open waters at or below approximately 4,208-foot elevation east of Antelope Island and south of the Antelope Island Causeway, excluding salt evaporation ponds.

Beneficial Uses -- Protected for infrequent primary and secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain.

e. Class 5E Transitional Waters along the Shoreline of the Great Salt Lake Geographical Boundary -- All waters below approximately 4,208-foot elevation to the current lake elevation of the open water of the Great Salt Lake receiving their source water from naturally occurring springs and streams, impounded wetlands, or facilities requiring a UPDES permit. The geographical areas of these transitional waters change corresponding to the fluctuation of open water elevation.

Beneficial Uses -- Protected for infrequent primary and secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain.

R317-2-7. Water Quality Standards.

7.1 Application of Standards

The numeric criteria listed in R317-2-14 shall apply to each of the classes assigned to waters of the State as specified in R317-2-6. It shall be unlawful and a violation of these regulations for any person to discharge or place any wastes or other substances in such manner as may interfere with designated uses protected by assigned classes or to cause any of the applicable standards to be violated, except as provided in R317-1-3.1. At a minimum, assessment of the beneficial use support for waters of the state will be conducted biennially and available for a 30-day period of public comment and review. Monitoring locations and target indicators of water quality standards shall be prioritized and published yearly. For water quality assessment purposes, up to 10 percent of the representative samples may exceed the minimum or maximum criteria for dissolved oxygen, pH, E. coli, total dissolved solids, and temperature, including situations where such criteria have been adopted on a site-specific basis. ~~The Board may allow site specific modifications based upon bioassay or other tests performed in accordance with standard procedures determined by the Board. Site-specific criteria may be developed based on bioassay or other tests~~

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performed in accordance with standard procedures determined by the Board by rulemaking Site-specific criterion may be adopted by rulemaking where biomonitoring data, bioassays, or other scientific analyses indicate that the statewide criterion is over or under protective of the designated uses or where natural or un-alterable conditions or other factors as defined in 40 CFR 131.10(g) prevent the attainment of the statewide criterion.

7.2 Narrative Standards

It shall be unlawful, and a violation of these regulations, for any person to discharge or place any waste or other substance in such a way as will be or may become offensive such as unnatural deposits, floating debris, oil, scum or other nuisances such as color, odor or taste; or cause conditions which produce undesirable aquatic life or which produce objectionable tastes in edible aquatic organisms; or result in concentrations or combinations of substances which produce undesirable physiological responses in desirable resident fish, or other desirable aquatic life, or undesirable human health effects, as determined by bioassay or other tests performed in accordance with standard procedures.

R317-2-8. Protection of Downstream Uses.

All actions to control waste discharges under these regulations shall be modified as necessary to protect downstream designated uses.

R317-2-9. Intermittent Waters.

Failure of a stream to meet water quality standards when stream flow is either unusually high or less than the 7-day, 10-year minimum flow shall not be cause for action against persons discharging wastes which meet both the requirements of R317-1 and the requirements of applicable permits.

R317-2-10. Laboratory and Field Analyses.

10.1 Laboratory Analyses

All laboratory examinations of samples collected to determine compliance with these regulations shall be performed in accordance with standard procedures as approved by the Utah Division of Water Quality by the Utah Office of State Health Laboratory or by a laboratory certified by the Utah Department of Health.

10.2 Field Analyses

All field analyses to determine compliance with these regulations shall be conducted in accordance with standard procedures specified by the Utah Division of Water Quality.

R317-2-11. Public Participation.

Public hearings will be held to review all proposed revisions of water quality standards, designations and classifications, and public meetings may be held for consideration of discharge requirements set to protect water uses under assigned classifications.

R317-2-12. Category 1 and Category 2 Waters.

12.1 Category 1 Waters.

In addition to assigned use classes, the following surface waters of the State are hereby designated as Category 1 Waters:

a. All surface waters geographically located within the outer boundaries of U.S. National Forests whether on public or private lands with the following exceptions:

Category 2 Waters as listed in R317-2-12.2.

Weber River, a tributary to the Great Salt Lake, in the Weber River Drainage from Uintah to Mountain Green.

b. Other surface waters, which may include segments within U.S. National Forests as follows:

1. Colorado River Drainage

Calf Creek and tributaries, from confluence with Escalante River to headwaters.

Sand Creek and tributaries, from confluence with Escalante River to headwaters.

Mamie Creek and tributaries, from confluence with Escalante River to headwaters.

Deer Creek and tributaries, from confluence with Boulder Creek to headwaters (Garfield County).

Indian Creek and tributaries, through Newspaper Rock State Park to headwaters.

2. Green River Drainage

Price River (Lower Fish Creek from confluence with White River to Scofield Dam.

Range Creek and tributaries, from confluence with Green River to headwaters.

Strawberry River and tributaries, from confluence with Red Creek to headwaters.

Ashley Creek and tributaries, from Steinaker diversion to headwaters.

Jones Hole Creek and tributaries, from confluence with Green River to headwaters.

Green River, from state line to Flaming Gorge Dam.

Tollivers Creek, from confluence with Green River to headwaters.

Allen Creek, from confluence with Green River to headwaters.

3. Virgin River Drainage

North Fork Virgin River and tributaries, from confluence with East Fork Virgin River to headwaters.

East Fork Virgin River and tributaries from confluence with North Fork Virgin River to headwaters.

4. Kanab Creek Drainage

Kanab Creek and tributaries, from irrigation diversion at confluence with Reservoir Canyon to headwaters.

5. Bear River Drainage

Swan Creek and tributaries, from Bear Lake to headwaters.

North Eden Creek, from Upper North Eden Reservoir to headwaters.

Big Creek and tributaries, from Big Ditch diversion to headwaters.

Woodruff Creek and tributaries, from Woodruff diversion to headwaters.

3.15

6. Weber River Drainage

Burch Creek and tributaries, from Harrison Boulevard in Ogden to headwaters.

Hardscrabble Creek and tributaries, from confluence with East Canyon Creek to headwaters.

Chalk Creek and tributaries, from ~~U.S. Highway 189~~ Main Street in Coalville to headwaters.

Weber River and tributaries, from ~~U.S. Highway 189~~ Utah State Route 32 near Oakley to headwaters.

7. Jordan River Drainage

City Creek and tributaries, from City Creek Water Treatment Plant to headwaters (Salt Lake County).

Emigration Creek and tributaries, from Hogle Zoo to headwaters (Salt Lake County).

Red Butte Creek and tributaries, from Foothill Boulevard in Salt Lake City to headwaters.

Parley's Creek and tributaries, from 13th East in Salt Lake City to headwaters.

Mill Creek and tributaries, from Wasatch Boulevard in Salt Lake City to headwaters.

Big Cottonwood Creek and tributaries, from Wasatch Boulevard in Salt Lake City to headwaters.

Little Willow Creek and tributaries, from diversion to headwaters (Salt Lake County.)

Bell Canyon Creek and tributaries, from Lower Bells Canyon Reservoir to headwaters (Salt Lake County).

South Fork of Dry Creek and tributaries, from Draper Irrigation Company diversion to headwaters (Salt Lake County).

8. Provo River Drainage

Upper Falls drainage above Provo City diversion (Utah County).

Bridal Veil Falls drainage above Provo City diversion (Utah County).

Lost Creek and tributaries, above Provo City diversion (Utah County).

9. Sevier River Drainage

Chicken Creek and tributaries, from diversion at canyon mouth to headwaters.

Pigeon Creek and tributaries, from diversion to headwaters.

East Fork of Sevier River and tributaries, from Kingston diversion to headwaters.

Parowan Creek and tributaries, from Parowan City to headwaters.

Summit Creek and tributaries, from Summit City to headwaters.

Braffits Creek and tributaries, from canyon mouth to headwaters.

Right Hand Creek and tributaries, from confluence with Coal Creek to headwaters.

10. Raft River Drainage

Clear Creek and tributaries, from state line to headwaters (Box Elder County).

Birch Creek (Box Elder County), from state line to headwaters.

3.16

Cotton Thomas Creek from confluence with South Junction Creek to headwaters.

11. Western Great Salt Lake Drainage

All streams on the south slope of the Raft River Mountains above 7000' mean sea level.

Donner Creek (Box Elder County), from irrigation diversion to Utah-Nevada state line.

Bettridge Creek (Box Elder County), from irrigation diversion to Utah-Nevada state line.

Clover Creek, from diversion to headwaters.

All surface waters on public land on the Deep Creek Mountains.

12. Farmington Bay Drainage

Holmes Creek and tributaries, from Highway US-89 to headwaters (Davis County).

Shepard Creek and tributaries, from ~~Height~~ Haight Bench diversion to headwaters (Davis County).

Farmington Creek and tributaries, from ~~Height~~ Haight Bench Canal diversion to headwaters (Davis County).

Steed Creek and tributaries, from Highway US-89 to headwaters (Davis County).

12.2 Category 2 Waters.

In addition to assigned use classes, the following surface waters of the State are hereby designated as Category 2 Waters:

a. Green River Drainage

Deer Creek, a tributary of Huntington Creek, from the forest boundary to 4800 feet upstream.

Electric Lake.

~~b. Weber River Drainage~~

~~Weber River from Uintah to Mountain Green.~~

R317-2-13. Classification of Waters of the State (see R317-2-6).

a. Colorado River Drainage

13.1 Upper Colorado River Basin

TABLE

Paria River and tributaries, from state line to headwaters	2B		3C	4
All tributaries to Lake Powell, except as listed below	2B	3B		4
Tributaries to Escalante River from confluence with Boulder Creek to headwaters, including Boulder Creek	2B	3A		4
Dirty Devil River and tributaries, from Lake Powell to Fremont River	2B		3C	4
Deer Creek and tributaries, from confluence with Boulder Creek to headwaters	2B	3A		4

Fremont River and tributaries, from confluence with Muddy Creek to Capitol Reef National Park, except as listed below	1C	2B		3C	4
Pleasant Creek and tributaries, from confluence with Fremont River to East boundary of Capitol Reef National Park		2B		3C	4
Pleasant Creek and tributaries, from East boundary of Capitol Reef National Park to headwaters	1C	2B	3A		
Fremont River and tributaries, through Capitol Reef National Park to headwaters	1C	2A	3A		4
Muddy Creek and tributaries, from confluence with Fremont River to Highway U-10 crossing, except as listed below		2B		3C	4
Quitchupah Creek and Tributaries, from Highway U-10 crossing to headwaters		2B	3A		4
Ivie Creek and tributaries, from Highway U-10 to headwaters		2B	3A		4
Muddy Creek and tributaries, from Highway U-10 crossing to headwaters	1C	2B	3A		4
San Juan River and Tributaries, from Lake Powell to state line except As listed below:	1C	2A		3B	4
Johnson Creek and tributaries, from confluence with Recapture Creek to headwaters	1C	2B	3A		4
Verdure Creek and tributaries,					

3.18

from Highway US-191 crossing to headwaters		2B	3A		4
North Creek and tributaries, from confluence with Montezuma Creek to headwaters	1C	2B	3A		4
South Creek and tributaries, from confluence with Montezuma Creek to headwaters	1C	2B	3A		4
Spring Creek and tributaries, from confluence with Vega Creek to headwaters		2B	3A		4
Montezuma Creek and tributaries, from U.S. Highway 191 to headwaters	1C	2B	3A		4
Colorado River and tributaries, from Lake Powell to state line except as listed below	1C 2A			3B	4
Indian Creek and tributaries, through Newspaper Rock State Park to headwaters	1C	2B	3A		4
Kane Canyon Creek and tributaries, from confluence with Colorado River to headwaters		2B		3C	4
Mill Creek and tributaries, from confluence with Colorado River to headwaters	1C	2B	3A		4
Dolores River and tributaries, from confluence with Colorado River to state line		2B		3C	4
Roc Creek and tributaries, from confluence with Dolores River to headwaters		2B	3A		4
LaSal Creek and tributaries, from state line to headwaters		2B	3A		4
Lion Canyon Creek and tributaries, from state line to headwaters		2B	3A		4
Little Dolores River and tributaries, from confluence with Colorado River to state line		2B		3C	4

Bitter Creek and tributaries, from confluence with Colorado River to headwaters		2B		3C	4

b. Green River Drainage

TABLE

Green River and tributaries, from confluence with Colorado River to state line except as listed below:	1C	2A		3B	4
Thompson Creek and tributaries from Interstate Highway 70 to headwaters		2B		3C	4
San Rafael River and tributaries, from confluence with Green River to confluence with Ferron Creek		2B		3C	4
Ferron Creek and tributaries, from confluence with San Rafael River to Millsite Reservoir		2B		3C	4
Ferron Creek and tributaries, from Millsite Reservoir to headwaters	1C	2B	3A		4
Huntington Creek and tributaries, from confluence with Cottonwood Creek to Highway U-10 crossing		2B		3C	4
Huntington Creek and tributaries, from Highway U-10 crossing to headwaters	1C	2B	3A		4
Cottonwood Creek and tributaries, from confluence with Huntington Creek to Highway U-57 crossing		2B		3C	4
Cottonwood Creek and tributaries, from Highway U-57 crossing to headwaters	1C	2B	3A		4
Cottonwood Canal, Emery County	1C	2B		3E	4
Price River and tributaries,					

3.20

from confluence with Green River to Carbon Canal Diversion at Price City Golf Course		2B		3C	4
Except as listed below Grassy Trail Creek and tributaries, from Grassy Trail Creek Reservoir to headwaters	1C	2B	3A		4
Price River and tributaries, from Carbon Canal Diversion at Price City Golf Course to Price City Water ~~Water~~ Treatment Plant intake.		2B	3A		4
Price River and tributaries, from Price City Water Treatment Plant intake to headwaters	1C	2B	3A		4
Range Creek and tributaries, from confluence with Green River to Range Creek Ranch		2B	3A		4
Range Creek and tributaries, from Range Creek Ranch to headwaters	1C	2B	3A		4
Rock Creek and tributaries, from confluence with Green River to headwaters		2B	3A		4
Nine Mile Creek and tributaries, from confluence with Green River to headwaters		2B	3A		4
Pariette Draw and tributaries, from confluence with Green River to headwaters		2B	3B	3D	4
Willow Creek and tributaries (Uintah County), from confluence with Green River to headwaters		2B	3A		4
White River and tributaries, from confluence with Green River to state line, except as listed below		2B	3B		4
Bitter Creek and Tributaries from White River to Headwaters		2B	3A		4

3.21

Duchesne River and tributaries, from confluence with Green River to Myton Water Treatment Plant intake, except as listed below		2B	3B		4
Uinta River and tributaries, From confluence with Duchesne River to Highway US-40 crossing		2B	3B		4
Uinta River and tributaries, From Highway US-4- crossing to headwaters		2B	3A		4
Power House Canal from Confluence with Uinta River to headwaters		2B	3A		4
Whiterocks River and Canal, From Tridell Water Treatment Plant to Headwaters	1C	2B	3A		4
Duchesne River and tributaries, from Myton Water Treatment Plant intake to headwaters	1C	2B	3A		4
Lake Fork River and tributaries, from confluence with Duchesne River to headwaters	1C	2B	3A		4
Lake Fork Canal from Dry Gulch Canal Diversion to Moon Lake	1C	2B		3E	4
Dry Gulch Canal, from Myton Water Treatment Plant to Lake Fork Canal	1C	2B		3E	4
Ashley Creek and tributaries, from confluence with Green River to Steinaker diversion		2B	3B		4
Ashley Creek and tributaries, from Steinaker diversion to headwaters	1C	2B	3A		4
Big Brush Creek and tributaries, from confluence					

with Green River to Tyzack (Red Fleet) Dam		2B	3B		4
Big Brush Creek and tributaries, from Tyzack (Red Fleet) Dam to headwaters	1C	2B	3A		4
Jones Hole Creek and tributaries, from confluence with Green River to headwaters		2B	3A		
Diamond Gulch Creek and tributaries, from confluence with Green River to headwaters		2B	3A		4
Pot Creek and tributaries, from Crouse Reservoir to headwaters		2B	3A		4
Green River and tributaries, from Utah-Colorado state line to Flaming Gorge Dam except as listed below:	2A		3A		4
Sears Creek and tributaries, Daggett County		2B	3A		
Tolivers Creek and tributaries, Daggett County		2B	3A		
Red Creek and tributaries, from confluence with Green River to state line		2B		3C	4
Jackson Creek and tributaries, Daggett County		2B	3A		
Davenport Creek and tributaries, Daggett County		2B	3A		
Goslin Creek and tributaries, Daggett County		2B	3A		
Gorge Creek and tributaries, Daggett County		2B	3A		
Beaver Creek and tributaries, Daggett County		2B	3A		
O-Wi-Yu-Kuts Creek and tributaries, Daggett County		2B	3A		

3.23

Tributaries to Flaming Gorge Reservoir, except as listed below		2B 3A		4
Birch Spring Draw and tributaries, from Flaming Gorge Reservoir to headwaters		2B	3C	4
Spring Creek and tributaries, from Flaming Gorge Reservoir to headwaters		2B 3A		
All Tributaries of Flaming Gorge Reservoir from Utah-Wyoming state line to headwaters		2B 3A		4

13.2 Lower Colorado River Basin
a. Virgin River Drainage

TABLE

Beaver Dam Wash and tributaries, from Motoqua to headwaters		2B	3B	4
Virgin River and tributaries from state line to Quail Creek diversion except as listed below		2B	3B	4
Santa Clara River from confluence with Virgin River to Gunlock Reservoir	1C	2B	3B	4
Santa Clara River and tributaries, from Gunlock Reservoir to headwaters		2B 3A		4
Leed's Creek, from confluence with Quail Creek to headwaters		2B 3A		4
Quail Creek from Quail Creek Reservoir to headwaters	1C	2B 3A		4
Ash Creek and tributaries, from confluence with Virgin River to Ash Creek Reservoir		2B 3A		4
Ash Creek and tributaries, From Ash Creek Reservoir to headwaters		2B 3A		4
Virgin River and tributaries, from the Quail Creek diversion to headwaters, except as listed				

below	1C	2B	3C	4
North Fork Virgin River and tributaries	1C 2A	3A		4
East Fork Virgin River, from town of Glendale to headwaters		2B 3A		4
Kolob Creek, from confluence with Virgin River to headwaters		2B 3A		4

b. Kanab Creek Drainage

TABLE

Kanab Creek and tributaries, from state line to irrigation diversion at confluence with Reservoir Canyon		2B	3C	4
Kanab Creek and tributaries, from irrigation diversion at confluence with Reservoir Canyon to headwaters		2B 3A		4
Johnson Wash and tributaries, from state line to confluence with Skutumpah Canyon		2B	3C	4
Johnson Wash and tributaries, from confluence with Skutumpah Canyon to headwaters		2B 3A		4

13.3 Bear River Basin
a. Bear River Drainage

TABLE

Bear River and tributaries, from Great Salt Lake to Utah-Idaho border, except as listed below:		2B	3B 3D	4
Perry Canyon Creek from U.S. Forest boundary to headwaters		2B 3A		4
Box Elder Creek from confluence with Black Slough to Brigham City Reservoir (the Mayor's Pond)		2B	3C	4
Box Elder Creek, from Brigham City Reservoir (the Mayor's Pond) to headwaters		2B 3A		4

Salt Creek, from confluence with Bear River to Crystal Hot Springs		2B	3B	3D	
Malad River and tributaries, from confluence with Bear River to state line		2B		3C	
Little Bear River and tributaries, from Cutler Reservoir to headwaters		2B	3A	3D	4
Logan River and tributaries, from Cutler Reservoir to headwaters		2B	3A	3D	4
Blacksmith Fork and tributaries, from confluence with Logan River to headwaters		2B	3A		4
Newton Creek and tributaries, from Cutler Reservoir to Newton Reservoir		2B	3A		4
Clarkston Creek and tributaries, from Newton Reservoir to headwaters		2B	3A		4
Birch Creek and tributaries, from confluence with Clarkston Creek to headwaters		2B	3A		4
Summit Creek and tributaries, from confluence with Bear River to headwaters		2B	3A		4
Cub River and tributaries, from confluence with Bear River to state line, except as listed below:		2B	3B		4
High Creek and tributaries, from confluence with Cub River to headwaters		2B	3A		4
All tributaries to Bear Lake from Bear Lake to headwaters, except as listed below		2B	3A		4
Swan Springs tributary to Swan Creek	1C	2B	3A		
Bear River and tributaries in					

3.26

Rich County		2B 3A		4
Bear River and tributaries, from Utah-Wyoming state line to headwaters (Summit County)		2B 3A		4
Mill Creek and tributaries, from state line to headwaters (Summit County)		2B 3A		4

13.4 Weber River Basin
a. Weber River Drainage

TABLE

Willard Creek, from Willard Bay Reservoir to headwaters		2B 3A		4
Weber River, from Great Salt Lake to Slaterville diversion, except as listed below:		2B	3C 3D	4
Four Mile Creek from I-15 To headwaters		2B 3A		4
Weber River and tributaries, from Slaterville diversion to Stoddard diversion, except as listed below		2B 3A		4
Ogden River and tributaries, From confluence with Weber River To Pineview Dam, except as listed Below		2A ~~2B~~ 3A		4
Wheeler Creek from Confluence with Ogden River to headwaters	1C	2B 3A		4
All tributaries to Pineview Reservoir	1C	2B 3A		4
Strongs Canyon Creek and Tributaries, from U.S. National Forest boundary to headwaters	1C	2B 3A		4
Burch Creek and tributaries, from Harrison Boulevard in Ogden to Headwaters	1C	2B 3A		
Spring Creek and tributaries, From U.S. National Forest Boundary to headwaters	1C	2B 3A		4

Weber River and tributaries, from Stoddard diversion to headwaters	1C	2B 3A			4

13.5 Utah Lake-Jordan River Basin
a. Jordan River Drainage

TABLE

Jordan River, from Farmington Bay to North Temple Street, Salt Lake City		2B	3B *	3D	4
State Canal, from Farmington Bay to confluence with the Jordan River		2B	3B *	3D	4
Jordan River, from North Temple Street in Salt Lake City to confluence with Little Cottonwood Creek		2B	3B *		4
Surplus Canal from Great Salt Lake to the diversion from the Jordan River		2B	3B *	3D	4
Jordan River from confluence with Little Cottonwood Creek to Narrows Diversion		2B 3A			4
Jordan River, from Narrows Diversion to Utah Lake	1C	2B	3B		4
City Creek, from Memory Park in Salt Lake City to City Creek Water Treatment Plant		2B 3A			
City Creek, from City Creek Water Treatment Plant to headwaters	1C	2B 3A			
Red Butte Creek and tributaries from Liberty Park pond inlet to Red Butte Reservoir		2B 3A			4
Red Butte Creek and tributaries, from Red Butte Reservoir to headwaters	1C	2B 3A			
Emigration Creek and tributaries, from ~~Foothill Boulevard 1100 East~~ in Salt Lake City to headwaters		2B 3A			4

3.28

Parley's Creek and tributaries, from 1300 East in Salt Lake City to Mountain Dell Reservoir ~~headwaters~~	1C	2B 3A		
Parley's Creek and tributaries, from Mountain Dell Reservoir to headwaters	1C	2B 3A		
Mill Creek (Salt Lake County) from confluence with Jordan River to Interstate Highway 15		2B	3C	4
Mill Creek (Salt Lake County) and tributaries from Interstate Highway 15 to headwaters		2B 3A		4
Big Cottonwood Creek and tributaries, from confluence with Jordan River to Big Cottonwood Water Treatment Plant		2B 3A		4
Big Cottonwood Creek and tributaries, from Big Cottonwood Water Treatment Plant to headwaters	1C	2B 3A		
Deaf Smith Canyon Creek and tributaries	1C	2B 3A		4
Little Cottonwood Creek and tributaries, from confluence with Jordan River to Metropolitan Water Treatment Plant		2B 3A		4
Little Cottonwood Creek and tributaries, from Metropolitan Water Treatment Plant to headwaters	1C	2B 3A		
Bell Canyon Creek and tributaries, from lower Bell's Canyon reservoir to headwaters	1C	2B 3A		
Little Willow Creek and tributaries, from Draper Irrigation Company diversion to headwaters	1C	2B 3A		
Big Willow Creek and tributaries, from Draper Irrigation Company diversion to headwaters	1C	2B 3A		
South Fork of Dry Creek and				

tributaries, from Draper				
Irrigation Company diversion to headwaters	1C	2B 3A		
All permanent streams on east slope of Oquirrh Mountains (Coon, Barney's, Bingham, Butterfield, and Rose Creeks)		2B	3D	4
Kersey Creek from confluence of C-7 Ditch to headwaters		2B	3D	

* Site specific criteria for dissolved oxygen. See Table 2.14.5.

b. Provo River Drainage

TABLE

Provo River and tributaries, from Utah Lake to Murdock diversion		2B 3A		4
Provo River and tributaries, from Murdock Diversion to headwaters, except as listed below	1C	2B 3A		4
Upper Falls drainage above Provo City diversion	1C	2B 3A		
Bridal Veil Falls drainage above Provo City diversion	1C	2B 3A		
Lost Creek and tributaries above Provo City diversion	1C	2B 3A		

c. Utah Lake Drainage

TABLE

Dry Creek and tributaries (above Alpine), from U.S. National Forest boundary to headwaters		2B 3A		4
American Fork Creek and tributaries, from diversion at mouth of American Fork Canyon to headwaters		2B 3A		4
Spring Creek and tributaries, from Utah Lake near Lehi to				

headwaters		2B	3A				4
Lindon Hollow Creek and tributaries, from Utah Lake to headwaters		2B		3B			4
Rock Canyon Creek and tributaries (East of Provo) from U.S. National Forest boundary to headwaters	1C	2B	3A				4
Mill Race (except from Interstate Highway 15 to the Provo City WWTP discharge) and tributaries from Utah Lake to headwaters		2B		3B			4
Mill Race from Interstate Highway 15 to the Provo City wastewater treatment plant discharge		2B		3B			4
Spring Creek and tributaries from Utah Lake (Provo Bay) to 50 feet upstream from the east boundary of the Industrial Parkway Road Right-of-way		2B		3B			4
Tributary to Spring Creek (Utah County) which receives the Springville City WWTP effluent from confluence with Spring Creek to headwaters		2B				3D	4
Spring Creek and tributaries from 50 feet upstream from the east boundary of the Industrial Parkway Road right-of-way to the headwaters		2B	3A				4
Ironton Canal from Utah Lake (Provo Bay) to the east boundary of the Denver and Rio Grande Western Railroad right-of-way		2B			3C		4
Ironton Canal from the east boundary of the Denver and Rio Grande Western Railroad right-of-way to the point of diversion from Spring Creek		2B	3A				4
Hobble Creek and tributaries, from Utah Lake to headwaters		2B	3A				4
Dry Creek and tributaries from Utah Lake (Provo Bay) to Highway-US 89		2B				3E	4

Dry Creek and tributaries from Highway-US 89 to headwaters	2B	3A		4
Spanish Fork River and tributaries, from Utah Lake to diversion at Moark Junction	2B	3B	3D	4
Spanish Fork River and tributaries, from diversion at Moark Junction to headwaters	2B	3A		4
Benjamin Slough and tributaries from Utah Lake to headwaters, except as listed below	2B	3B		4
Beer Creek (Utah County) from 4850 West (in NE1/4NE1/4 sec. 36, T.8 S., R.1 E.) to headwaters	2B		3C	4
Salt Creek, from Nephi diversion to headwaters	2B	3A		4
Currant Creek, from mouth of Goshen Canyon to Mona Reservoir	2B	3A		4
Burriston Creek, from Mona Reservoir to headwaters	2B	3A		4
Peteetneet Creek and tributaries, from irrigation diversion above Maple Dell to headwaters	2B	3A		4
Summit Creek and tributaries (above Santaquin), from U.S. National Forest boundary to headwaters	2B	3A		4
All other permanent streams entering Utah Lake	2B	3B		4

13.6 Sevier River Basin
a. Sevier River Drainage

TABLE

Sevier River and tributaries from Sevier Lake to Gunnison Bend Reservoir to U.S.National Forest boundary except				

3.32

as listed below	2B	3C	4
Beaver River and tributaries from Minersville City to headwaters	2B 3A		4
Little Creek and tributaries, From irrigation diversion to Headwaters	2B 3A		4
Pinto Creek and tributaries, From Newcastle Reservoir to Headwaters	2B 3A		4
Coal Creek and tributaries	2B 3A		4
Summit Creek and tributaries	2B 3A		4
Parowan Creek and tributaries	2B 3A		4
Tributaries to Sevier River from Sevier Lake to Gunnison Bend Reservoir from U.S. National Forest boundary to headwaters, including:	2B 3A		4
Pioneer Creek and tributaries, Millard County	2B 3A		4
Chalk Creek and tributaries, Millard County	2B 3A		4
Meadow Creek and tributaries, Millard County	2B 3A		4
Corn Creek and tributaries, Millard County	2B 3A		4
Sevier River and tributaries below U.S. National Forest boundary from Gunnison Bend Reservoir to Annabella Diversion except ~~except~~ as listed below 4		2B	3B
Oak Creek and tributaries, Millard County	2B 3A		4
Round Valley Creek and tributaries, Millard County	2B 3A		4
Judd Creek and tributaries, Juab County	2B 3A		4
Meadow Creek and tributaries,			

Juab County	2B	3A			4
Cherry Creek and tributaries Juab County	2B	3A			4
Tanner Creek and tributaries, Juab County	2B			3E	4
Baker Hot Springs, Juab County	2B		3D		4
Chicken Creek and tributaries, Juab County	2B	3A			4
San Pitch River and tributaries, from confluence with Sevier River to Highway U-132 crossing except As listed below:	2B		3C	3D	4
Twelve Mile Creek (South Creek) and tributaries, from U.S. Forest Service boundary to headwaters	2B	3A			4
Six Mile Creek and tributaries, Sanpete County	2B	3A			4
Manti Creek (South Creek) and tributaries, from U.S. Forest Service boundary to headwaters	2B	3A			4
Ephraim Creek (Cottonwood Creek) and tributaries, from U.S. Forest Service to headwaters	2B	3A			4
Oak Creek and tributaries, from U.S. Forest Service boundary near Spring City to headwaters	2B	3A			4
Fountain Green Creek and tributaries, from U.S. Forest Service boundary to headwaters	2B	3A			4
San Pitch River and tributaries, from Highway U-132 crossing to headwaters	2B	3A			4
Tributaries to Sevier River from Gunnison Bend Reservoir to					

Annabelle Diversion from U.S. National Forest boundary to headwaters		2B 3A	4
Sevier River and tributaries, from Annabella diversion to headwaters		2B 3A	4
Monroe Creek and tributaries, from diversion to headwaters		2B 3A	4
Little Creek and tributaries, from irrigation diversion to headwaters		2B 3A	4
Pinto Creek and tributaries, from Newcastle Reservoir to headwaters		2B 3A	4
Coal Creek and tributaries		2B 3A	4
Summit Creek and tributaries		2B 3A	4
Parowan Creek and tributaries		2B 3A	4
Duck Creek and tributaries	1C	2B 3A	4

13.7 Great Salt Lake Basin
a. Western Great Salt Lake Drainage

TABLE

Grouse Creek and tributaries, Box Elder County		2B 3A	4
Muddy Creek and tributaries, Box Elder County		2B 3A	4
Dove Creek and tributaries, Box Elder County		2B 3A	4
Pine Creek and tributaries, Box Elder County		2B 3A	4
Rock Creek and tributaries, Box Elder County		2B 3A	4
Fisher Creek and tributaries, Box Elder County		2B 3A	4
Dunn Creek and tributaries, Box Elder County		2B 3A	4

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Indian Creek and tributaries, Box Elder County		2B	3A		4
Tenmile Creek and tributaries, Box Elder County		2B	3A		4
Curlew (Deep) Creek, Box Elder County		2B	3A		4
Blue Creek and tributaries, from Great Salt Lake to Blue Creek Reservoir		2B		3D	4
Blue Creek and tributaries, from Blue Creek Reservoir to headwaters		2B	3B		4
All perennial streams on the east slope of the Pilot Mountain Range	1C	2B	3A		4
Donner Creek and tributaries, from irrigation diversion to Utah-Nevada state line		2B	3A		4
Bettridge Creek and tributaries, from irrigation diversion to Utah-Nevada state line		2B	3A		4
North Willow Creek and tributaries, Tooele County		2B	3A		4
South Willow Creek and tributaries, Tooele County		2B	3A		4
Hickman Creek and tributaries, Tooele County		2B	3A		4
Barlow Creek and tributaries, Tooele County		2B	3A		4
Clover Creek and tributaries, Tooele County		2B	3A		4
Faust Creek and tributaries, Tooele County		2B	3A		4
Vernon Creek and tributaries, Tooele County		2B	3A		4
Ophir Creek and tributaries, Tooele County		2B	3A		4
Soldier Creek and Tributaries					

from the Drinking Water Treatment Facility Headwaters, Tooele County	1C	2B	3A		4
Settlement Canyon Creek and tributaries, Tooele County		2B	3A		4
Middle Canyon Creek and tributaries, Tooele County		2B	3A		4
Tank Wash and tributaries, Tooele County		2B	3A		4
Basin Creek and tributaries, Juab and Tooele Counties		2B	3A		4
Thomas Creek and tributaries, Juab County		2B	3A		4
Indian Farm Creek and tributaries, Juab County		2B	3A		4
Cottonwood Creek and tributaries, Juab County		2B	3A		4
Red Cedar Creek and tributaries, Juab County		2B	3A		4
Granite Creek and tributaries, Juab County		2B	3A		4
Trout Creek and tributaries, Juab County		2B	3A		4
Birch Creek and tributaries, Juab County		2B	3A		4
Deep Creek and tributaries, from Rock Spring Creek to headwaters, Juab and Tooele Counties		2B	3A		4
Cold Spring, Juab County		2B		3C 3D	
Cane Spring, Juab County		2B		3C 3D	
Lake Creek, from Garrison (Pruess) Reservoir to Nevada state line		2B	3A		4
Snake Creek and tributaries, Millard County		2B	3B		4

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Salt Marsh Spring Complex, Millard County		2B	3A			
Twin Springs, Millard County		2B		3B		
Tule Spring, Millard County		2B			3C	3D
Coyote Spring Complex, Millard County		2B			3C	3D
Hamblin Valley Wash and tributaries, from Nevada state line to headwaters (Beaver and Iron Counties)		2B			3D	4
Indian Creek and tributaries, Beaver County, from Indian Creek Reservoir to headwaters		2B	3A			4
Shoal Creek and tributaries, Iron County		2B	3A			4

b. Farmington Bay Drainage

TABLE

Corbett Creek and tributaries, from Highway to headwaters		2B	3A			4
Kays Creek and tributaries, from Farmington Bay to U.S. National Forest boundary		2B		3B		4
North Fork Kays Creek and tributaries, from U.S. National Forest boundary to headwaters		2B	3A			4
Middle Fork Kays Creek and tributaries, from U.S. National Forest boundary to headwaters	1C	2B	3A			4
South Fork Kays Creek and tributaries, from U.S. National Forest boundary to headwaters	1C	2B	3A			4
Snow Creek and tributaries		2B			3C	4
Holmes Creek and tributaries, from Farmington Bay to U.S. National Forest boundary		2B		3B		4
Holmes Creek and tributaries, from U.S. National Forest						

boundary to headwaters	1C	2B	3A		4
Baer Creek and tributaries, from Farmington Bay to Interstate Highway 15		2B		3C	4
Baer Creek and tributaries, from Interstate Highway 15 to Highway US-89		2B	3B		4
Baer Creek and tributaries, from Highway US-89 to headwaters	1C	2B	3A		4
Shepard Creek and tributaries, from U.S. National Forest boundary to headwaters	1C	2B	3A		4
Farmington Creek and tributaries, from Farmington Bay Waterfowl Management Area to U.S. National Forest boundary		2B	3B		4
Farmington Creek and tributaries, from U.S. National Forest boundary to headwaters	1C	2B	3A		4
Rudd Creek and tributaries, from Davis aqueduct to headwaters		2B	3A		4
Steed Creek and tributaries, from U.S. National Forest boundary to headwaters	1C	2B	3A		4
Davis Creek and tributaries, from Highway US-89 to headwaters		2B	3A		4
Lone Pine Creek and tributaries, from Highway US-89 to headwaters		2B	3A		4
Ricks Creek and tributaries, from Highway I-15 to headwaters	1C	2B	3A		4
Barnard Creek and tributaries, from Highway US-89 to headwaters		2B	3A		4
Parrish Creek and tributaries, from Davis Aqueduct to headwaters		2B	3A		4
Deuel Creek and tributaries, (Centerville Canyon) from Davis Aqueduct to headwaters		2B	3A		4
Stone Creek and tributaries, from Farmington Bay Waterfowl Management Area to U.S. National					

Forest boundary		2B 3A		4
Stone Creek and tributaries, from U.S. National Forest boundary to headwaters	1C	2B 3A		4
Barton Creek and tributaries, from U.S. National Forest boundary to headwaters		2B 3A		4
Mill Creek (Davis County) and tributaries, from confluence with State Canal to U.S. National Forest boundary		2B	3B	4
Mill Creek (Davis County) and tributaries, from U.S. National Forest boundary to headwaters	1C	2B 3A		4
North Canyon Creek and tributaries, from U.S. National Forest boundary to headwaters		2B 3A		4
Howard Slough		2B	3C	4
Hooper Slough		2B	3C	4
Willard Slough		2B	3C	4
Willard Creek to Headwaters	1C	2B 3A		4
Chicken Creek to Headwaters	1C	2B 3A		4
Cold Water Creek to Headwaters	1C	2B 3A		4
One House Creek to Headwaters	1C	2B 3A		4
Garner Creek to Headwaters	1C	2B 3A		4

13.8 Snake River Basin
a. Raft River Drainage (Box Elder County)

TABLE

Raft River and tributaries		2B 3A		4
Clear Creek and tributaries, from Utah-Idaho state line to headwaters		2B 3A		4
Onemile Creek and tributaries, from Utah-Idaho state line to				

headwaters	2B 3A	4
George Creek and tributaries, from Utah-Idaho state line to headwaters	2B 3A	4
Johnson Creek and tributaries, from Utah-Idaho state line to headwaters	2B 3A	4
Birch Creek and tributaries, from state line to headwaters	2B 3A	4
Pole Creek and tributaries, from state line to headwaters	2B 3A	4
Goose Creek and tributaries	2B 3A	4
Hardesty Creek and tributaries, from state line to headwaters	2B 3A	4
Meadow Creek and tributaries, from state line to headwaters	2B 3A	4

13.9 All irrigation canals and ditches statewide, except as otherwise designated: 2B, 3E, 4

13.10 All drainage canals and ditches statewide, except as otherwise designated: 2B, 3E

13.11 National Wildlife Refuges and State Waterfowl Management Areas, and other Areas Associated with the Great Salt Lake

TABLE

Bear River National Wildlife Refuge, Box Elder County	2B 3B 3D	
Bear River Bay		
Open Water below approximately 4,208 ft.		5C
Transitional Waters approximately 4,208 ft. to Open Water		5E
Open Water above approximately 4,208 ft.	2B 3B 3D	
Brown's Park Waterfowl Management Area, Daggett County	2B 3A 3D	
Clear Lake Waterfowl Management Area, Millard County	2B 3C 3D	
Desert Lake Waterfowl Management Area, Emery County	2B 3C 3D	

3.41

Farmington Bay Waterfowl Management Area, Davis and Salt Lake Counties	2B		3C 3D	
Farmington Bay				
Open Water below approximately 4,208 ft.				5D
Transitional Waters approximately 4,208 ft. to Open Water				5E
Open Water above approximately 4,208 ft.	2B	3B	3D	
Fish Springs National Wildlife Refuge, Juab County	2B		3C 3D	
Harold Crane Waterfowl Management Area, Box Elder County	2B		3C 3D	
Gilbert Bay				
Open Water below approximately 4,208 ft.				5A
Transitional Waters approximately 4,208 ft. to Open Water				5E
Open Water above approximately 4,208 ft.	2B	3B	3D	
Gunnison Bay				
Open Water below approximately 4,208 ft.				5B
Transitional Waters approximately 4,208 ft. to Open Water				5E
Open Water above approximately 4,208 ft.	2B	3B	3D	
Howard Slough Waterfowl Management Area, Weber County	2B		3C 3D	
Locomotive Springs Waterfowl Management Area, Box Elder County	2B	3B	3D	
Ogden Bay Waterfowl Management Area, Weber County	2B		3C 3D	
Ouray National Wildlife Refuge, Uintah County	2B	3B	3D	
Powell Slough Waterfowl Management Area, Utah County	2B		3C 3D	
Public Shooting Grounds Waterfowl Management Area, Box Elder County	2B		3C 3D	

Salt Creek Waterfowl Management Area, Box Elder County		2B		3C	3D
Stewart Lake Waterfowl Management Area, Uintah County		2B	3B		3D
Timpie Springs Waterfowl Management Area, Tooele County		2B	3B		3D

13.12 Lakes and Reservoirs. All lakes and any reservoirs greater than 10 acres not listed in 13.12 are assigned by default to the classification of the stream with which they are associated.

a. Beaver County

TABLE

Anderson Meadow Reservoir		2B	3A		4
Manderfield Reservoir		2B	3A		4
LaBaron Reservoir		2B	3A		4
Kent's Lake		2B	3A		4
Minersville Reservoir		2B	3A	3D	4
Puffer Lake		2B	3A		
Three Creeks Reservoir		2B	3A		4

b. Box Elder County

TABLE

Cutler Reservoir (including portion in Cache County)		2B	3B	3D	4
Etna Reservoir		2B	3A		4
Lynn Reservoir		2B	3A		4
Mantua Reservoir		2B	3A		4
Willard Bay Reservoir	1C 2A	~~2B~~	3B	3D	4

c. Cache County

TABLE

Hyrum Reservoir	2A	~~2B~~	3A~~**~~		4

Comment [C1]: These asterisks are strikethrough

3.43

Newton Reservoir		2B	3A		4
Porcupine Reservoir		2B	3A		4
Pelican Pond		2B		3B	4
Tony Grove Lake		2B	3A		4

d. Carbon County

TABLE

Grassy Trail Creek Reservoir	1C	2B	3A		4
Olsen Pond		2B		3B	4
Scofield Reservoir	1C	2B	3A		4

e. Daggett County

TABLE

Browne Reservoir		2B	3A		4
Daggett Lake		2B	3A		4
Flaming Gorge Reservoir (Utah portion)	1C 2A	~~2B~~	3A		4
Long Park Reservoir	1C	2B	3A		4
Sheep Creek Reservoir		2B	3A		4
Spirit Lake		2B	3A		4
Upper Potter Lake		2B	3A		4

f. Davis County

TABLE

Farmington Ponds		2B	3A		4
Kaysville Highway Ponds		2B	3A		4
Holmes Creek Reservoir		2B		3B	4

g. Duchesne County

TABLE

Allred Lake		2B	3A		4

3.44

Atwine Lake		2B 3A	4
Atwood Lake		2B 3A	4
Betsy Lake		2B 3A	4
Big Sandwash Reservoir	1C	2B 3A	4
Bluebell Lake		2B 3A	4
Brown Duck Reservoir		2B 3A	4
Butterfly Lake		2B 3A	4
Cedarview Reservoir		2B 3A	4
Chain Lake #1		2B 3A	4
Chepeta Lake		2B 3A	4
Clements Reservoir		2B 3A	4
Cleveland Lake		2B 3A	4
Cliff Lake		2B 3A	4
Continent Lake		2B 3A	4
Crater Lake		2B 3A	4
Crescent Lake		2B 3A	4
Daynes Lake		2B 3A	4
Dean Lake		2B 3A	4
Doll Lake		2B 3A	4
Drift Lake		2B 3A	4
Elbow Lake		2B 3A	4
Farmer's Lake		2B 3A	4
Fern Lake		2B 3A	4
Fish Hatchery Lake		2B 3A	4
Five Point Reservoir		2B 3A	4
Fox Lake Reservoir		2B 3A	4
Governor's Lake		2B 3A	4

3.45

Granddaddy Lake	2B 3A		4
Hoover Lake	2B 3A		4
Island Lake	2B 3A		4
Jean Lake	2B 3A		4
Jordan Lake	2B 3A		4
Kidney Lake	2B 3A		4
Kidney Lake West	2B 3A		4
Lily Lake	2B 3A		4
Midview Reservoir (Lake Boreham)	2B	3B	4
Milk Reservoir	2B 3A		4
Mirror Lake	2B 3A		4
Mohawk Lake	2B 3A		4
Moon Lake	1C 2A ~~2B~~ 3A		4
North Star Lake	2B 3A		4
Palisade Lake	2B 3A		4
Pine Island Lake	2B 3A		4
Pinto Lake	2B 3A		4
Pole Creek Lake	2B 3A		4
Potter's Lake	2B 3A		4
Powell Lake	2B 3A		4
Pyramid Lake	2A ~~2B~~ 3A		4
Queant Lake	2B 3A		4
Rainbow Lake	2B 3A		4
Red Creek Reservoir	2B 3A		4
Rudolph Lake	2B 3A		4
Scout Lake	2A ~~2B~~ 3A		4

3.46

Spider Lake		2B	3A		4
Spirit Lake		2B	3A		4
Starvation Reservoir	1C 2A	2B	3A		4
Superior Lake		2B	3A		4
Swasey Hole Reservoir		2B	3A		4
Taylor Lake		2B	3A		4
Thompson Lake		2B	3A		4
Timothy Reservoir #1		2B	3A		4
Timothy Reservoir #6		2B	3A		4
Timothy Reservoir #7		2B	3A		4
Twin Pots Reservoir	1C	2B	3A		4
Upper Stillwater Reservoir	1C	2B	3A		4
X - 24 Lake		2B	3A		4

h. Emery County

TABLE

Cleveland Reservoir		2B	3A		4
Electric Lake		2B	3A		4
Huntington Reservoir		2B	3A		4
Huntington North Reservoir	2A	[illegible]		3B	4
Joe's Valley Reservoir	2A	[illegible]	3A		4
Millsite Reservoir	1C 2A	[illegible]	3A		4

i. Garfield County

TABLE

Barney Lake		2B	3A		4
Cyclone Lake		2B	3A		4
Deer Lake		2B	3A		4
Jacob's Valley Reservoir		2B		3C 3D	4

Lower Bowns Reservoir		2B	3A		4
North Creek Reservoir		2B	3A		4
Panguitch Lake		2B	3A		4
Pine Lake		2B	3A		4
Oak Creek Reservoir (Upper Bowns)		2B	3A		4
Pleasant Lake		2B	3A		4
Posey Lake		2B	3A		4
Purple Lake		2B	3A		4
Raft Lake		2B	3A		4
Row Lake #3		2B	3A		4
Row Lake #7		2B	3A		4
Spectacle Reservoir		2B	3A		4
Tropic Reservoir		2B	3A		4
West Deer Lake		2B	3A		4
Wide Hollow Reservoir		2B	3A		4

j. Iron County

TABLE

Newcastle Reservoir		2B	3A		4
Red Creek Reservoir		2B	3A		4
Yankee Meadow Reservoir		2B	3A		4

k. Juab County

TABLE

Chicken Creek Reservoir		2B		3C 3D	4
Mona Reservoir		2B	3B		4
Sevier Bridge (Yuba) Reservoir	2A	~~2B~~	3B		4

l. Kane County

3.48

TABLE

Navajo Lake			2B	3A			4

m. Millard County

TABLE

DMAD Reservoir			2B	3B			4
Fools Creek Reservoir			2B		3C	3D	4
Garrison Reservoir (Pruess Lake)			2B	3B			4
Gunnison Bend Reservoir			2B	3B			4

n. Morgan County

TABLE

East Canyon Reservoir	1C	2A	~~2B~~	3A			4
Lost Creek Reservoir	1C		2B	3A			4

o. Piute County

TABLE

Barney Reservoir			2B	3A			4
Lower Boxcreek Reservoir			2B	3A			4
Manning Meadow Reservoir			2B	3A			4
Otter Creek Reservoir			2B	3A			4
Piute Reservoir			2B	3A			4
Upper Boxcreek Reservoir			2B	3A			4

p. Rich County

TABLE

Bear Lake (Utah portion)		2A	~~2B~~	3A			4
Birch Creek Reservoir			2B	3A			4
Little Creek Reservoir			2B	3A			4
Woodruff Creek Reservoir			2B	3A			4

q. Salt Lake County

TABLE

Decker Lake			2B	3B	3D	4
Lake Mary	1C		2B	3A		
Little Dell Reservoir	1C		2B	3A		
Mountain Dell Reservoir	1C		2B	3A		

r. San Juan County

TABLE

Blanding Reservoir #4	1C		2B	3A		4
Dark Canyon Lake	1C		2B	3A		4
Ken's Lake			2B	3A**		4
Lake Powell (Utah portion)	1C	2A	~~2B~~	3B		4
Lloyd's Lake	1C		2B	3A		4
Monticello Lake			2B	3A		4
Recapture Reservoir			2B	3A		4

s. Sanpete County

TABLE

Duck Fork Reservoir			2B	3A		4
Fairview Lakes	1C		2B	3A		4
Ferron Reservoir			2B	3A		4
Lower Gooseberry Reservoir	1C		2B	3A		4
Gunnison Reservoir			2B		3C	4
Island Lake			2B	3A		4
Miller Flat Reservoir			2B	3A		4
Ninemile Reservoir			2B	3A		4
Palisade Reservoir		2A	~~2B~~	3A		4
Rolfson Reservoir			2B		3C	4

3.50

Twin Lakes	2B 3A	4
Willow Lake	2B 3A	4

t. Sevier County

TABLE

Annabella Reservoir	2B 3A	4
Big Lake	2B 3A	4
Farnsworth Lake	2B 3A	4
Fish Lake	2B 3A	4
Forsythe Reservoir	2B 3A	4
Johnson Valley Reservoir	2B 3A	4
Koosharem Reservoir	2B 3A	4
Lost Creek Reservoir	2B 3A	4
Redmond Lake	2B 3B	4
Rex Reservoir	2B 3A	4
Salina Reservoir	2B 3A	4
Sheep Valley Reservoir	2B 3A	4

u. Summit County

TABLE

Abes Lake	2B 3A	4
Alexander Lake	2B 3A	4
Amethyst Lake	2B 3A	4
Beaver Lake	2B 3A	4
Beaver Meadow Reservoir	2B 3A	4
Big Elk Reservoir	2B 3A	4
Blanchard Lake	2B 3A	4
Bridger Lake	2B 3A	4
China Lake	2B 3A	4

Cliff Lake	2B 3A	4
Clyde Lake	2B 3A	4
Coffin Lake	2B 3A	4
Cuberant Lake	2B 3A	4
East Red Castle Lake	2B 3A	4
Echo Reservoir	1C 2A ~~2B~~ 3A	4
Fish Lake	2B 3A	4
Fish Reservoir	2B 3A	4
Haystack Reservoir #1	2B 3A	4
Henry's Fork Reservoir	2B 3A	4
Hoop Lake	2B 3A	4
Island Lake	2B 3A	4
Island Reservoir	2B 3A	4
Jesson Lake	2B 3A	4
Kamas Lake	2B 3A	4
Lily Lake	2B 3A	4
Lost Reservoir	2B 3A	4
Lower Red Castle Lake	2B 3A	4
Lyman Lake	2A ~~2B~~ 3A	4
Marsh Lake	2B 3A	4
Marshall Lake	2B 3A	4
McPheters Lake	2B 3A	4
Meadow Reservoir	2B 3A	4
Meeks Cabin Reservoir	2B 3A	4
Notch Mountain Reservoir	2B 3A	4
Red Castle Lake	2B 3A	4

3.52

Rockport Reservoir	1C	2A	~~2B~~	3A	4
Ryder Lake			2B	3A	4
Sand Reservoir			2B	3A	4
Scow Lake			2B	3A	4
Smith Moorehouse Reservoir	1C		2B	3A	4
Star Lake			2B	3A	4
Stateline Reservoir			2B	3A	4
Tamarack Lake			2B	3A	4
Trial Lake	1C		2B	3A	4
Upper Lyman Lake			2B	3A	4
Upper Red Castle			2B	3A	4
Wall Lake Reservoir			2B	3A	4
Washington Reservoir			2B	3A	4
Whitney Reservoir			2B	3A	4

v. Tooele County

TABLE

Blue Lake			2B	3B	4
Clear Lake			2B	3B	4
Grantsville Reservoir			2B	3A	4
Horseshoe Lake			2B	3B	4
Kanaka Lake			2B	3B	4
Rush Lake			2B	3B	
Settlement Canyon Reservoir			2B	3A	4
Stansbury Lake			2B	3B	4
Vernon Reservoir			2B	3A	4

w. Uintah County

TABLE
51

3.53

Ashley Twin Lakes (Ashley Creek)	1C		2B	3A		4
Bottle Hollow Reservoir			2B	3A		4
Brough Reservoir			2B	3A		4
Calder Reservoir			2B	3A		4
Crouse Reservoir			2B	3A		4
East Park Reservoir			2B	3A		4
Fish Lake			2B	3A		4
Goose Lake #2			2B	3A		4
Matt Warner Reservoir			2B	3A		4
Oaks Park Reservoir			2B	3A		4
Paradise Park Reservoir			2B	3A		4
Pelican Lake			2B		3B	4
Red Fleet Reservoir	1C	2A	~~2B~~	3A		4
Steinaker Reservoir	1C	2A	~~2B~~	3A		4
Towave Reservoir			2B	3A		4
Weaver Reservoir			2B	3A		4
Whiterocks Lake			2B	3A		4
Workman Lake			2B	3A		4

x. Utah County

TABLE

Big East Lake			2B	3A		4
Salem Pond		2A		3A		4
Silver Flat Lake Reservoir			2B	3A		4
Tibble Fork Resevoir			2B	3A		4
Utah Lake			2B		3B	3D	4

y. Wasatch County

3.54

TABLE

Currant Creek Reservoir	1C		2B	3A		4
Deer Creek Reservoir	1C	2A	~~2B~~	3A		4
Jordanelle Reservoir	1C	2A		3A		4
Mill Hollow Reservoir			2B	3A		4
Strawberry Reservoir	1C		2B	3A		4

z. Washington County

TABLE

Baker Dam Reservoir			2B	3A		4
Gunlock Reservoir	1C	2A	~~2B~~		3B	4
Ivins Reservoir			2B		3B	4
Kolob Reservoir			2B	3A		4
Lower Enterprise Reservoir			2B	3A		4
Quail Creek Reservoir	1C	2A	~~2B~~		3B	4
Sand Hollow Reservoir	1C	2A			3B	4
Upper Enterprise Reservoir			2B	3A		4

aa. Wayne County

TABLE

Blind Lake			2B	3A		4
Cook Lake			2B	3A		4
Donkey Reservoir			2B	3A		4
Fish Creek Reservoir			2B	3A		4
Mill Meadow Reservoir			2B	3A		4
Raft Lake			2B	3A		4

bb. Weber County

TABLE

Causey Reservoir			2B	3A		4

3.55

Pineview Reservoir 1C 2A ~~2B~~ 3A** 4

** Denotes site-specific temperature, see Table 2.14.2 Notes

13.13 Unclassified Waters

All waters not specifically classified are presumptively classified: 2B, 3D

R317-2-14. Numeric Criteria.

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

Parameter	Domestic Source 1C	Recreation and Aesthetics 2A	Recreation and Aesthetics 2B	Agri-culture 4
BACTERIOLOGICAL (30-DAY GEOMETRIC MEAN) (NO.)/100 ML) (7)				
E. coli	206	126	206	
MAXIMUM (NO.)/100 ML) (7)				
E. coli	668	409	668	
PHYSICAL				
pH (RANGE)	6.5-9.0	6.5-9.0	6.5-9.0	6.5-9.0
Turbidity Increase (NTU)		10	10	
METALS (DISSOLVED, MAXIMUM MG/L) (2)				
Arsenic	0.01			0.1
Barium	1.0			
Beryllium	<0.004			
Cadmium	0.01			0.01
Chromium	0.05			0.10
Copper				0.2
Lead	0.015			0.1
Mercury	0.002			
Selenium	0.05			0.05
Silver	0.05			
INORGANICS (MAXIMUM MG/L)				
Bromate	0.01			
Boron				0.75
Chlorite	<1.0			
Fluoride (3)	1.4-2.4			
Nitrates as N	10			
Total Dissolved Solids ~~(4)~~				1200

3.56

	RADIOLOGICAL		
(MAXIMUM pCi/L)			
Gross Alpha	15		15
Gross Beta	4 mrem/yr	Radium 226, 228	
(Combined)	5		
Strontium 90	8		
Tritium	20000		
Uranium	30		
ORGANICS (MAXIMUM UG/L)			
Chlorophenoxy Herbicides			
2,4-D	70		
2,4,5-TP	10		
Methoxychlor	40		
POLLUTION INDICATORS (5)			
BOD (MG/L)	5	5	5
Nitrate as N (MG/L)	4	4	
Total Phosphorus as P (MG/L) (6)	0.05	0.05	

FOOTNOTES:

(1) Reserved

(2) The dissolved metals method involves filtration of the sample in the field, acidification of the sample in the field, no digestion process in the laboratory, and analysis by approved laboratory methods for the required detection levels.

(3) Maximum concentration varies according to the daily maximum mean air temperature.

TEMP (C)	MG/L
12.0	2.4
12.1-14.6	2.2
14.7-17.6	2.0
17.7-21.4	1.8
21.5-26.2	1.6
26.3-32.5	1.4

(4) Reserved ~~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 (b) a less stringent, site specific criterion and/or date specified criterion is protective of existing and attainable agricultural uses; or (c) a more stringent criterion is attainable and necessary for the protection of sensitive crops.~~

~~For water quality assessment purposes, up to 10% of~~

3.57

representative samples may exceed the standard.

SITE SPECIFIC STANDARDS FOR TOTAL DISSOLVED SOLIDS (TDS)

Castle Creek from confluence with the Colorado River to Seventh Day Adventist Diversion: 1,800 mg/l;

Cottonwood Creek from the confluence with Huntington Creek to I-57:
3,500 mg/l;

Ferron Creek from the confluence with San Rafael River to Highway 10:
3,500 mg/l;

Huntington Creek and tributaries from the confluence with Cottonwood
Creek to U-10: 4,800 mg/l;

Ivie Creek and its tributaries from the confluence with Muddy Creek
to the confluence with Quitchupah Creek:
3,800 mg/l provided that total sulfate not exceed 2,000 mg/l to protect the livestock watering agricultural existing use;

Ivie Creek and its tributaries from the confluence with Quitchupah Creek to U10: 2,600 mg/l;

Lost Creek from the confluence with Sevier River to U.S. Forest Service Boundary: 4,600 mg/l;

Muddy Creek and tributaries from the confluence with Ivie Creek toU-10: 2,600 mg/l;

Muddy Creek from confluence with Fremont River to confluence with Ivie Creek: 5,800 mg/l;

North Creek from the confluence with Virgin River to headwaters:
2,035 mg/l;

Onion Creek from the confluence with Colorado River to road crossing
above Stinking Springs: 3000 mg/l;

Brine Creek-Petersen Creek, from the confluence with the Sevier River to U-119 Crossing: 9,700 mg/l;

Price River and tributaries from
confluence with Green River to confluence with Coal Soldier Creek:
3,000 mg/l;

Price River and tributaries from the
confluence with Coal Creek Soldier Creek to Carbon Canal

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Diversion:
1,700 mg/l

Quitchupah Creek from the confluence with Ivie Creek to U-10:
3,800 mg/l provided that total sulfate not exceed
2,000 mg/l to protect the livestock watering agricultural existing use;

Rock Canyon Creek from the confluence with Cottonwood Creek to headwaters: 3,500 mg/l;

San Pitch River from below Gunnison Reservoir to the Sevier River: 2,400 mg/l;

San Rafael River from the confluence with the Green River to Buckhorn Crossing: 4,100 mg/l;

San Rafael River from the Buckhorn Crossing to the confluence with Huntington Creek and Cottonwood Creek: 3,500 mg/l;

Sevier River between Gunnison Bend Reservoir and DMAD Reservoir: 1,725 mg/l;

Sevier River from Gunnison Bend Reservoir to Clear Lake: 3,370 mg/l;

South Fork Spring Creek from confluence with Pelican Pond Slough Stream to US 89 1,450 mg/l (Apr.-Sept.)
1,950 mg/l (Oct.-March)

Virgin River from the Utah/Arizona border to Pah Tempe Springs: 2,360 mg/l

(5) Investigations should be conducted to develop more information where these pollution indicator levels are exceeded.

(6) Total Phosphorus as P (mg/l) indicator for lakes and reservoirs shall be 0.025.

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

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.

TABLE 2.14.2
NUMERIC CRITERIA FOR AQUATIC WILDLIFE(8)

Parameter	Aquatic Wildlife 3A	3B	3C	3D	5
PHYSICAL					
Total Dissolved Gases	(1)	(1)			
Minimum Dissolved Oxygen (MG/L) (2)(2a)					
30 Day Average	6.5	5.5	5.0	5.0	
7 Day Average	9.5/5.0	6.0/4.0			
Minimum	8.0/4.0	5.0/3.0	3.0	3.0	
Max. Temperature(C)(3)	20	27	27		
Max. Temperature Change (C)(3)	2	4	4		
pH (Range)(2a)	6.5-9.0	6.5-9.0	6.5-9.0	6.5-9.0	
Turbidity Increase (NTU)	10	10	15	15	
METALS (4) (DISSOLVED, UG/L)(5)					
Aluminum					
4 Day Average (6)	87	87	87	87	
1 Hour Average	750	750	750	750	
Arsenic (Trivalent)					
4 Day Average	150	150	150	150	
1 Hour Average	340	340	340	340	
Cadmium (7)					
4 Day Average	0.25	0.25	0.25	0.25	
1 Hour Average	2.0	2.0	2.0	2.0	
Chromium (Hexavalent)					
4 Day Average	11	11	11	11	
1 Hour Average	16	16	16	16	
Chromium (Trivalent) (7)					
4 Day Average	74	74	74	74	

3.60

1 Hour Average	570	570	570	570	
Copper (7)					
4 Day Average	9	9	9	9	
1 Hour Average	13	13	13	13	
Cyanide (Free)					
4 Day Average	5.2	5.2	5.2		
1 Hour Average	22	22	22	22	
Iron (Maximum)	1000	1000	1000	1000	
Lead (7)					
4 Day Average	2.5	2.5	2.5	2.5	
1 Hour Average	65	65	65	65	
Mercury					
4 Day Average	0.012	0.012	0.012	0.012	
1 Hour Average	2.4	2.4	2.4	2.4	
Nickel (7)					
4 Day Average	52	52	52	52	
1 Hour Average	468	468	468	468	
Selenium					
4 Day Average	4.6	4.6	4.6	4.6	
1 Hour Average	18.4	18.4	18.4	18.4	
Selenium (14) Gilbert Bay (Class 5A) Great Salt Lake Geometric Mean over Nesting Season (mg/kg dry wt)					12.5
Silver					
1 Hour Average (7)	1.6	1.6	1.6	1.6	
Tributyl Tin					
4 Day Average	0.072	0.072	0.072	0.072	
1 Hour Average	0.46	0.46	0.46	0.46	
Zinc (7)					
4 Day Average	120	120	120	120	
1 Hour Average	120	120	120	120	
INORGANICS (MG/L) (4)					
Total Ammonia as N (9)					
30 Day Average	(9a)	(9a)	(9a)	(9a)	
1 Hour Average	(9b)	(9b)	(9b)	(9b)	
Chlorine (Total Residual)					
4 Day Average	0.011	0.011	0.011	0.011	

3.61

1 Hour Average	0.019	0.019	0.019	0.019
Hydrogen Sulfide (13) (Undissociated, Max. UG/L)	2.0	2.0	2.0	2.0
Phenol (Maximum)	0.01	0.01	0.01	0.01
RADIOLOGICAL (MAXIMUM pCi/L)				
Gross Alpha (10)	15	15	15	15
ORGANICS (UG/L) (4)				
Acrolein				
4 Day Average	3.0	3.0	3.0	3.0
1 Hour Average	3.0	3.0	3.0	3.0
Aldrin				
1 Hour Average	1.5	1.5	1.5	1.5
Chlordane				
4 Day Average	0.0043	0.0043	0.0043	0.0043
1 Hour Average	1.2	1.2	1.2	1.2
Chlorpyrifos				
4 Day Average	0.041	0.041	0.041	0.041
1 Hour Average	0.083	0.083	0.083	0.083
4,4' -DDT				
4 Day Average	0.0010	0.0010	0.0010	0.0010
1 Hour Average	0.55	0.55	0.55	0.55
Diazinon				
4 Day Average	0.17	0.17	0.17	0.17
1 Hour Average	0.17	0.17	0.17	0.17
Dieldrin				
4 Day Average	0.056	0.056	0.056	0.056
1 Hour Average	0.24	0.24	0.24	0.24
Alpha-Endosulfan				
4 Day Average	0.056	0.056	0.056	0.056
1 Hour Average	0.11	0.11	0.11	0.11
beta-Endosulfan				
4 Day Average	0.056	0.056	0.056	0.056
1 Day Average	0.11	0.11	0.11	0.11
Endrin				
4 Day Average	0.036	0.036	0.036	0.036
1 Hour Average	0.086	0.086	0.086	0.086
Heptachlor				
4 Day Average	0.0038	0.0038	0.0038	0.0038
1 Hour Average	0.26	0.26	0.26	0.26

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Heptachlor epoxide				
4 Day Average	0.0038	0.0038	0.0038	0.0038
1 Hour Average	0.26	0.26	0.26	0.26
Hexachlorocyclohexane (Lindane)				
4 Day Average	0.08	0.08	0.08	0.08
1 Hour Average	1.0	1.0	1.0	1.0
Methoxychlor (Maximum)	0.03	0.03	0.03	0.03
Mirex (Maximum)	0.001	0.001	0.001	0.001
Nonylphenol				
4 Day Average	6.6	6.6	6.6	6.6
1 Hour Average	28.0	28.0	28.0	28.0
Parathion				
4 Day Average	0.013	0.013	0.013	0.013
1 Hour Average	0.066	0.066	0.066	0.066
PCB's				
4 Day Average	0.014	0.014	0.014	0.014
Pentachlorophenol (11)				
4 Day Average	15	15	15	15
1 Hour Average	19	19	19	19
Toxaphene				
4 Day Average	0.0002	0.0002	0.0002	0.0002
1 Hour Average	0.73	0.73	0.73	0.73
POLLUTION INDICATORS (11)				
Gross Beta (pCi/L)	50	50	50	50
BOD (MG/L)	5	5	5	5
Nitrate as N (MG/L)	4	4	4	
Total Phosphorus as P(MG/L) (12)	0.05	0.05		

FOOTNOTES:

(1) Not to exceed 110% of saturation.

(2) These limits are not applicable to lower water levels in deep impoundments. First number in column is for when early life stages are present, second number is for when all other life stages present.

(2a) These criteria are not applicable to Great Salt Lake impounded wetlands. Surface water in these wetlands shall be protected from changes in pH and dissolved oxygen that create significant adverse impacts to the existing beneficial uses. To ensure protection of uses, the Executive Secretary shall develop reasonable protocols and guidelines that quantify the

physical, chemical, and biological integrity of these waters. These protocols and guidelines will include input from local governments, the regulated community, and the general public. The Executive Secretary will inform the Water Quality Board of any protocols or guidelines that are developed.

(3) ~~The temperature standard shall be at background where it can be shown that natural or un alterable conditions prevent its attainment. In such cases rulemaking will be undertaken to modify the standard accordingly.~~

Site Specific Standards for Temperature

Ken's Lake: From June 1st - September 20th, 27 degrees C.

(4) Where criteria are listed as 4-day average and 1-hour average concentrations, these concentrations should not be exceeded more often than once every three years on the average.

(5) The dissolved metals method involves filtration of the sample in the field, acidification of the sample in the field, no digestion process in the laboratory, and analysis by EPA approved laboratory methods for the required detection levels.

(6) The criterion for aluminum will be implemented as follows:

Where the pH is equal to or greater than 7.0 and the hardness is equal to or greater than 50 ppm as CaC03 in the receiving water after mixing, the 87 ug/l chronic criterion (expressed as total recoverable) will not apply, and aluminum will be regulated based on compliance with the 750 ug/l acute aluminum criterion (expressed as total recoverable).

(7) Hardness dependent criteria. 100 mg/l used. Conversion factors for ratio of total recoverable metals to dissolved metals must also be applied. In waters with a hardness greater than 400 mg/l as CaC03, calculations will assume a hardness of 400 mg/l as CaC03. See Table 2.14.3 for complete equations for hardness and conversion factors.

(8) Reserved

(9) The following equations are used to calculate Ammonia criteria concentrations:

(9a) The thirty-day average concentration of total ammonia nitrogen (in mg/l as N) does not exceed, more than once every three years on the average, the chronic criterion calculated using the following equations.

Fish Early Life Stages are Present:

mg/l as N (Chronic) = $((0.0577/(1+10^{7.688-pH})) + (2.487/(1+10^{pH-7.688})))$ * MIN $(2.85, 1.45*10^{0.028*(25-T)})$

Fish Early Life Stages are Absent:

mg/l as N (Chronic) = $((0.0577/(1+10^{7.688-pH})) + (2.487/(1+10^{pH-7.688})))$ * $1.45*10^{0.028*(25-MAX(T,7))})$

(9b) The one-hour average concentration of total ammonia nitrogen (in mg/l as N) does not exceed, more than once every three years on the average the acute criterion calculated using the following equations.

Class 3A:

3.64

mg/l as N (Acute) = $(0.275/(1+10^{7.204-pH})) + (39.0/1+10^{pH-7.204}))$

Class 3B, 3C, 3D:

mg/l as N (Acute) = $0.411/(1+10^{7.204-pH})) + (58.4/(1+10^{pH-7.204}))$

In addition, the highest four-day average within the 30-day period should not exceed 2.5 times the chronic criterion. The "Fish Early Life Stages are Present" 30-day average total ammonia criterion will be applied by default unless it is determined by the Division, on a site-specific basis, that it is appropriate to apply the "Fish Early Life Stages are Absent" 30-day average criterion for all or some portion of the year. At a minimum, the "Fish Early Life Stages are Present" criterion will apply from the beginning of spawning through the end of the early life stages. Early life stages include the pre-hatch embryonic stage, the post-hatch free embryo or yolk-sac fry stage, and the larval stage for the species of fish expected to occur at the site. The division will consult with the Division of Wildlife Resources in making such determinations. The Division will maintain information regarding the waterbodies and time periods where application of the "Early Life Stages are Absent" criterion is determined to be appropriate.

(10) Investigation should be conducted to develop more information where these levels are exceeded.

(11) pH dependent criteria. pH 7.8 used in table. See Table 2.14.4 for equation.

(12) Total Phosphorus as P (mg/l) as a pollution indicator for lakes and reservoirs shall be 0.025.

(13) Formula to convert dissolved sulfide to un-disassociated hydrogen sulfide is: H_2S = Dissolved Sulfide * $e^{((-1.92 + pH) + 12.05)}$

(14) The selenium water quality standard of 12.5 (mg/kg dry weight) for Gilbert Bay is a tissue based standard using the complete egg/embryo of aquatic dependent birds using Gilbert Bay based upon a minimum of five samples over the nesting season. Assessment procedures are incorporated as a part of this standard as follows:

Egg Concentration Triggers: DWQ Responses

Below 5.0 mg/kg: Routine monitoring with sufficient intensity to determine if selenium concentrations within the Great Salt Lake ecosystem are increasing.

5.0 mg/kg: Increased monitoring to address data gaps, loadings, and areas of uncertainty identified from initial Great Salt Lake selenium studies.

6.4 mg/kg: Initiation of a Level II Antidegradation review by the State for all discharge permit renewals or new discharge permits to Great Salt Lake. The Level II Antidegradation review may include an analysis of loading reductions.

9.8 mg/kg: Initiation of preliminary TMDL studies to evaluate selenium loading sources.

12.5 mg/kg and above: Declare impairment. Formalize and implement TMDL.

Antidegradation
Level II Review procedures associated with this standard are referenced at R317-2-3.5.C.

TABLE
1-HOUR AVERAGE (ACUTE) CONCENTRATION OF
TOTAL AMMONIA AS N (MG/L)

pH	Class 3A	Class 3B, 3C, 3D
6.5	32.6	48.8
6.6	31.3	46.8
6.7	29.8	44.6
6.8	28.1	42.0
6.9	26.2	39.1
7.0	24.1	36.1
7.1	22.0	32.8
7.2	19.7	29.5
7.3	17.5	26.2
7.4	15.4	23.0
7.5	13.3	19.9
7.6	11.4	17.0
7.7	9.65	14.4
7.8	8.11	12.1
7.9	6.77	10.1
8.0	5.62	8.40
8.1	4.64	6.95
8.2	3.83	5.72
8.3	3.15	4.71
8.4	2.59	3.88
8.5	2.14	3.20
8.6	1.77	2.65
8.7	1.47	2.20
8.8	1.23	1.84
8.9	1.04	1.56
9.0	0.89	1.32

TABLE
30-DAY AVERAGE (CHRONIC) CONCENTRATION OF
TOTAL AMMONIA AS N (MG/l)

Fish Early Life Stages Present
Temperature, C

pH	0	14	16	18	20	22	24	26	28	30
6.5	6.67	6.67	6.06	5.33	4.68	4.12	3.62	3.18	2.80	2.46
6.6	6.57	6.57	5.97	5.25	4.61	4.05	3.56	3.13	2.75	2.42
6.7	6.44	6.44	5.86	5.15	4.52	3.98	3.50	3.07	2.70	2.37
6.8	6.29	6.29	5.72	5.03	4.42	3.89	3.42	3.00	2.64	2.32

3.66

6.9	6.12	6.12	5.56	4.89	4.30	3.78	3.32	2.92	2.57	2.25
7.0	5.91	5.91	5.37	4.72	4.15	3.65	3.21	2.82	2.48	2.18
7.1	5.67	5.67	5.15	4.53	3.98	3.50	3.08	2.70	2.38	2.09
7.2	5.39	5.39	4.90	4.31	3.78	3.33	2.92	2.57	2.26	1.99
7.3	5.08	5.08	4.61	4.06	3.57	3.13	2.76	2.42	2.13	1.87
7.4	4.73	4.73	4.30	3.78	3.32	2.92	2.57	2.26	1.98	1.74
7.5	4.36	4.36	3.97	3.49	3.06	2.69	2.37	2.08	1.83	1.61
7.6	3.98	3.98	3.61	3.18	2.79	2.45	2.16	1.90	1.67	1.47
7.7	3.58	3.58	3.25	2.86	2.51	2.21	1.94	1.71	1.50	1.32
7.8	3.18	3.18	2.89	2.54	2.23	1.96	1.73	1.52	1.33	1.17
7.9	2.80	2.80	2.54	2.24	1.96	1.73	1.52	1.33	1.17	1.03
8.0	2.43	2.43	2.21	1.94	1.71	1.50	1.32	1.16	1.02	0.90
8.1	2.10	2.10	1.91	1.68	1.47	1.29	1.14	1.00	0.88	0.77
8.2	1.79	1.79	1.63	1.43	1.26	1.11	0.97	0.86	0.75	0.66
8.3	1.52	1.52	1.39	1.22	1.07	0.94	0.83	0.73	0.64	0.56
8.4	1.29	1.29	1.17	1.03	0.91	0.80	0.70	0.62	0.54	0.48
8.5	1.09	1.09	0.99	0.87	0.76	0.67	0.59	0.52	0.46	0.40
8.6	0.92	0.92	0.84	0.73	0.65	0.57	0.50	0.44	0.39	0.34
8.7	0.78	0.78	0.71	0.62	0.55	0.48	0.42	0.37	0.33	0.29
8.8	0.66	0.66	0.60	0.53	0.46	0.41	0.36	0.32	0.28	0.24
8.9	0.56	0.56	0.51	0.45	0.40	0.35	0.31	0.27	0.24	0.21
9.0	0.49	0.49	0.44	0.39	0.34	0.30	0.26	0.23	0.20	0.18

TABLE
30-DAY AVERAGE (CHRONIC) CONCENTRATION OF
TOTAL AMMONIA AS N (MG/l)

Fish Early Life Stages Absent

	Temperature, C								
pH	0-7	8	9	10	11	12	13	14	16
6.5	10.8	10.1	9.51	8.92	8.36	7.84	7.36	6.89	6.06
6.6	10.7	10.1	9.37	9.37	8.79	8.24	7.72	7.24	6.36
6.7	10.5	9.99	9.20	8.62	8.08	7.58	7.11	6.66	5.86
6.8	10.2	9.81	8.98	8.42	7.90	7.40	6.94	6.51	5.72
6.9	9.93	9.31	8.73	8.19	7.68	7.20	6.75	6.33	5.56
7.0	9.60	9.00	8.43	7.91	7.41	6.95	6.52	6.11	5.37
7.1	9.20	8.63	8.09	7.58	7.11	6.67	6.25	5.86	5.15
7.2	8.75	8.20	7.69	7.21	6.76	6.34	5.94	5.57	4.90
7.3	8.24	7.73	7.25	6.79	6.37	5.97	5.60	5.25	4.61
7.4	7.69	7.21	6.76	6.33	5.94	5.57	5.22	4.89	4.30
7.5	7.09	6.64	6.23	5.84	5.48	5.13	4.81	4.51	3.97
7.6	6.46	6.05	5.67	5.32	4.99	4.68	4.38	4.11	3.61
7.7	5.81	5.45	5.11	4.79	4.49	4.21	3.95	3.70	3.25
7.8	5.17	4.84	4.54	4.26	3.99	3.74	3.51	3.29	2.89
7.9	4.54	4.26	3.99	3.74	3.51	3.29	3.09	2.89	2.54
8.0	3.95	3.70	3.47	3.26	3.05	2.86	2.68	2.52	2.21
8.1	3.41	3.19	2.99	2.81	2.63	2.47	2.31	2.17	1.91
8.2	2.91	2.73	2.56	2.40	2.25	2.11	1.98	1.85	1.63
8.3	2.47	2.32	2.18	2.04	1.91	1.79	1.68	1.58	1.39
8.4	2.09	1.96	1.84	1.73	1.62	1.52	1.42	1.33	1.17
8.5	1.77	1.66	1.55	1.46	1.37	1.28	1.20	1.13	0.990
8.6	1.49	1.40	1.31	1.23	1.15	1.08	1.01	0.951	0.836

3.67

8.7	1.26	1.18	1.11	1.04	0.976	0.915	0.858	0.805	0.707
8.8	1.07	1.01	0.944	0.885	0.829	0.778	0.729	0.684	0.601
8.9	0.917	0.860	0.806	0.758	0.709	0.664	0.623	0.584	0.513
9.0	0.790	0.740	.694	0.651	0.610	0.572	0.536	0.503	0.442

pH	18	20	22	24	26	28	30
6.5	5.33	4.68	4.12	3.62	3.18	2.80	2.46
6.6	5.25	4.61	4.05	3.56	3.13	2.75	2.42
6.7	5.15	4.52	3.98	3.50	3.07	2.70	2.37
6.8	5.03	4.42	3.89	3.42	3.00	2.64	2.32
6.9	4.89	4.30	3.78	3.32	2.92	2.57	2.25
7.0	4.72	4.15	3.65	3.21	2.82	2.48	2.18
7.1	4.53	3.98	3.50	3.08	2.70	2.38	2.09
7.2	4.41	3.78	3.33	2.92	2.57	2.26	1.99
7.3	4.06	3.57	3.13	2.76	2.42	2.13	1.87
7.4	3.78	3.32	2.92	2.57	2.26	1.98	1.74
7.5	3.49	3.06	2.69	2.37	2.08	1.83	1.61
7.6	3.18	2.79	2.45	2.16	1.90	1.67	1.47
7.7	2.86	2.51	2.21	1.94	1.71	1.50	1.32
7.8	2.54	2.23	1.96	1.73	1.52	1.33	1.17
7.9	2.24	1.96	1.73	1.52	1.33	1.17	1.03
8.0	0.94	1.71	1.50	1.32	1.16	1.02	0.897
8.1	0.68	1.47	1.29	1.14	1.00	0.879	0.733
8.2	0.43	1.26	1.11	0.073	0.855	0.752	0.661
8.3	0.22	1.07	0.941	0.827	0.727	0.639	0.562
8.4	0.03	0.906	0.796	0.700	0.615	0.541	0.475
8.5	0.870	0.765	0.672	0.591	0.520	0.457	0.401
8.6	0.735	0.646	0.568	0.499	0.439	0.396	0.339
8.7	0.622	0.547	0.480	0.422	0.371	0.326	0.287
8.8	0.528	0.464	0.408	0.359	0.315	0.277	0.244
8.9	0.451	0.397	0.349	0.306	0.269	0.237	0.208
9.0	0.389	0.342	0.300	0.264	0.232	0.204	0.179

TABLE 2.14.3a

EQUATIONS TO CONVERT TOTAL RECOVERABLE METALS STANDARD WITH HARDNESS (1) DEPENDENCE TO DISSOLVED METALS STANDARD BY APPLICATION OF A CONVERSION FACTOR (CF).

Parameter	4-Day Average (Chronic) Concentration (UG/L)
CADMIUM	$CF * e^{(0.7409 (\ln(hardness)) - 4.719}$
	$CF = 1.101672 - \ln(hardness) (0.041838)$
CHROMIUM III	$CF * e^{(0.8190(\ln(hardness)) + 0.6848}$
	$CF = 0.860$
COPPER	$CF * e^{(0.8545(\ln(hardness)) - 1.702)}$
	$CF = 0.960$

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LEAD	$CF * e^{(1.273(\ln(hardness))-4.705)}$ $CF = 1.46203 - \ln(hardness)(0.145712)$
NICKEL	$CF * e^{(0.8460(\ln(hardness))+0.0584)}$ $CF = 0.997$
SILVER	N/A
ZINC	$Cf * e^{(0.8473(\ln(hardness))+0.884)}$ $CF = 0.986$

TABLE 2.14.3b

EQUATIONS TO CONVERT TOTAL RECOVERABLE METALS STANDARD WITH HARDNESS (1) DEPENDENCE TO DISSOLVED METALS STANDARD BY APPLICATION OF A CONVERSION FACTOR (CF).

Parameter	1-Hour Average (Acute) Concentration (UG/L)
CADMIUM	$CF * e^{(1.0166(\ln(hardness))-3.924)}$ $CF = 1.136672 - \ln(hardness)(0.041838)$
CHROMIUM (III)	$CF * e^{(0.8190(\ln(hardness))+3.7256)}$ $CF = 0.316$
COPPER	$CF * e^{(0.9422(\ln(hardness))-1.700)}$ $CF = 0.960$
LEAD	$CF * e^{(1.273(\ln(hardness))-1.460)}$ $CF = 1.46203 - \ln(hardness)(0.145712)$
NICKEL	$CF * e^{(0.8460(\ln(hardness))+2.255}$ $CF= 0.998$
SILVER	$CF * e^{(1.72(\ln(hardness))-6.59}$ $CF = 0.85$
ZINC	$CF * e^{(0.8473(\ln(hardness))+0.884}$ $CF = 0.978$

FOOTNOTE:
(1) Hardness as mg/l $CaCO_3$.

TABLE 2.14.4
EQUATIONS FOR PENTACHLOROPHENOL
(pH DEPENDENT)

4-Day Average (Chronic) Concentration (UG/L)	1-Hour Average (Acute) Concentration (UG/L)
$e^{(1.005(pH))-5.134}$	$e^{(1.005(pH))-4.869}$

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TABLE 2.14.5
SITE SPECIFIC CRITERIA FOR
DISSOLVED OXYGEN FOR JORDAN RIVER, SURPLUS CANAL, AND STATE CANAL
(SEE SECTION 2.13)

DISSOLVED OXYGEN:	
May-July	
7-day average	5.5 mg/l
30-day average	5.5 mg/l
Instantaneous minimum	4.5 mg/l
August-April	
30-day average	5.5 mg/l
Instantaneous minimum	4.0 mg/l

TABLE 2.14.6
LIST OF HUMAN HEALTH CRITERIA (CONSUMPTION)

Chemical Parameter	Water and Organism (ug/L) Class 1C	Organism Only (ug/L) Class 3A,3B,3C,3D
Antimony	5.6	640
Arsenic	A	A
Beryllium	C	C
Cadmium	C	C
Chromium III	C	C
Chromium VI	C	C
Copper	1,300	
Lead	C	C
Mercury	A	A
Nickel	100 MCL	4,600
Selenium	A	4,200
Silver		
Thallium	0.24	0.47
Zinc	7,400	26,000
Cyanide	140	140
Asbestos	7 million Fibers/L	
2,3,7,8-TCDD Dioxin	5.0 E -9 B	5.1 E-9 B
Acrolein	~~1506.0~~	~~2909.0~~
Acrylonitrile	0.051 B	0.25 B
Alachlor	2.0	
Atrazine	3.0	
Benzene	2.2 B	51 B
Bromoform	4.3 B	140 B
Carbofuran	40	
Carbon Tetrachloride	0.23 B	1.6 B
Chlorobenzene	100 MCL	1,600
Chlorodibromomethane	0.40 B	13 B
Chloroethane		
2-Chloroethylvinyl Ether		

Chloroform	5.7 B	470 B	
Dalapon	200		
Di(2ethylhexl)adipate	400		
Dibromochloropropane	0.2		
Dichlorobromomethane	0.55 B	17 B	
1,1-Dichloroethane			
1,2-Dichloroethane	0.38 B	37 B	
1,1-Dichloroethylene	7 MCL	7,100	
Dichloroethylene (cis-1,2)	70		
Dinoseb	7.0		
Diquat	20		
1,2-Dichloropropane	0.50 B	15 B	
1,3-Dichloropropene	0.34	21	
Endothall	100		
Ethylbenzene	530	2,100	
Ethylene Dibromide	0.05		
Glyphosate	700		
Haloacetic acids	60 E		
Methyl Bromide	47	1,500	
Methyl Chloride	F	F	
Methylene Chloride	4.6 B	590 B	
Ocamyl (vidate)	200		
Picloram	500		
Simazine	4		
Styrene	100		
1,1,2,2-Tetrachloroethane	0.17 B	4.0 B	
Tetrachloroethylene	0.69 B	3.3 B	
Toluene	1,000	15,000	
1,2 -Trans-Dichloroethylene	100 MCL	10,000	
1,1,1-Trichloroethane	200 MCL	F	
1,1,2-Trichloroethane	0.59 B	16 B	
Trichloroethylene	2.5 B	30 B	
Vinyl Chloride	0.025	2.4	
Xylenes	10,000		
2-Chlorophenol	81	150	
2,4-Dichlorophenol	77		2902,4-
Dimethylphenol	380	850	
2-Methyl-4,6-Dinitrophenol	13.0	280	
2,4-Dinitrophenol	69	5,300	
2-Nitrophenol			
4-Nitrophenol			
3-Methyl-4-Chlorophenol			
Penetachlorophenol	0.27 B	3.0 B	
Phenol	~~21000~~-10,4000	~~1,700,000~~ 860,000	
2,4,6-Trichlorophenol	1.4 B	2.4 B	
Acenaphthene	670	990	
Acenaphthylene			
Anthracene	8,300	40,000	
Benzidine	0.000086 B	0.00020 B	
BenzoaAnthracene	0.0038 B	0.018 B	
BenzoaPyrene	0.0038 B	0.018 B	
Benzobfluoranthene	0.0038 B	0.018 B	
BenzoghiPerylene			

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BenzokFluoranthene	0.0038 B		0.018 B
Bis2-ChloroethoxyMethane			
Bis2-ChloroethylEther	0.030 B		0.53 B
Bis2-ChloroisopropylEther	1,400		65,000
Bis2-EthylhexylPhthalate	1.2 B		2.2 B
4-Bromophenyl Phenyl Ether			
Butylbenzyl Phthalate	1,500		1,900
2-Chloronaphthalene	1,000		1,600
4-Chlorophenyl Phenyl Ether			
Chrysene	0.0038 B		0.018 B
Dibenzoa,hAnthracene	0.0038 B		0.018 B
1,2-Dichlorobenzene	420		1,300
1,3-Dichlorobenzene	320		960
1,4-Dichlorobenzene	63		190
3,3-Dichlorobenzidine	0.021 B		0.028 B
Diethyl Phthalate	17,000		44,000
Dimethyl Phthalate	270,000		1,100,000
Di-n-Butyl Phthalate	2,000		4,500
2,4-Dinitrotoluene	0.11 B		3.4 B
2,6-Dinitrotoluene			
Di-n-Octyl Phthalate			
1,2-Diphenylhydrazine	0.036 B		0.20 B
Fluoranthene	130	140	
Fluorene	1,100		5,300
Hexachlorobenzene	0.00028 B		0.00029 B
Hexachlorobutedine	0.44 B		18 B
Hexachloroethane	1.4 B		3.3 B
Hexachlorocyclopentadiene	40		1,100
Ideno 1,2,3-cdPyrene	0.0038 B		0.018 B
Isophorone	35 B		960 B
Naphthalene			
Nitrobenzene	17		690
N-Nitrosodimethylamine	0.00069 B		3.0 B
N-Nitrosodi-n-Propylamine	0.005 B		0.51 B
N-Nitrosodiphenylamine	3.3 B		6.0 B
Phenanthrene			
Pyrene	830		4,000
1,2,4-Trichlorobenzene	35		70
Aldrin	0.000049 B		0.000050 B
alpha-BHC	0.0026 B		0.0049 B
beta-BHC	0.0091 B		0.017 B
gamma-BHC (Lindane)	0.2 MCL		1.8
delta-BHC			
Chlordane	0.00080 B		0.00081 B
4,4-DDT	0.00022 B		0.00022 B
4,4-DDE	0.00022 B		0.00022 B
4,4-DDD	0.00031 B		0.00031 B
Dieldrin	0.000052 B		0.000054 B
alpha-Endosulfan	62		89
beta-Endosulfan	62		89
Endosulfan Sulfate	62		89
Endrin	0.059		0.060
Endrin Aldehyde	0.29		0.30

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Heptachlor	0.000079 B	0.000079 B
Heptachlor Epoxide	0.000039 B	0.000039 B
Polychlorinated Biphenyls PCB's	0.000064 B,D	0.000064 B,D
Toxaphene	0.00028 B	0.00028 B

Footnotes:

A. See Table 2.14.2

B. Based on carcinogenicity of 10-6 risk.

C. EPA has not calculated a human criterion for this contaminant. However, permit authorities should address this contaminant in NPDES permit actions using the State's existing narrative criteria for toxics

D. This standard applies to total PCBs.

KEY: water pollution, water quality standards
Date of Enactment or Last Substantive Amendment: April 1, 2010
Notice of Continuation: October 2, 2007
Authorizing, and Implemented or Interpreted Law: 19-5

Attachment 2 - Supporting rationale for changes to Utah's Standards of Water Quality R317-2 2011 Triennial Review
September 2011 Water Quality Board Meeting

Rule	Change	Page
R317-2-3.2, R317-2-3.3, R317-2-3.5.a.2., R317-2-3.5.a.3., R317-2-12, R317-2-12.1., R317-2-12.1.a., R317-2-12.2	Change the numbering of Antidegradation Review Categories, e.g., Category 1 changes to Category 3.5.	3
R317-2-3.2 and 3.3	Revise the description of temporary and limited for (new) Category 3.5 and add to exclusion to (new) Category 3	4
R317-2-3.5.b.1.(d)	Delete antidegradation example disapproved by USEPA	5
R317-2-4	Update the Colorado Salinity Forum because public review period for 2011 ended in August	6
R317-2-7.1, Tables 2.14.1 and 2.14.2	Revise and broaden description for developing site-specific standards	7
R317-2-12.1.a. and R317-2-12.2.a	Correct error in previous rulemaking where antidegradation category of the Weber River was the unintentionally changed	8-11
R317-2-12.2.b.6.	Reassign the antidegradation category boundary for Chalk Creek and Weber (Coalville and Oakley) from previous boundary because of highway name changes.	12-20
R317-2-13.1	Change beneficial use for Fremont River to frequent recreation from infrequent recreation	21-23
R317-2-13.4.a.	Change beneficial use for Ogden River to frequent recreation from infrequent recreation	24
R317-2-13.5.a.	Assign beneficial uses to a previously unclassified reach of Red Butte Creek	25-26
R317-2-13.5.a.	Assign beneficial uses to a previously unclassified reach of Emigration Creek	27
R317-2-13.2.a. and R317-13.2.bb.	Delete ** where no site-specific temperature standard was promulgated	28
R317-2-13.2.x.	Assign beneficial uses to Big East Lake	29
R317-2-13.2.	Assign beneficial uses to Sand Hollow Reservoir	30
R317-2-13.2	Delete infrequent recreation beneficial use when frequent recreation is specified	31
Table 2.14.1 Site-Specific TDS Standards, Price River	Revise boundary for Price River site-specific TDS standards to resolve USEPA disapproval	32
Table 2.14.2	Delete acute criteria for mercury	33
Table 2.14.2	Add numeric criteria for tributyl tin	34
Tables 2.14.2, 2.14.6	Add numeric criteria for acrolein	35

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Rule	Change	Page
Tables 2.14.2	Add numeric criteria for chlorpyrifos	36
Table 2.14.6	Add numeric criteria for phenol	37

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No.[1]	Rule Number	Change Summary
15	R317-2-3.2, R317-2-3.3, R317-2-3.5.a.2., R317-2-3.5.a.3., R317-2-12, R317-2-12.1., R317-2-12.1.a., R317-2-12.2.,	The Clean Water Act (40 CFR § 131.12) requires that at least three levels of protection be adopted for Waters of the State. R317-2-3.5 identifies these levels as Category 1 through 3 with Category 1 having the most protection. USEPA identified the levels as Tiers 1 through 3 with Tier 3 have the most protections. This discrepancy between the Utah Water Quality Standards and USEPA guidance has created confusion. This change is intended to eliminate confusion by reordering Utah's Categories so that Category 3 has the most protections analogous to USEPA's Tier 3. Categories 1 and 2 were changed to Categories 3.5 and 3 respectively. Previous Categories 2 and 3 meet USEPA requirements for Tier 3 waters. Category 3 was changed to Category 2 to reflect waters where water quality is better than required by the Standards and degradation is allowed for important social and economic reasons. This change does not change the protection status of any waters.

[1] Refers to the UT WQS workplan 04202011

3.76

No.[1]	Rule Number	Change Summary
1	R317-2-3.2 and 3.3	Federal rules allow degradation in Tier 3 waters for discharges that are temporary and limited. Utah included this exemption for existing Category 1 waters with roads being listed as a specific example. The road example was deleted and a reference to the criteria to be considered for making a temporary and limited determination was added. Road construction and other activities that meets the criteria for temporary and limited will continue to be allowed. In addition, this same exemption was added to the less stringent, existing Category 2 waters (proposed Category 3).

[1] Refers to the UT WQS workplan 04202011

3.77

No.[1]	Rule Number	Change Summary
1	R317-2-3.5.b.1.(d)	This example for when an antidegradation review is not required was deleted to resolve a USEPA disapproval in 2010.

[1] Refers to the UT WQS workplan 04202011

3.78

No.[1]	Rule Number	Change Summary
	R317-2-4	The 2011 review is complete and the agreement is updated in Utah's Standards as shown below In addition to quality protection afforded by these regulations to waters of the Colorado River and its tributaries, such waters shall be protected also by requirements of "Proposed Water Quality Standards for Salinity including Numeric Criteria and Plan of Implementation for Salinity Control, Colorado River System, June 1975" and a supplement dated August 26, 1975, entitled "Supplement, including Modifications to Proposed Water Quality Standards for Salinity including Numeric Criteria and Plan of Implementation for Salinity Control, Colorado River System, June 1975", as approved by the seven Colorado River Basin States and the U.S. Environmental Protection Agency, as updated by the 1978 Revision and the 1981, 1984, 1987, 1990, 1993, 1996, 1999, 2002, 2005, ~~and~~2008, and 2011 ~~R~~reviews of the above documents.

3.79

No.[1]	Rule Number	Change Summary
11	R317-2-7.1, Tables 2.14.1 and 2.14.2	This section regarding numeric standards was revised to acknowledge that numeric standards can be modified based on certain site-specific conditions. The previous version of the standards listed changes based on bioassays or other methods, and site-specific temperature and total dissolved solids standards based on natural conditions. This change consolidates and broadens the reasons for allowing site-specific standards consistent with USEPA policies and the Clean Water Act. Footnote (4) from Table 2.14.1 was moved to R37-2-7.1 and Footnote (3) from Table 2.14.2 was deleted but site-specific temperature can be developed per the revised R317-2-7.1. The Water Quality Board must approve any change to the Standards thereby preserving their approval role.

[1] Refers to the UT WQS workplan 04202011

3.80

No.[1]	Rule Number	Change Summary
17	R317-2-12.1.a. and R317-2-12.2.a	This reach of the Weber River was mistakenly moved to R317-2-12,2 during the Standards changes in 2010 (see Utah Bulletin below 33233 on pp. 50-51). This change inadvertently changed the Category of this reach from existing Category 3 to existing Category 2 and this correction restores the original classifications.

[1] Refers to the UT WQS workplan 04202011

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UTAH STATE BULLETIN

OFFICIAL NOTICES OF UTAH STATE GOVERNMENT
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Kimberly K. Hood, Executive Director
Kenneth A. Hansen, Director
Nancy L. Lancaster, Editor

The *Utah State Bulletin (Bulletin)* is an official noticing publication of the executive branch of Utah State Government. The Department of Administrative Services, Division of Administrative Rules produces the *Bulletin* under authority of Section 63G-3-402.

Inquiries concerning the substance or applicability of an administrative rule that appears in the *Bulletin* should be addressed to the contact person for the rule. Questions about the *Bulletin* or the rulemaking process may be addressed to: Division of Administrative Rules, 4120 State Office Building, Salt Lake City, Utah 84114-1201, telephone 801-538-3764, FAX 801-538-1773. Additional rulemaking information, and electronic versions of all administrative rule publications are available at: http://www.rules.utah.gov/

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treatment requirements. Protocols and guidelines will consider federal guidance and will include input from local governments, the regulated community, and the general public. The Executive Secretary will inform the Water Quality Board of any protocols or guidelines that are developed.

R317-2-6. Use Designations.

The Board as required by Section 19-5-110, shall group the waters of the state into classes so as to protect against controllable pollution the beneficial uses designated within each class as set forth below. Surface waters of the state are hereby classified as shown in R317-2-13.

6.1 Class 1 -- Protected for use as a raw water source for domestic water systems.

a. Class 1A -- Reserved.

b. Class 1B -- Reserved.

c. Class 1C -- Protected for domestic purposes with prior treatment by treatment processes as required by the Utah Division of Drinking Water

6.2 Class 2 -- Protected for recreational use and aesthetics.

a. 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.

b. 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 a low degree of bodily contact with the water. Examples include, but are not limited to, wading, hunting, and fishing.

6.3 Class 3 -- Protected for use by aquatic wildlife.

a. Class 3A -- Protected for cold water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain.

b. Class 3B -- Protected for warm water species of game fish and other warm water aquatic life, including the necessary aquatic organisms in their food chain.

c. Class 3C -- Protected for nongame fish and other aquatic life, including the necessary aquatic organisms in their food chain.

d. Class 3D -- Protected for waterfowl, shore birds and other water-oriented wildlife not included in Classes 3A, 3B, or 3C, including the necessary aquatic organisms in their food chain.

e. Class 3E -- Severely habitat-limited waters. Narrative standards will be applied to protect these waters for aquatic wildlife.

6.4 Class 4 -- Protected for agricultural uses including irrigation of crops and stock watering.

6.5 Class 5 -- The Great Salt Lake.

a. Class 5A Gilbert Bay

Geographical Boundary -- All open waters at or below approximately 4,208-foot elevation south of the Union Pacific Causeway, excluding all of the Farmington Bay south of the Antelope Island Causeway and salt evaporation ponds.

Beneficial Uses -- Protected for frequent primary and secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain.

b. Class 5B Gunnison Bay

Geographical Boundary -- All open waters at or below approximately 4,208-foot elevation north of the Union Pacific Causeway and west of the Promontory Mountains, excluding salt evaporation ponds.

Beneficial Uses -- Protected for infrequent primary and secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain.

c. Class 5C Bear River Bay

Geographical Boundary -- All open waters at or below approximately 4,208-foot elevation north of the Union Pacific Causeway and east of the Promontory Mountains, excluding salt evaporation ponds.

Beneficial Uses -- Protected for infrequent primary and secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain.

d. Class 5D Farmington Bay

Geographical Boundary -- All open waters at or below approximately 4,208-foot elevation east of Antelope Island and south of the [~~Union Pacific~~]Antelope Island Causeway, excluding salt evaporation ponds.

Beneficial Uses -- Protected for infrequent primary and secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain.

e. Class 5E Transitional Waters along the Shoreline of the Great Salt Lake Geographical Boundary -- All waters below approximately 4,208-foot elevation to the current lake elevation of the open water of the Great Salt Lake receiving their source water from naturally occurring springs and streams, impounded wetlands, or facilities requiring a UPDES permit. The geographical areas of these transitional waters change corresponding to the fluctuation of open water elevation.

Beneficial Uses -- Protected for infrequent primary and secondary contact recreation, waterfowl, shore birds and other water-oriented wildlife including their necessary food chain.

R317-2-12. Category 1 and Category 2 Waters.

12.1 Category 1 Waters.

In addition to assigned use classes, the following surface waters of the State are hereby designated as Category 1 Waters:

a. All surface waters geographically located within the outer boundaries of U.S. National Forests whether on public or private lands with the following exceptions:

Category 2 Waters as listed in R317-2-12.2.

[~~Weber River, a tributary to the Great Salt Lake, in the Weber River Drainage from Uintah to Mountain Green.~~

b. Other surface waters, which may include segments within U.S. National Forests as follows:

1. Colorado River Drainage

Calf Creek and tributaries, from confluence with Escalante River to headwaters.

Sand Creek and tributaries, from confluence with Escalante River to headwaters.

Mamie Creek and tributaries, from confluence with Escalante River to headwaters.

Deer Creek and tributaries, from confluence with Boulder Creek to headwaters (Garfield County).

Indian Creek and tributaries, through Newspaper Rock State Park to headwaters.

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2. Green River Drainage

Price River (Lower Fish Creek from confluence with White River to Scofield Dam.

Range Creek and tributaries, from confluence with Green River to headwaters.

Strawberry River and tributaries, from confluence with Red Creek to headwaters.

Ashley Creek and tributaries, from Steinaker diversion to headwaters.

Jones Hole Creek and tributaries, from confluence with Green River to headwaters.

Green River, from state line to Flaming Gorge Dam.

Tollivers Creek, from confluence with Green River to headwaters.

Allen Creek, from confluence with Green River to headwaters.

3. Virgin River Drainage

North Fork Virgin River and tributaries, from confluence with East Fork Virgin River to headwaters.

East Fork Virgin River and tributaries from confluence with North Fork Virgin River to headwaters.

4. Kanab Creek Drainage

Kanab Creek and tributaries, from irrigation diversion at confluence with Reservoir Canyon to headwaters.

5. Bear River Drainage

Swan Creek and tributaries, from Bear Lake to headwaters.

North Eden Creek, from Upper North Eden Reservoir to headwaters.

Big Creek and tributaries, from Big Ditch diversion to headwaters.

Woodruff Creek and tributaries, from Woodruff diversion to headwaters.

6. Weber River Drainage

Burch Creek and tributaries, from Harrison Boulevard in Ogden to headwaters.

Hardscrabble Creek and tributaries, from confluence with East Canyon Creek to headwaters.

Chalk Creek and tributaries, from U.S. Highway 189 to headwaters.

Weber River and tributaries, from U.S. Highway 189 near Oakley to headwaters.

7. Jordan River Drainage

City Creek and tributaries, from City Creek Water Treatment Plant to headwaters (Salt Lake County).

Emigration Creek and tributaries, from Hogle Zoo to headwaters (Salt Lake County).

Red Butte Creek and tributaries, from Foothill Boulevard in Salt Lake City to headwaters.

Parley's Creek and tributaries, from 13th East in Salt Lake City to headwaters.

Mill Creek and tributaries, from Wasatch Boulevard in Salt Lake City to headwaters.

Big Cottonwood Creek and tributaries, from Wasatch Boulevard in Salt Lake City to headwaters.

Little Willow Creek and tributaries, from diversion to headwaters (Salt Lake County.)

Bell Canyon Creek and tributaries, from Lower Bells Canyon Reservoir to headwaters (Salt Lake County).

South Fork of Dry Creek and tributaries, from Draper Irrigation Company diversion to headwaters (Salt Lake County).

8. Provo River Drainage

Upper Falls drainage above Provo City diversion (Utah County).

Bridal Veil Falls drainage above Provo City diversion (Utah County).

Lost Creek and tributaries, above Provo City diversion (Utah County).

9. Sevier River Drainage

Chicken Creek and tributaries, from diversion at canyon mouth to headwaters.

Pigeon Creek and tributaries, from diversion to headwaters.

East Fork of Sevier River and tributaries, from Kingston diversion to headwaters.

Parowan Creek and tributaries, from Parowan City to headwaters.

Summit Creek and tributaries, from Summit City to headwaters.

Braffits Creek and tributaries, from canyon mouth to headwaters.

Right Hand Creek and tributaries, from confluence with Coal Creek to headwaters.

10. Raft River Drainage

Clear Creek and tributaries, from state line to headwaters (Box Elder County).

Birch Creek (Box Elder County), from state line to headwaters.

Cotton Thomas Creek from confluence with South Junction Creek to headwaters.

11. Western Great Salt Lake Drainage

All streams on the south slope of the Raft River Mountains above 7000' mean sea level.

Donner Creek (Box Elder County), from irrigation diversion to Utah-Nevada state line.

Bettridge Creek (Box Elder County), from irrigation diversion to Utah-Nevada state line.

Clover Creek, from diversion to headwaters.

All surface waters on public land on the Deep Creek Mountains.

12. Farmington Bay Drainage

Holmes Creek and tributaries, from Highway US-89 to headwaters (Davis County).

Shepard Creek and tributaries, from Height Bench diversion to headwaters (Davis County).

Farmington Creek and tributaries, from Height Bench Canal diversion to headwaters (Davis County).

Steed Creek and tributaries, from Highway US-89 to headwaters (Davis County).

12.2 Category 2 Waters.

In addition to assigned use classes, the following surface waters of the State are hereby designated as Category 2 Waters:

a. Green River Drainage

Deer Creek, a tributary of Huntington Creek, from the forest boundary to 4800 feet upstream.

Electric Lake.

b. Weber River Drainage

Weber River from Uintah to Mountain Green.

No.[1]	Rule Number	Change Summary
16	R317-2-12.2.b.6.	US 189 was the previous boundary for existing Category 1 waters Chalk Creek and the Weber River. With the construction of Jordanelle Reservoir, US 189 was rerouted and is no longer a valid boundary. The boundary for the existing Category 1 waters was updated to reflect the previous geographic boundary with existing roads. The protection status of Chalk Creek and the Weber river are unchanged. See the discussion below for documentation of the road boundaries.

[1] Refers to the UT WQS workplan 04202011

Change in Alignment and Jurisdiction of US Highway 189, Summit County, Utah

Category 1 high quality waters include all waters within U.S. Forest Service outer boundaries (Section R317-2-12 *in* R317-2 Standards of Quality for Waters of the State). In addition, other waters are specifically named, such as Chalk Creek and the Weber River:

> Weber River and tributaries, from U.S. Highway 189 near Oakley to headwaters.
>
> Chalk Creek and tributaries, from U.S. Highway 189 to headwaters.

Due to the construction of Interstate 80 (I-80) and Jordanelle Reservoir in Summit County, the alignment of U.S. Highway 189 (US-189) changed so that now US-189 and the Weber River near Oakley no longer intersect. Similarly, U.S. Highway 189 and Chalk Creek no longer intersect in Coalville.

Prior to 1967, US-189 ran from Provo, Utah, up Provo Canyon to Heber City where it joined U.S. Highway 40 (US-40). From Heber City, US-189 followed on top of, or coincident with, US-40 north to Hailstone Junction. At Hailstone Junction, now inundated by Jordanelle Reservoir, US-189 diverted from US-40 and traveled east to Francis, north to Oakley (fig. 1), and northwest around Rockport Reservoir to Wanship. From Wanship, US-189 was aligned on top of State Route 2 (which name replaced SR4) to Coalville, crossed Chalk Creek as Coalville's Main Street (fig. 2), ran north to Echo Canyon, and east to Evanston, Wyoming. State Route 2 was a forerunner to I-80 which followed the same general route except I-80 bypassed small towns along the way.

3.85

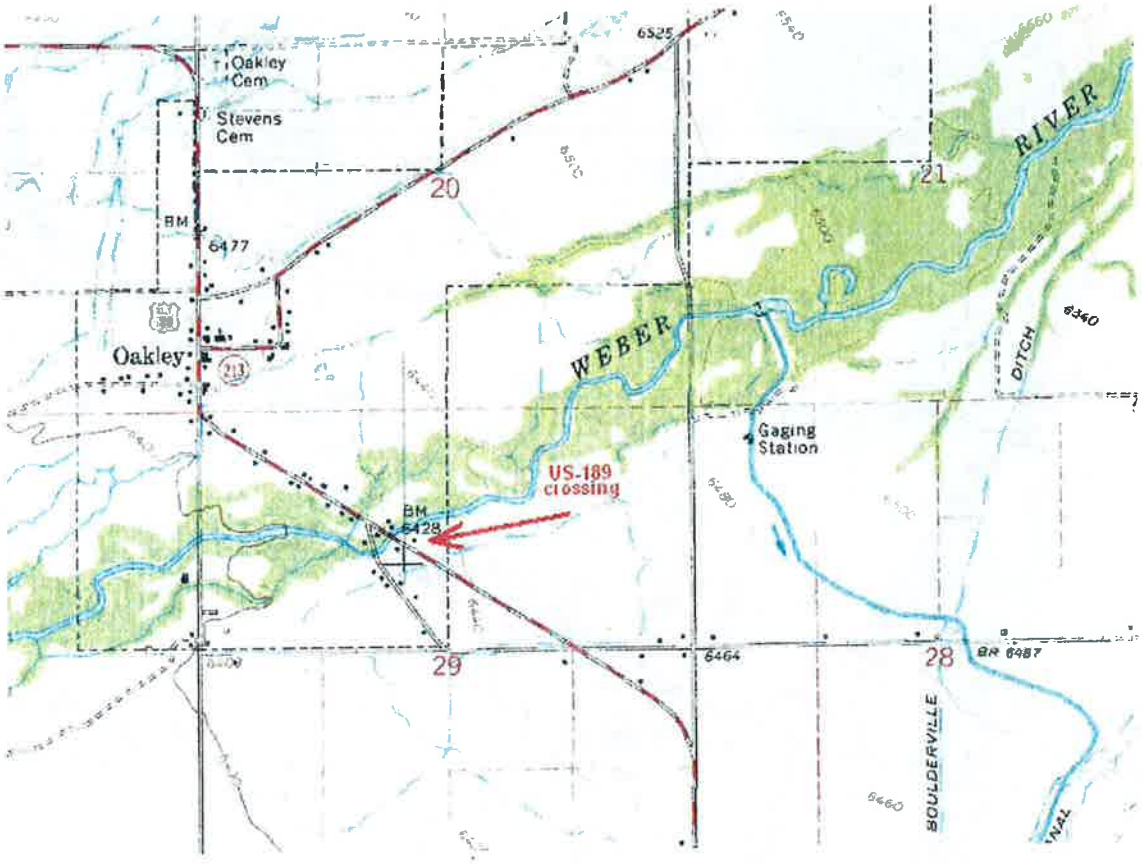


Figure 1. US-189 and Weber River crossing located southeast of Oakley, Summit County, Utah prior to the construction of I-80 and Jordanelle Reservoir (U.S. Geological Survey, *Kamas* 1:24,000 scale map).

3.86

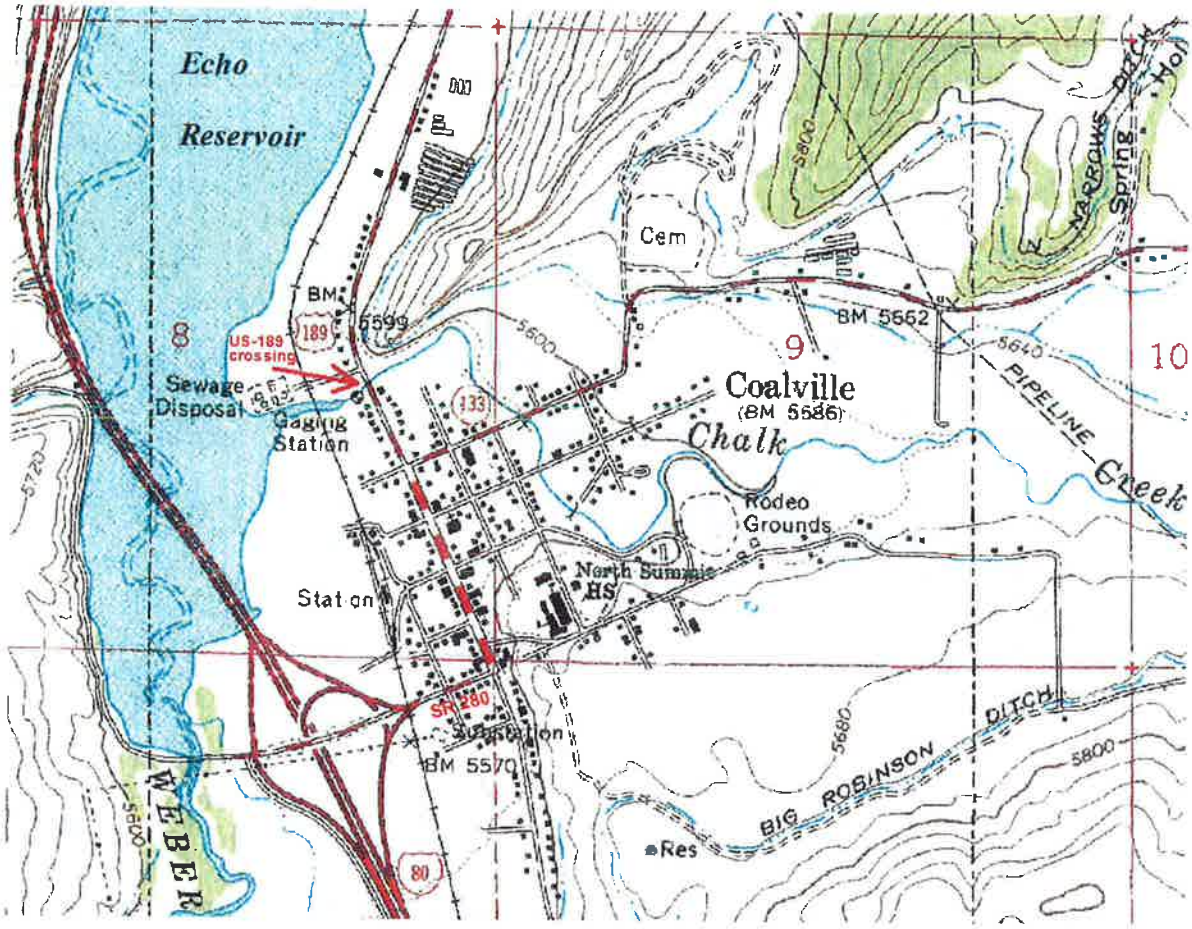


Fig. 2. Location of US189 crossing of Chalk Creek in Coalville, Summit County, Utah prior to the construction of I-80 and Jordanelle Reservoir (U.S. Geological Survey, *Coalville* 1:24,000 scale map).

To organize public highways for state tracking purposes, the Utah Transportation Commission instituted a road numbering system that changed the names of all interstates and U.S. highways to state route numbers. US-189 became known as State Route 189 (SR189) and I-80 became State Route 80.

Summary of Changes to US-189 Alignment Through Oakley, Summit County, Utah

The completion of I-80 in the 1960s and the construction of Jordanelle Reservoir Dam in the early 1980s changed the alignment and maintenance jurisdiction of US-189 (SR189). The junction where SR189 diverted from US-40 was inundated by Jordanelle Reservoir. Route designation for US-189Alt from Francis to Kamas to Oakley and beyond was deleted in late 1975. Later, US-189 (SR189) routing changed to follow, or "piggy-back," US-40 from Heber City past newly completed Jordanelle Reservoir to the Park City interchange, then on to Kamas and through Oakley but bypassing Francis.

The water quality standards description for the Weber River above Oakley as category 1 waters became inaccurate through changes in the late 1980s. By 1990, the existing route alignment was approved for US-189 (SR189) which now is coincident with US-40 from Heber to Silver Creek Junction at I-80, then coincident on I-80 to Wanship, past Coalville on the west side of Echo

Reservoir, and on to Evanston (fig.3 and fig. 4). The road through Francis, Kamas, and Oakley is now called SR32.

RESOLUTION

Relocation of U.S. Route 189

WHEREAS, AASHTO has established policy number 8-B to provide guidance in determining U.S. Route designations and,

WHEREAS, construction of the Jordanelle Dam Project has created improvements along with shortening the length of U.S. 40, also eliminating Hailstone Junction as well as other sections of roadway that U.S. Route 189 traversed and,

WHEREAS, policy calls for following the newest, shortest, and best route and,

WHEREAS, the new alignment of U.S. Route 40 has created a situation where the present alignment of U.S. 189 from Wanship to Hailstone Junction no longer warrants a U.S. Route designation.

NOW THEREFORE, be it resolved as follows:

1. That application be made to the American Association of State Highway and Transportation Officials, U.S. Numbering Committee, requesting that U.S. Route 189 should run concurrently with Interstate Route 80 and U.S. Route 40, and the description for U.S. Route 189 within the State of Utah should read in the following manner.

UTAH	State Line	0	0	
	Echo Jct.	30	30	I-84 begins and leaves
	Silver Creek Jct.	21	51	Leaves I-80, Joins U.S. 40
	Heber	19	70	Leaves U.S. 40
	Provo	28	98	Crosses U.S. 89
	Provo	2	100	Route ends, Jct. I-15

2. The accompanying map, and AASHTO application be made part of this resolution.

Dated this 21st day of September, 1990.

Utah Transportation Commission

Chairman

Commissioner

Commissioner

Commissioner

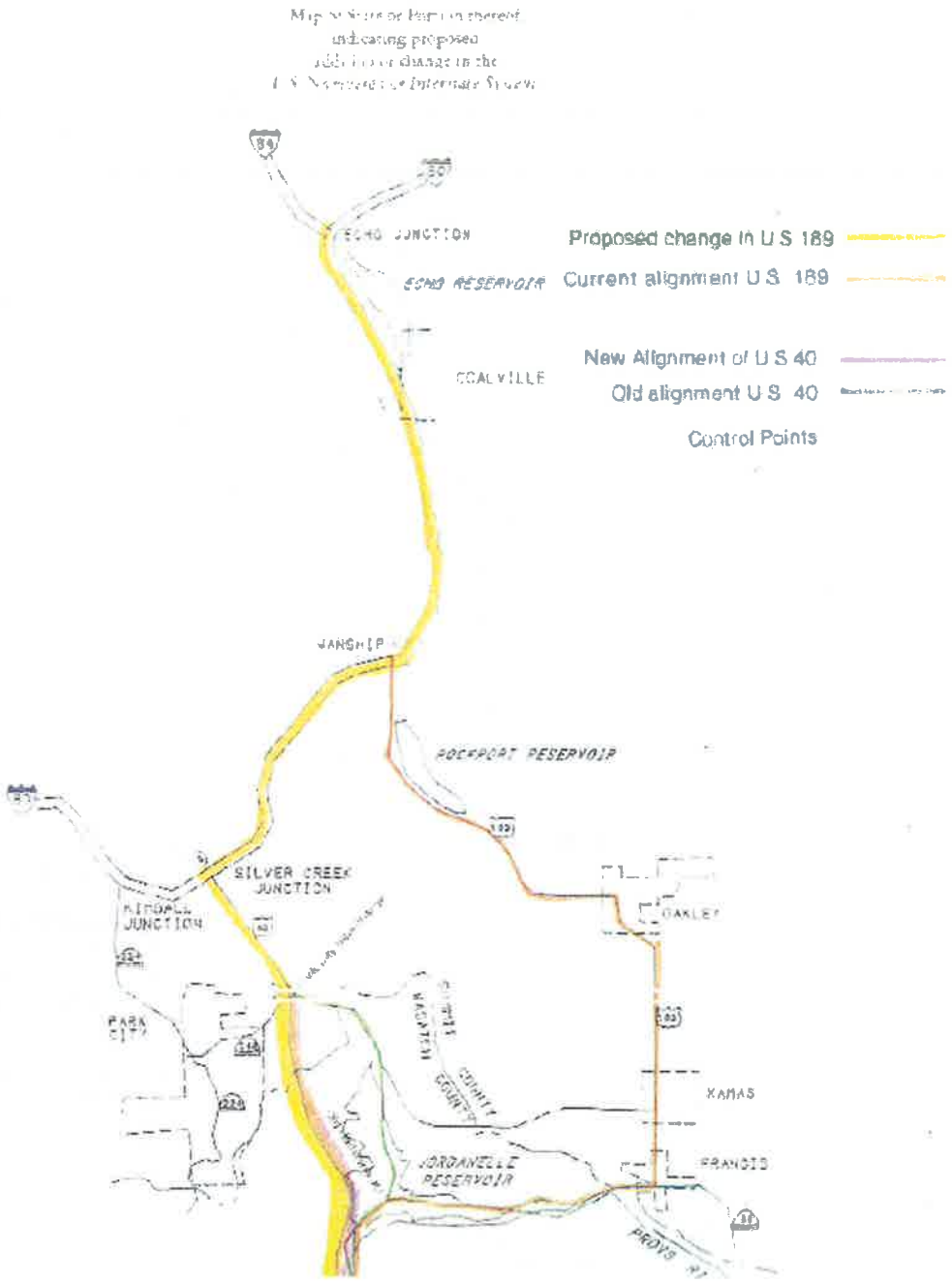
Commissioner

Attest: Secretary to Commission

3.88

Figure 3. Description of US-189 alignment with I-80 and US-40 to Heber City, bypassing the Oakley area, as approved in 1990 by American Association of State Highway and Transportation Officials.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS



3.89

Figure 4. Map of current US-189 alignment coincident with I-80 and US-40 as approved in September of 1990 by the American Association of State Highway and Transportation Officials.

Summary of Changes to US-189 Alignment in the Coalville, Summit County, Utah, Area

Written correspondences between the State of Utah Department of Transportation, Summit County, and Coalville City in late 1967 and early 1968 indicate that US-189 used to pass through Coalville. Upon completion of I-80, Coalville City and Summit County officials agreed to take over control and maintenance of SR189 (US-189) from the State. At this time US-189 went through Coalville as its Main Street. After road damage caused by heavy trucks hauling material for I-80 construction was repaired, the jurisdiction and maintenance of SR189 (US-189), running from Wanship on through Hoytsville and on to Coalville, was transferred from the State of Utah to Coalville City and Summit County (fig. 5)

3.90

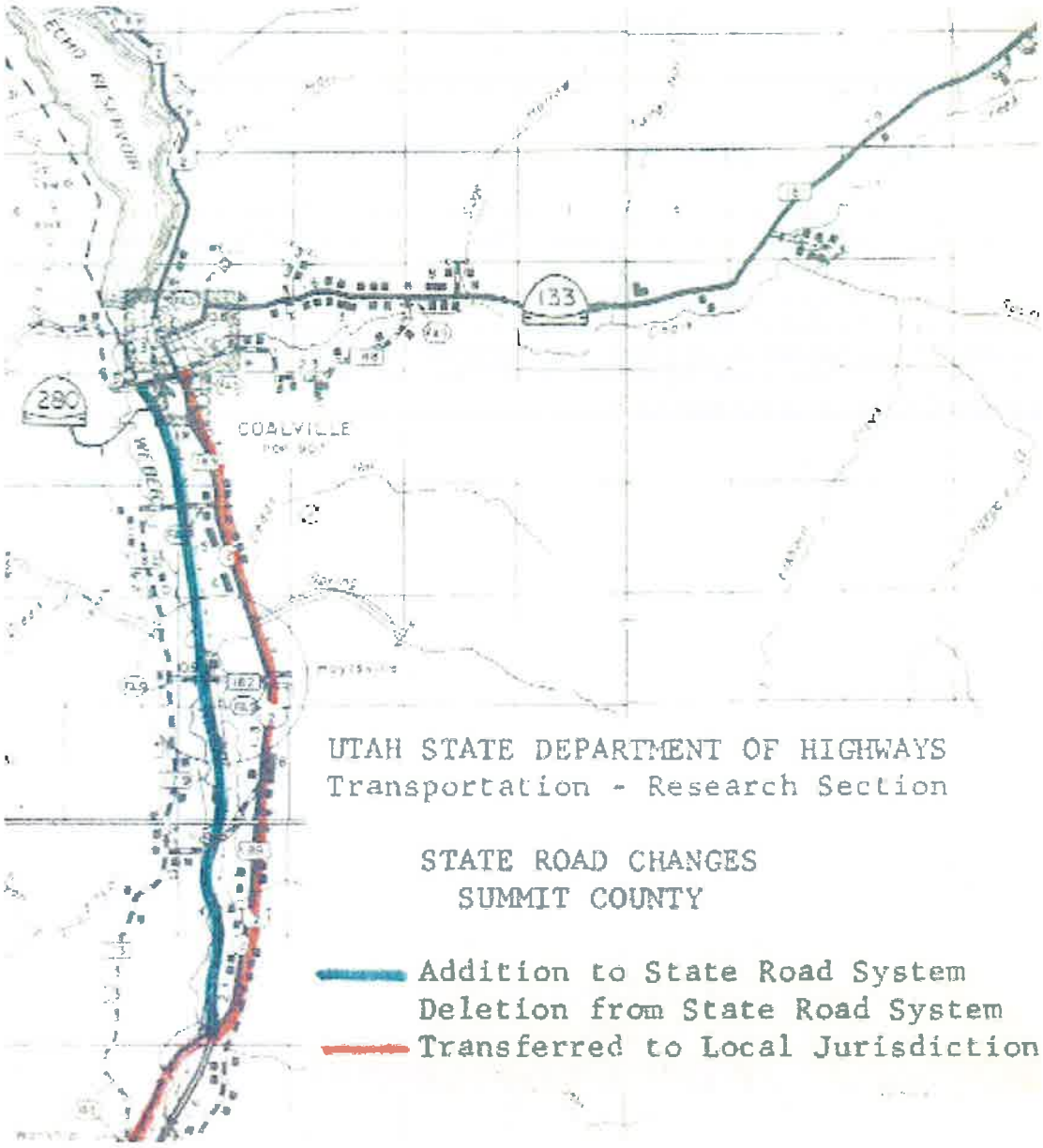


Figure 5. Location of State Route 2 and US-189 from Wanship to Coalville, Summit County, Utah prior to 1967 changes in alignment and jurisdiction.

After gaining control of SR189, Summit County officials requested that the State repair the damage done to it during the construction of I-80. The damage was repaired and the transfer was later completed. Scanned maps (fig. 5) and letters shown in Figure 6 and 7 indicate that I-80 and US-189 were not the same route at that time.

3.91

COMMISSIONERS
EDWARD W. DURRANT
CARLOS L. POVILA
KENNETH E. WOOLSTENHULME

Summit County
State of Utah
COALVILLE, UTAH

RULO D. PACE
COUNTY CLERK
BLANCHE W. YOUNG
TREASURER
WANDA F. MERRILL
RECORDER
ROBERT F. CATON
ATTORNEY
RONALD W. ROBINSON
SHERIFF
NAIL W. BIDDULPH
ASSESSOR

October 18, 1967

Mr. David R. Greenwood
Class "B" & "C" Road Aministrator
State Office Bldg.
Salt Lake City, Utah

Dear Mr. Greenwood;

On February 13, 1967, the State of Utah turned over to Summit County a portion of highway 189, from Wanship to Coalville.

Summit County will formally accept this road for maintenance and snow removal, but we feel that the STate of Utah should keep their promise to us, that of resurfacing this portion of highway.

A great part of this highway was broken up during construction of the freeway-nearly all of the gravel was hauled from the Harvey Pace gravel pit in Wanship and the heavy loads caused considerable amount of damage to nearly all of this section.

We also urge you to have this section of highway placed on our Class "B" System, as we removed the snow from it after February 13, 1967.

Your cooperation will be greatly appreciated.

Yours truly,

Summit County Commission
R.W. Durrant
Chairman

Figure 6. Conditional acceptance of State Road 189 (US-189) by Summit County officials. US-189 alignment has since been moved to coincide with I-80 through the Wanship and Coalville area.

3.92

District Engineer's Office
525 West 13th South
Salt Lake City, Utah

Attention: Quenten Adair, District Engineer

Gentlemen:

This is to advise you that Summit County will accept as a county road State Road 189 from the South Coalville city limits to Wanship where said State Road 189 joins Interstate 80, the same being approximately 7 miles in length, only upon the condition that the State Highway Commission resurface said road with road mix or plant mix to a thickness of 1½" to 2" and a width of 24' by no later than the spring of 1968.

If you have any questions with reference to anything discussed herein please feel free to contact us at your convenience.

Very truly yours,

SUMMIT COUNTY COMMISSION

By _____
R. W. Durrant, Chairman

cc: Summit County Clerk

Figure 7. Summit County officials indicate they will accept SR189 (US-189) as a county road after repairs from Coalville City limits to Wanship are made.

US-189, re-named SR189, piggy-backed on the old SR2 prior to I-80 and was also Main Street through Coalville. Now US-189 piggy-backs on US-40 and on I-80 and never passes though Coalville nor crosses Chalk Creek.

Internet references:

State Roads resolutions (route history) list: http://www.udot.utah.gov/main/f?p=100:pg:0::::1:1,V:1348,

Specific highway resolutions:

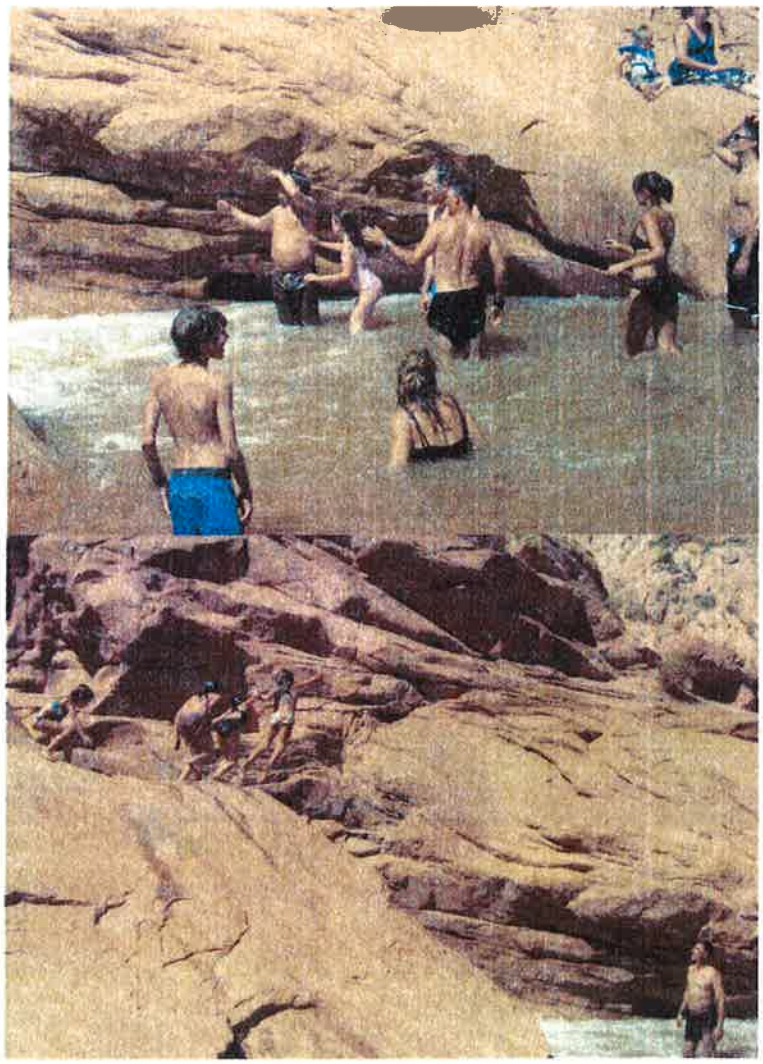
Route 2 (SR2): http://www.udot.utah.gov/main/uconowner.gf?n=200609121731373
Route 189 (US 189): http://www.udot.utah.gov/main/uconowner.gf?n=200609121729253

Route summaries:

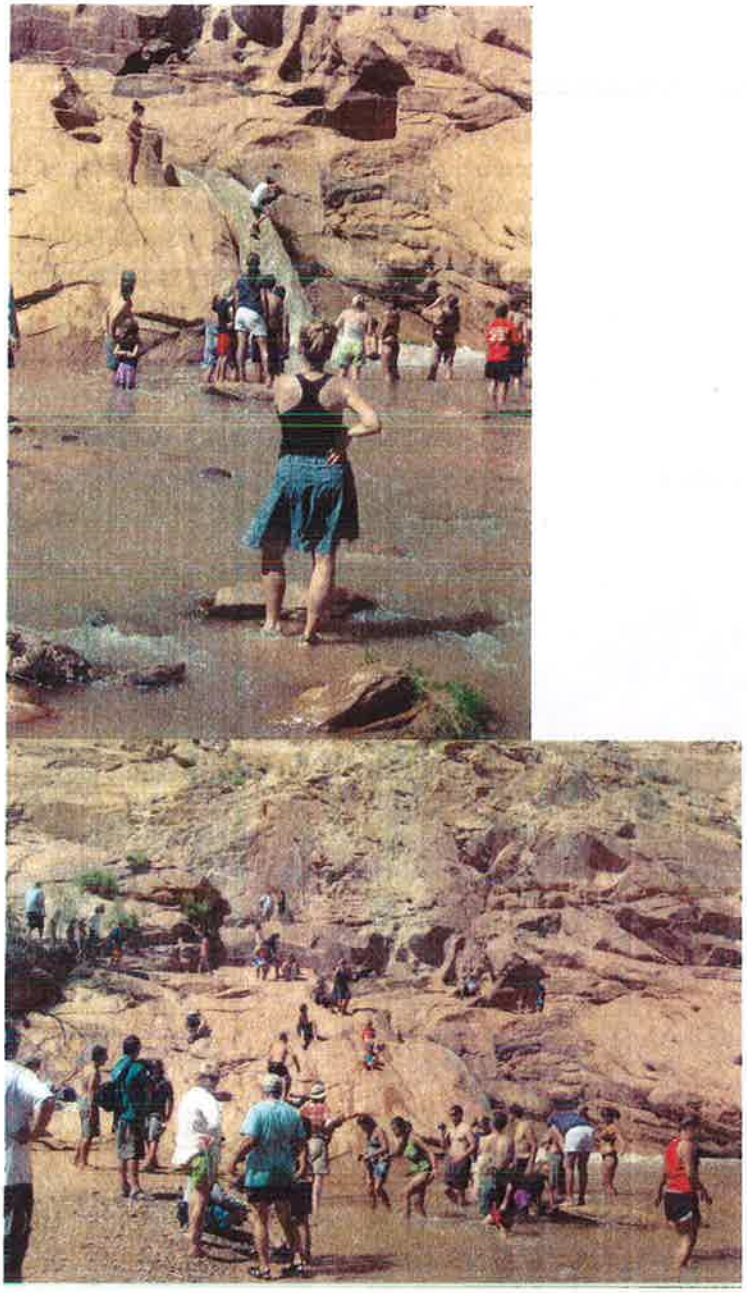
Summary of U.S. Route 189: http://en.wikipedia.org/wiki/U.S._Route_189
State Route 280: http://en.wikipedia.org/wiki/Utah_State_Route_280 (names east junction with US-189 as Main Street in Coalville).

No.[1]	Rule Number	Change Summary
5	R317-2-13.1	Fremont River and tributaries, through Capitol Reef National Park to headwaters were changed from Class 2B (infrequent primary and secondary contact recreation) to Class 2A (frequent primary and secondary contact recreation) based on information and the pictures below provided by the U.S. Park Service. Frequent primary recreation has more stringent numeric standards than infrequent primary recreation.

[1] Refers to the UT WQS workplan 04202011

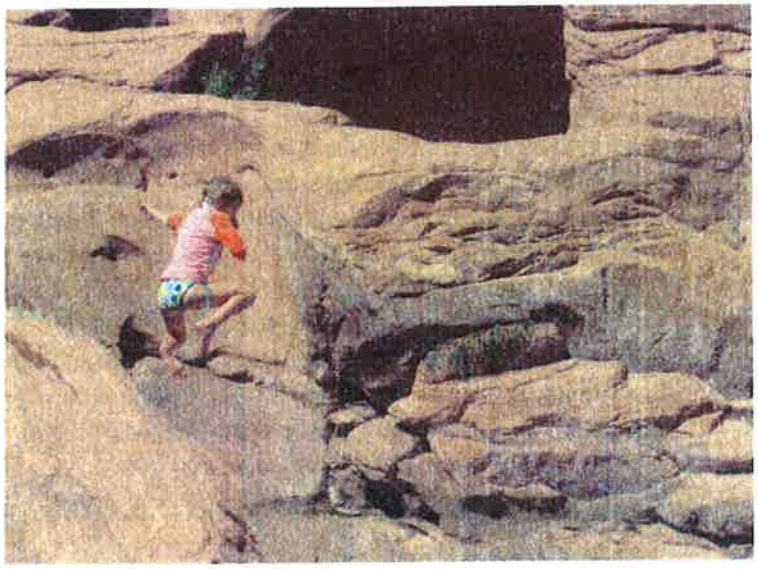


Swimmers in Fremont River, September 2010



Swimmers in Fremont River, September 2010

3.95



Swimmers in Fremont River, September 2010

3.96

No.[1]	Rule Number	Change Summary
5	R317-2-13.4.a.	Ogden River and tributaries, from confluence with Weber River to Pineview Dam, except as listed below to Class 2A (frequent primary and secondary contact recreation) from Class 2B (infrequent primary and secondary contact recreation). Frequent primary recreation has more stringent numeric standards than infrequent primary recreation and one of the goals of the Ogden River restoration is to encourage recreation. Ms. Kari Lundeen, DWQ Watershed Coordinator, reported that people regularly swim in this reach of the Ogden River.

[1] Refers to the UT WQS workplan 04202011

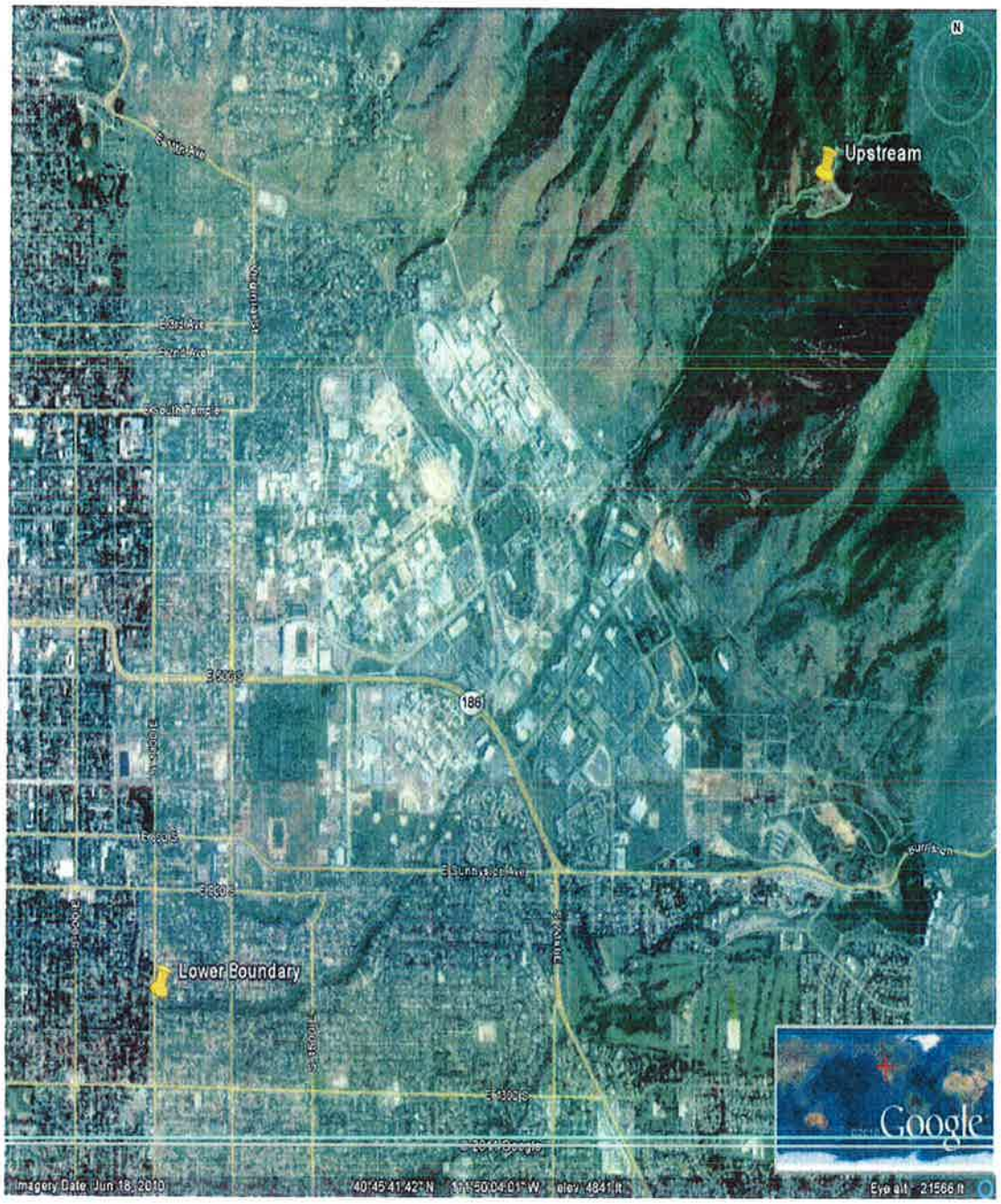
3.97

No.[1]	Rule Number	Change Summary
4	R317-2-13.5.a.	Assign beneficial uses of 2B, 3A, and 4 to Red Butte Creek and tributaries from Liberty Park pond inlet to Red Butte Reservoir.

[1] Refers to the UT WQS workplan 04202011

In the absence of designated beneficial uses, the defaults are class 2B and 3D (waterfowl) for the urbanized portion of Red Butte Creek (see map below). At 1100 East, Red Butte Creek is channelized and buried in a subterranean culvert until discharging to the Jordan River. The beneficial uses of Red Butte Creek from Red Butte Reservoir to headwaters are Classes 1C (drinking water), 2B (infrequent primary and secondary contact recreation), 3A (cold water aquatic life), and 4 (agriculture).

This reach between 1100 East and Red Butte Reservoir is not regularly monitored through DWQ programs. Unlike the reach above Red Butte Reservoir, drinking water is not a beneficial use for Red Butte as it flows through the urbanized area. Recreation contact is anticipated to be infrequent primary and secondary contact based on the small size of Red Butte Creek (e.g., 0.05 m^3/s during low water). Trout have been observed and are planned to be restocked as part of the restoration from the Chevron Oil Pipeline spill in 2010. The presence of trout supports the cold water aquatic life designation which is the most stringent aquatic life use. e Class 4 beneficial use for agriculture is intended to protect water quality to support irrigation such as Mt. Olivet cemetery.



Red Butte Creek between 1100 East and Red Butte Reservoir

3.99

No.[1]	Rule Number	Change Summary
4	R317-2-13.5.a.	Assign beneficial uses of 2B, 3A, to Emigration Creek Emigration Creek and tributaries, from 1100 East in Salt Lake City to headwaters. This changes the boundary from Foothill Blvd. to 1100 East. In addition, add the beneficial use of Class 4 (agriculture) to protect the water rights for irrigation.

[1] Refers to the UT WQS workplan 04202011

The reach between 1100 East and Foothill Blvd. was previously unclassified and would default to Classes 2B (infrequent primary and secondary contact) and 3D (waterfowl). Based on the small size of the creek and location, infrequent primary and secondary contact recreation is appropriate. Cold water aquatic life (Class 3A) is the most stringent aquatic life use and is appropriate for the cold water species known to reside in Emigration Creek. Emigration Creek has water rights in this reach for irrigation and Class 4 is being added.

Emigration Creek between 1100 East and Foothill Blvd.

3.100

No.[1]	Rule Number	Change Summary
19	R317-2-13.2.a. and R317-13.2.bb.	Delete "**" that referred to a site-specific temperature standard. No site-specific temperature standard has been was promulgated for Hyrum or Pineview Reservoirs

[1] Refers to the UT WQS workplan 04202011

3.101

No.[1]	Rule Number	Change Summary
4	R317-2-13.2.x.	Add beneficial uses of 2B (infrequent primary and secondary contact recreation, 3A (cold water aquatic life), and 4 (agriculture) to Big East Lake

[1] Refers to the UT WQS workplan 04202011

In the absence of specifically designated beneficial uses, Big East Lake is assigned the default uses of 2B and 3D. As shown on the first page of the Lake Report for Big East Lake (http://www.waterquality.utah.gov/watersheds/lakes/BIGEAST.pdf) below, the beneficial use classes of 3A and 4 are appropriate. Class 2B is recommended because the cold waters (average temperature June-July 62° F, maximum 62° F) and cool air temperatures due to elevation will limit contact recreation.

3.102

No.[1]	Rule Number	Change Summary
4	R317-2-13.2.	Assign beneficial uses of 1C (drinking water), 2A (frequent primary and secondary recreation contact), 3B (warm water aquatic life), and 4 (agriculture).

[1] Refers to the UT WQS workplan 04202011

The water source for Sand Hollow is Quail Creek which has the beneficial uses of 1C, 2B, 3A, and 4. Nearby Quail Creek Reservoir has the beneficial uses of 1C, 2A, 2B, 3B, and 4 and water can be transferred between Quail Creek and Sand Hollow Reservoirs. Sand Hollow is a State Park (http://stateparks.utah.gov/parks/sand-hollow) that includes beaches and boat ramps to facilitate recreation. Fish in Sand Hollow include bass, bluegill, and crappie supporting the warm water aquatic life designation.

3.103

No.[1]	Rule Number	Change Summary
	R317-2-13.2	Delete Class 2B (infrequent primary recreation) where water is also Class 2A (frequent primary recreation because the numeric standards for 2A are more stringent than 2B. Class 2B was deleted from: Bear Lake, Deer Creek, East Canyon, Echo, Flaming Gorge, Gunlock, Huntington Lake North, Hyrum, Lyman, Joe's Valley, Millsite, Moon, Palisades, Pineview, Powell, Pyramid, Quail Creek, Redfleet, Rockport, Scout, Starvation, Steinaker, and Yuba. This change does not affect the level of protection for these waters.

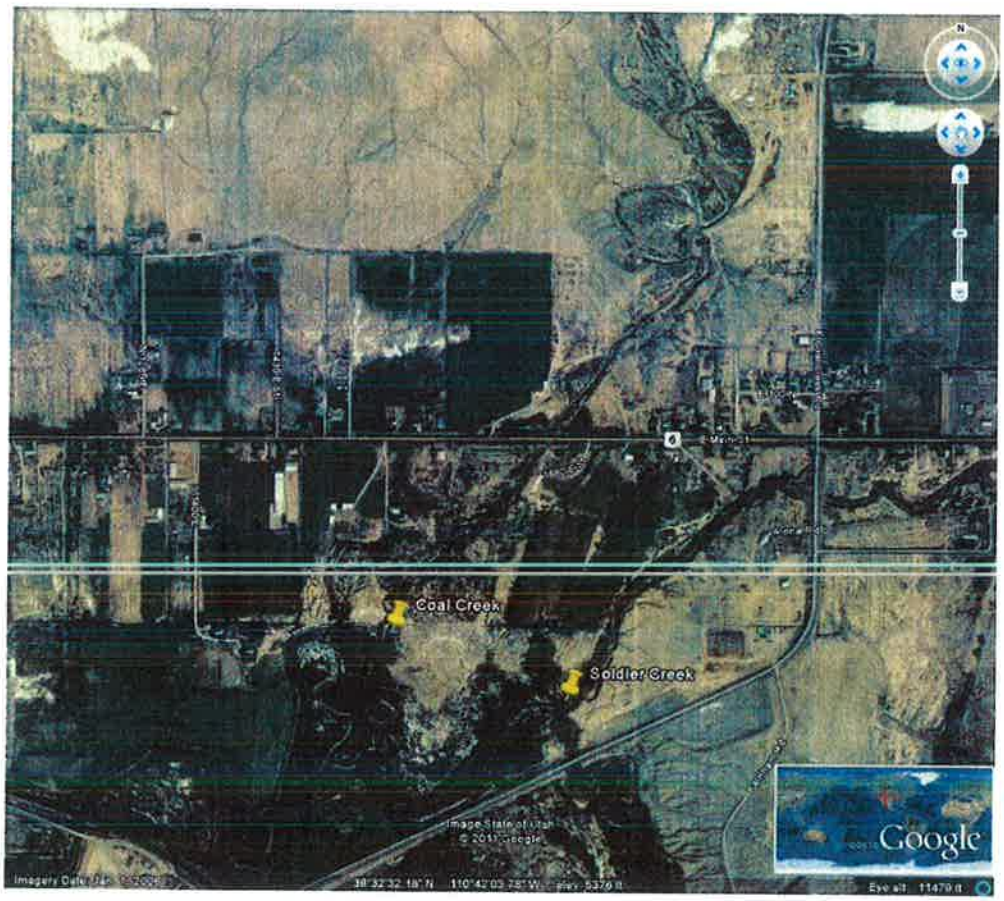
[1] Refers to the UT WQS workplan 04202011

3.104

No.[1]	Rule Number	Change Summary
14	Table 2.14.1 Site-Specific TDS Standards, Price River	Change the boundary of the 3,000/1,700 mg/l site-specific TDS standard from Coal Creek to Soldier Creek

[1] Refers to the UT WQS workplan 04202011

The image below shows the confluences of Coal and Soldier Creeks with the Price River. A total maximum daily load (TMDL) study was conducted for TDS on the Price River (http://www.waterquality.utah.gov/TMDL/West_Colorado_TMDL.pdf) resulting in a recommendation for a site-specific standard. This short reach of the Price River was omitted when the upstream and downstream site-specific total dissolved solids standards were originally promulgated. In 2011, this reach was included with the site-specific TDS standard for the lower Price River (3,000 mg/l). USEPA disapproved this change. No data specific to this reach is available that has no UPDES discharges or significant nonpoint sources. The site-specific TDS standard is proposed to be the more conservative upstream standard of 1,700 mg/l.



3.105

No.[1]	Rule Number	Change Summary
10	Table 2.14.2	Delete acute criteria for **mercury**

[1] Refers to the UT WQS workplan 04202011

USEPA recommended that the acute criteria for mercury be deleted because USEPA's data indicates that the criteria are not adequately protective. This change is expected to have little effect on DWQ's programs because permits that have a mercury limit are based on the chronic criteria.

3.10b

No.[1]	Rule Number	Change Summary
8	Table 2.14.2	Add numeric criteria for **tributyl tin**

[1] Refers to the UT WQS workplan 04202011

USEPA requested that Utah adopt numeric criteria for tributyl tin, a Clean Water Act nonpriority pollutant. DWQ proposes to adopt USEPA's criteria in lieu of developing Utah-specific criteria. Tributyl tin (TBT) is commonly used in antifouling coatings for watercraft, a chemical intermediary, and an antimicrobial in cooling systems (http://www.cdpr.ca.gov/docs/emon/pubs/ehapreps/eh9507.pdf). When used in cooling systems, TBT has been detected in treatment plant effluents. The impacts of adopting these criteria are not precisely known. No UPDES permits have TBT limits. Waters with boat marinas may be affected if TBT-based antifouling coatings were used but this is currently unknown because DWQ does not routinely monitor for TBT.

Tributyltin Numeric Criteria for Aquatic Wildlife (µg/l)				
Class	3A	3B	3C	3D
4 Day Average	0.072	0.072	0.072	0.072
1 Hour Average	0.46	0.46	0.46	0.46
Source: AWQC For Tributyl Tin Final EPA 822-R-03-031 December 2003				

3.107

No.[1]	Rule Number	Change Summary
7, 8	Table 2.14.2 and 2.14.7	Add numeric criteria for **acrolein**

[1] Refers to the UT WQS workplan 04202011

Acrolein is a CWA priority pollutant and is toxic to aquatic life. In 1997, USEPA withdrew the drinking water health advisory. In 2003, a reference dose was derived and the aquatic criteria was recalculated using the new reference dose. Acrolein is a biocide currently registered as an herbicide to control aquatic weeds in irrigation canals, as a burrow fumigant to control rodents, and as a microbiocide to eliminate slime-forming microbes in oil drilling operations, pulp and paper mills, and in industrial cooling towers. It has activity as a molluscicide, but is not currently registered for use against mollusks. Acrolein has not been detected in Utah waters and is not a UPDES parameter.

Acrolein Numeric Criteria for Aquatic Wildlife (µg/l)				
Class	3A	3B	3C	3D
4 Day Average	3.0	3.0	3.0	3.0
1 Hour Average	3.0	3.0	3.0	3.0

Acrolein List of Human Health Criteria (µg/l)		
Class	1C	3A, 3B, 3C, 3D
	6.0	9.0
Source: FR Vol. 73, No. 179 / Monday, September 15, 2008 pp. 53246-53248		

3.108

No.[1]	Rule Number	Change Summary
8	Table 2.14.2	Add numeric criteria for **chlorpyrifos**

[1] Refers to the UT WQS workplan 04202011

Chloropyrifos is a CWA priority pollutant. Chlorpyrifos is an organophosphate insecticide, acaricide, and miticide used to control foliage and soil-borne insect pests on a variety of food and feed crops. It controls Coleoptera, Diptera, Homoptera, and Lepidoptera in soil or on foliage in over 100 crops. Also used for control of household pests, mosquitoes (larvae and adults) and in animal houses. It is one of the most widely used pesticides in the United States and has been one of the top five insecticides used in residential settings. Chlorpyrifos has not been detected in Utah water's and is not a permitted parameter for UPDES permits.

Chlorpyrifos Numeric Criteria for Aquatic Wildlife (µg/l)				
Class	3A	3B	3C	3D
4 Day Average	0.041	0.041	0.041	0.041
1 Hour Average	0.083	0.083	0.083	0.083

3.109

No.[1]	Rule Number	Change Summary
7	Table 2.14.6	Add numeric criteria for **phenol**

[1] Refers to the UT WQS workplan 04202011

Phenol is a CWA priority pollutant and a SWDA organoleptic pollutant. Phenol is infrequently detected in waters of the State and these detections are well below the standards. Some of the Utah refineries have permit limits for phenolic compounds. Phenol is used a general disinfectant, either in solution or mixed with slaked lime, etc., for toilets, stables, cesspools, floors, drains, etc. Phenol is also a chemical intermediate for phenolic resins, bisphenol A, and other chemicals.

Phenol List of Human Health Criteria (µg/l)		
Class	1C	3A, 3B, 3C, 3D
	10,400	860,000
Source: FR Vol. 73, No. 179 / Monday, September 15, 2008 pp. 53246-53248		

3.110

Attachment 3: Utah Water Quality Standards 2011 Triennial Review Topics Work Plan
9/12/2011

No.	Standards Issues	DWQ LOE	Priority	When	Notes
1	Antidegradation Policy Revisions: Rule Changes Implementation Guidance Complete Category Section Resolve temporary and limited for Category 1	High	High	2011	Revise rule to address EPA 2010 disapproval; Reconsider examples of temporary and limited and add same exemption to Category 2
2	Assign beneficial uses	Low	High	2011	Sand Hollow Reservoir; Big East Reservoir; Emigration Creek Red Butte Creek
3	Change Recreation Beneficial Use	Low	Medium	2011	Restored Ogden River from 2B to 2A; Fremont River Capitol Reef from 2B to 2A; Hyrum Reservoir from 2B to 2A (already 2A, 05102011)
4	Adopt updated human health water quality criteria for phenol, acrolein, and tributyl tin	Low	Medium	2011	USEPA updated AWQC
5	Adopt updated aquatic life water quality criteria for acrolein, chlorpyrifos, and tributyl tin	Low	Medium	2011	USEPA updated AWQC
6	Modify standards to allow the use of the biotic-ligand model or water effects ratio for site-specific standards	Low	Low	2011	R317-2-7 was revised to allow for site-specific standards for a several reasons including the biotic-ligand model or water effects ratio.
7	Delete acute criteria for mercury	Low	Medium	2011	Acute standard no longer supported by USEPA because standard not protective of bioaccumulation
8	Revise "a less stringent criterion is appropriate because of natural or un-alterable conditions" to apply to any parameter, not just TDS and temperature	Low	Medium	2011	R317-2-7 was revised to allow for site-specific standards for a several reasons including the biotic-ligand model or water effects ratio.
9	Revise upstream boundary for Spring Creek (Bear River WMU) site-specific TDS standard	High	Low	2011	Existing boundary is US 89 which is downstream of the facility that instigated the investigation for a site-specific standard. 05102011, no change necessary, boundary is the beginning of Spring Creek.
10	Site-specific TDS Standards	Medium	High	2011	Price River between Soldier and Coal Creeks; Antelope Creek (Uinta) TMDL; Blue Creek
11	Revise Category 1 descriptions for Oakley and Coalville WWTPs	Low	Medium	2011	Category 1 boundary is defined as US 189 which subsequently was moved with road construction. US189 is no longer a valid geographical residence. Reestablish Category 1 boundary in the same location with a new reference.
12	In R317-2-12.2 Revise Category 2 Fountain Green To Uintah, should be Category 3	Low	Medium	2011	This exception was inadvertently moved from R317-2-12.1 during the last rulemaking resulting in this reach being changed to Category 2 as opposed to being excluded from Category 1 (and by default, Category 3)
13	Remove or define astericks in lake beneficial uses	Low	Low	2011	No reference in standards

3.111

Attachment 3: Utah Water Quality Standards 2011 Triennial Review Topics Work Plan
9/12/2011

No.	Standards Issues	DWQ LOE	Priority	When	Notes

3.112

Utah Water Quality Standards Future and Ongoing Review Topics Workplan

12-Sep-11

No.	Standards Issues	DWQ LOE	Priority	When	Notes
1	Antidegradation Policy: Implementation Guidance: Complete Category Section Complete 401, 402, and General Permits Program	Med	Medium	2014	
2	Revisions to narrative standard - expand to address biological condition	Med/Low	High	2014	Revisions will better align standards with assessments based on biology
3	Recategorize the following waters from Category 3 to Category 2: Provo from Jordanelle to Olmsted Diversion excluding Deer Creek Reservoir	Medium	Low	2014	Trout Unlimited request: review existing 208 restrictions on discharges. Waiting for TU to compile supporting rationale and documentation 9/12/2011.
4	Adopt updated aquatic life water quality criteria for chloride	Low	Medium	2014	USEPA updated AWQC. Adoption was delayed in 2011 until DWQ can evaluate the applicability to Utah of the USEPA default chloride standard.
5	Review iron criteria for dissolved and total	Medium	Medium	2014	Iron criteria may have been erroneously changed to dissolved when other metals were changed to dissolved
6	Reclassify Pineview Reservoir from 3A to 3B	Low	Medium	2014	Attachment 3: Recommendation of the 2002 TMDL
7	State-wide nutrient criteria: numeric nutrient criteria for casual and response variables for streams/rivers and lakes/reservoirs	High	High	2014	Time needed to complete analyses- will be addressed in 2012
8	Variance policy	High	High	2014	Time needed to complete analyses for nutrients but policy extends beyond nutrients.
9	GSL wetlands - validation of assessment methodology	High/Med	High	2014	proceeding

3.113

Utah Water Quality Standards Future and Ongoing Review Topics Workplan

12-Sep-11

No.	Standards Issues	DWQ LOE	Priority	When	Notes
10	GSL wetlands - standards revisions for different wetland types	High/Med	High	2014	MMI being validated
11	GSL indicator values/criteria	High	High	2014	Development of indicator values/criteria will streamline permitting inefficiencies and assist assessment of the GSL
12	Translator for GSL selenium standard (egg to water translator)	High/Med	High	2014	CH2MHill collating data for model refinement
13	Willard Spur nutrient criteria and beneficial uses	High	High	2014	Pending outcome of ongoing studies
14	Change the Beneficial Uses for Willard Spur north of approximately Great Salt Lake Minerals to match Bear River Migratory Bird Refuge Beneficial Uses	Med/High	High	2014	Pending outcome of ongoing studies
15	Jordan River temperature/beneficial uses	High	High	2014	post TMDL
16	Site-specific TDS Standards: Jordan River, Antelope Creek, Blue Creek	High	High	2014	post TMDL
18	Change beneficial uses of Salteratus Creek from 3A to 3D	Low	Low	2014	DWQ no longer assesses Salteratus Creek, TMDL has most of work done.
19	Change beneficial use of Recapture Reservoir from 3A to 3B	Low	Medium	2014	Recommendation of TMDL
20	Develop a mixing policy for wetlands including effluent-dominated wetlands	High	High	2014	Current EPA Region 8 policy is no mixing zones for wetlands

3.11H

Utah Water Quality Standards Future and Ongoing Review Topics Workplan

12-Sep-11

No.	Standards Issues	DWQ LOE	Priority	When	Notes
21	Delete pH and DO standards for all wetlands. Replace with a multi-metric index type approach.	Med/High	High	2014	Pending validation and applicability of MMI
22	Develop an action planning process when an MMI Analysis does not show a wetland meets an acceptable quality level as compared to the reference wetland. This would include the an analysis of beneficial use protection and would be in conformance with recommendations from the National Academy of Sciences TMDL Report (see page 49).	Med	High	2014	Pending validation and applicability of MMI
23	Update the hardness-based zinc criteria	Medium	Low	2014	
24	Assess Biotic ligand model for inclusion into copper aquatic life standards	Medium	Low	2014	
25	Assess Biotic ligand model for inclusion into zinc aquatic life standards	Medium	Low	2014	
26	Methylmercury criterion	Medium	High	2014	Multiple implementation considerations, implementation methods should be developed prior to adopting tissue-based std
27	Methylmercury criterion Implementation	High	High	2014	Need implementation methods prior to promulgating methyl mercury standard

3.115

Utah Water Quality Standards Future and Ongoing Review Topics Workplan

12-Sep-11

No.	Standards Issues	DWQ LOE	Priority	When	Notes
28	Revised temperature criteria and assessment methodology	High/Med	Medium	2014	New temperature listings could have a low priority (unless waterbody is receiving a thermal discharge), and potentially be delisted once standards are revised. May be able to build on approaches used by other states. Should include an allowance for excursions due to unusual weather. Can work with TMDL group to develop rationale for site-specific standards proposals until a state-wide approach can be developed
29	TDS - explore dividing the agricultural use into livestock and irrigation and the necessary criteria to adopt those uses (e.g. adoption of EC/SAR criteria for irrigation, criteria for livestock)	High	Medium	2014	Can work with TMDL group to develop rationale for site-specific standards proposals until a state-wide approach can be developed; Montana rules being challenged in court 2010.
30	Sediment (Quantity) Criteria	High	Medium	2014	
31	Implement identification numbers to provide consistency between standards, assessment, and TMDLs (e.g., NHD)	Medium	High	2014	Need to decide on best identifier. Small LOE from WQS Workgroup, large effort DWQ to implement
32	Develop tiered aquatic life beneficial uses	High	Medium	?	
33	Review Beneficial Use Class 3C	Medium	Low	?	Review the distinction between game and nongame fish
34	Sediment quantity criteria for GSL	High	Low	?	

3.114

Attachment 3: Utah Water Quality Standards Work Plan Archived Topics
9/12/2011

No.	Standards Issues	DWQ LOE	Priority	When	Notes
1	Revise upstream boundary for Spring Creek (Bear River WMU) site-specific TDS standard	High	Low	2011	Existing boundary is US 89 which is downstream of the facility that instigated the investigation for a site-specific standard. 05/10/2011, no change necessary, boundary is the beginning of Spring Creek.
2	Identify Table 13.2 in the standards	Low	Low	2011	No reference in standards for table. 05/10/2011, No change necessary because none of the tables in R317-2 have references.
3	Change Categories 1, 2, and 3 to Tier 1, 2, and 3 to be consistent with Federal program and other States	Low	Low	2011	Eliminate confusion regarding the nexus of Federal and State Rules. Utah's Categories don't match up with USEPA Tiers and DWQ decided not to pursue this change because the terminology between State and USEPA could not be reconciled without reworking the rule.
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