**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**REGION 8**
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APR 11 2012

Ref: EPR-EP

Mr. Walter L. Baker, P.E.
Director, Division of Water Quality
Department of Environmental Quality
195 North 1950 West
P.O. Box 144870
Salt Lake City, Utah 84114-4870

Re: Clean Water Act Section 303(d) List of Impaired Waters in need of Total Maximum Daily Loads (TMDL)

Dear Mr. Baker:

On February 10, 2012, the U.S. Environmental Protection Agency Region 8 issued its "partial approval/further review pending" action letter on Utah's 2008 and 2010 Section 303(d) lists. At that time, the EPA approved the State of Utah's decisions to list all the water bodies identified on Utah's list submissions, as well as the State's decisions not to list certain waters. The EPA deferred action on Utah's decision not to include certain waters including Kanab Creek-2 and Lower Robinson Creek ("Kanab Creek and tributaries") on either the 2008 or 2010 lists in order to conduct further evaluation of water quality data for these waters. The EPA has completed its review of Utah's evaluation of data and information relating to Kanab Creek and tributaries. This letter is to notify you of our decision.

Section 303(d) of the Clean Water Act requires states to identify those waters within their boundaries for which effluent limitations are not stringent enough to implement any water quality standard, and to submit the resultant list to the EPA for review. Pursuant to Section 303(d)(2), the EPA is required to approve or disapprove the submitted listings, and identify waters that are to be included on the state's final Section 303(d) list.

The EPA collected and evaluated existing and readily available water quality-related data and information pertaining to Kanab Creek and its tributaries, and has concluded that data and information shows exceedances of the applicable water quality criterion for Total Dissolved Solids (TDS) for these waters. This data was readily available to the State when the 2008 and 2010 Section 303(d) lists were developed, but was not evaluated during that process. As required by Section 303(d)(2), the EPA disapproves the decision not to include Kanab Creek and tributaries on the 2008 and 2010 Section 303(d) lists, and adds these waters to both lists. Further details of our action are provided in the attachment.

In accordance with 40 C.F.R. § 130.7(d)(2), EPA will seek public comment on its decision to add Kanab Creek and tributaries to the State's 2008 and 2010 Section 303(d) lists. At the conclusion of the public review period we will make any revisions we deem appropriate and transmit the listing for inclusion in your current Water Quality Management plan.

If you have questions about this decision, please contact Kris Jensen, who may be reached at 303-312-6237.

Sincerely,

Martin Hestmark
Assistant Regional Administrator
Office of Ecosystems Protection
and Remediation

Enclosure

cc: Ms. Leah Ann Lamb, Assistant Director, Water Quality Division, UDEQ
Mr. Jeff Ostermiller, Chief, Water Quality Management Branch, UDEQ

Kanab Creek and Tributaries Water Quality Standard Attainment Assessment for Total Dissolved Solids (TDS)

April 9, 2012

## I. Introduction

Utah Department of Environmental Quality (DEQ) submitted the State of Utah's final 2008 Integrated Report (IR) to EPA in a series of four submittals on March 31, April 21, May 24, and September 14, 2011. DEQ submitted their final 2010 Integrated Report (IR) to EPA on April 27, April 21 and May 24, 2011. Because both documents were available, EPA concurrently reviewed the 2008 and the 2010 Clean Water Act (CWA) Section 303(d) waterbody lists (Section 303(d) lists) contained in the two reports. On February 10, 2012, EPA issued its "partial approval/further review pending" decision. EPA deferred action on Utah's decisions not to include certain waters, including Kanab Creek-2 and Lower Robinson Creek (also known as "Kanab Creek and tributaries"), on either the 2008 or 2010 lists in order to conduct further evaluation of water quality data and information related to these waters. For this assessment, Kanab Creek-2 and Lower Robinson Creek correspond to the following location description in Utah's Water Quality Standards (UAC R317-2-13.2.b - Classification of Waters of the State, Lower Colorado River Basin, Kanab Creek Drainage): "Kanab Creek and tributaries, from state line to irrigation diversion at confluence with Reservoir Canyon."

The purpose of this document is to describe the rationale for EPA's action on Kanab Creek and tributaries.

EPA reviewed the methodology used by the State in developing the Section 303(d) lists and the State's description of the readily available and existing water quality-related data and information it considered. EPA's review of Utah's 2008 and 2010 Section 303(d) lists is based on EPA's analysis of whether the State considered existing and readily available water quality-related data and information and identified waters required to be listed. EPA's analysis and conclusions are based on the following information:

- For this assessment, EPA first identified the waterbodies in question (Kanab Creek and tributaries) and the applicable water quality standards assigned to the waters by the State. Kanab Creek and tributaries have the use designations of Class 2B, 3C and 4, which means they are protected for infrequent primary contact recreation, nongame fish, and agricultural uses.

- EPA considered approximately ten years of data collected at STORET site 4951830, located in Kane County, Utah, from April 3, 1996 through November 25, 2008 and comprising 2,258 records including routine sampling and field observations and measurements. Data in the STORET Warehouse are of documented quality, i.e., a certain level of metadata, including where, how, why, when and what was monitored is included with all data submissions. Each sampling result in the STORET Warehouse is accompanied by information on where the sample was taken (latitude, longitude, state, county, Hydrologic Unit Code and a brief site identification), when the sample was gathered, the medium sampled (e.g., water, sediment, fish tissue), and the name of the organization that sponsored the monitoring. In addition, the

STORET Warehouse contains information on why the data were gathered; sampling and analytical methods used; the laboratory used to analyze the samples; the quality control checks used when sampling, handling the samples, and analyzing the data; and the personnel responsible for the data.

- EPA evaluated the STORET site 4951930 results for total dissolved solids (TDS) from this time period (other parameters, including dissolved oxygen (DO), temperature, pH, etc. were reviewed against applicable water quality criteria for exceedances as well).

- The data results from STORET were compared to the water quality criterion for TDS from Utah's Water Quality Standards (UAC R317-2-14. Numeric Criteria. Table 2.14.1 – *Numeric Criteria for Domestic, Recreation, and Agricultural Uses*) according to the methodology described by Utah in *Part 1: Methods for Assessing and Reporting the Condition of Lakes and Streams*, Utah Final 2010 Integrated Report, April 2011.

- A table identifying all data results for TDS for the period of interest was created (see chart on pages 6 - 9) demonstrating the extent of exceedances of the criterion for TDS beyond the 10% of representative samples within the assessment timeframe that may exceed the standard without causing a water quality standard violation.

- Based on the results of this analysis, EPA concludes that Kanab Creek and tributaries are impaired for TDS and adds them to the State's 2008 and 2010 Section 303(d) lists.

## II. Statutory and Regulatory Background

### A. Identification of Water Quality Limited Segments (WQLSs) for Inclusion on Section 303(d) List

Section 303(d)(1) of the CWA directs states to identify those waters within its jurisdiction for which effluent limitations required by Section 301(b)(1)(A) and (B) are not stringent enough to implement any applicable water quality standard, and to establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters. The Section 303(d) listing requirement applies to waters impaired by point and/or nonpoint sources, pursuant to EPA's long-standing interpretation of Section 303(d).

EPA regulations provide that states do not need to list waters where the following controls are adequate to implement applicable standards: (1) technology-based effluent limitations required by the CWA; (2) more stringent effluent limitations required by state or local authority; and (3) other pollution control requirements required by state, local, or federal authority. (See 40 C.F.R. §130.7(b)(1).)

Note: The term "water quality limited segment," as defined by federal regulations, may also be referred to as "impaired waterbodies" or "impairments" throughout this document.

### B. Consideration of Existing and Readily Available Water Quality-Related Data and Information

In developing Section 303(d) lists, states are required to assemble and evaluate all existing and readily available water quality-related data and information, including, at a minimum, consideration of existing and readily available data and information about the following categories of waters: (1) waters identified as not meeting designated uses, or as threatened, in the State's most recent CWA Section 305(b) report; (2) waters for which dilution calculations or predictive modeling indicate nonattainment of applicable standards; (3) waters for which water quality problems have been reported by governmental agencies, members of the public, or academic institutions; and (4) waters identified as impaired or threatened in any Section 319 nonpoint assessment submitted to EPA. (See 40 C.F.R. §130.7(b)(5).) In addition to these minimum categories, states are required to consider any other water quality-related data and information that is existing and readily available. EPA's 1991 Guidance for Water Quality-Based Decisions describes categories of water quality-related data and information that may be existing and readily available. (See *Guidance for Water Quality-Based Decisions: The TMDL Process*, EPA Office of Water, April 1991.) While states are required to evaluate all existing and readily available water quality-related data and information, states may decide to rely or not rely on particular data or information in determining whether to list particular waters.

### C. Applicable Water Quality Standards.

For purposes of identifying waters for the Section 303(d) list, the terms "water quality standard applicable to such waters" and "applicable water quality standards" refer to those water quality standards established and approved under Section 303 of the Act. EPA interprets CWA Section 303(d) to require EPA establishment or approval of Section 303(d) lists only for impairments of waters with EPA-approved water quality standards.

## III. Analysis of Utah's Submission

### A. Background

In reviewing Utah's submittal, EPA first reviewed the methodology used by the State to develop its 2008 and 2010 Section 303(d) lists in light of Utah's approved water quality standards. The State's assessment methodologies are included in the following sections of the two integrated reports:

- Part 1: *Water Quality Assessment Guidance*, pages 1-i to 1-73, Utah Final 2008 Integrated Report.

- Part 1: *Methods for Assessing and Reporting the Condition of Lakes and Streams*, pages I to 56, Utah Final 2010 Integrated Report.

Details regarding EPA's concerns with the assessment of Kanab Creek and tributaries are described in Section B. EPA's review is based on its analysis of whether all readily available water quality-related data and information were considered and impaired waters listed. For today's action, EPA considered existing and readily available water quality-related data and information pertaining to the categories under 40 C.F.R. §130.7(b)(5) that were not taken into consideration by the State.

## B. Kanab Creek and Tributaries Deferral Waters

EPA considers water bodies where it is demonstrated that water quality does not meet applicable water quality standards or is not expected to meet applicable water quality standards, even after the application of the technology-based effluent limitations required by sections 301(b)(1)(A) and (B) of the Clean Water Act, to be water quality limited segments. The basis for adding these waters to the State's 2008 and 2010 lists is discussed below.

1. Water Quality Standards

Water quality standards for the State are contained in UAC R317-2. The water quality standards are intended to protect Utah's waters and improve the quality for beneficial uses. Beneficial uses in Utah generally include drinking water, fish and aquatic life, wildlife, agricultural, industrial, and recreational uses.

The waterbodies EPA is acting on today are Kanab Creek and tributaries, located within assessment unit UT15010003-003_00, and described as "*Kanab Creek and tributaries, from state line to irrigation diversion at confluence with Reservoir Canyon.*" EPA is concerned these waters were not included on Utah's 2008 and 2010 Section 303(d) lists although they demonstrate multiple exceedances of the water quality criterion for total dissolved solids (TDS) that protects the designated uses for the two waterbodies.

Designated Uses

Utah's *Standards of Quality for Waters of the State* classifies the Kanab Creek drainage in the Lower Colorado River Basin. Waters of the State are further grouped "to protect against controllable pollution" the beneficial uses designated within each class (UAC R317-2-6.) Kanab Creek and tributaries have been assigned Class 2B, 3C and 4 uses:

a. 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, swimming, rafting, kayaking, diving and water skiing.

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

c. Class 4: Protected for agricultural uses including irrigation of crops and stock watering.

Numeric Criterion

UAC R317-2-14 includes Table 2.14.1: Numeric Criteria for domestic, Recreation and Agricultural Uses. For the parameter Total Dissolved Solids (TDS), a maximum concentration value of 1200 mg/L is listed for Class 4, agricultural uses. A footnote clarifies *"for water quality assessment purposes, up to 10% of representative samples may exceed the standard."* Kanab Creek and tributaries were assessed for exceedances of the maximum concentration value for total dissolved solids for the Class 4 agricultural use.

2. Assessment Methodology

a. Assessment Categories

Beginning in 2002, EPA has recommended five categories for reporting results of designated use assessments. The five categories were developed by EPA to provide a clearer summary of a state's water quality status and to assist in developing management actions to protect and restore waters of a state to meet Utah's water quality standards and support its designated uses. Utah summarizes assessment results using these five categories.

Category 5: The concentration of a pollutant—or several pollutants—exceeds numeric water quality criteria, or quantitative biological assessments indicate that the biological designated uses are not supported (narrative water quality standards are violated).

Waters reported as Category 5 are impaired, which means that they are not meeting their designated uses.

b. Sample Size Requirement

As a general rule, DWQ requires at least 10 samples (conventional parameters) or 5 samples (toxic parameters), collected from an assessment unit within the most recent five years, to make an assessment of designated use support.

c. Conventional Parameters

Conventional measures of chemical condition have high temporal variation—daily, seasonally, and yearly. Also these parameters are not acutely toxic and tend to degrade designated uses via exposure over relatively long time periods. To avoid over-interpretation of outliers when interpreting designated use support, DWQ follows the "10% rule" (UAC R317-2-7.1), which allows ≤10% of samples within an assessment unit (AU) to exceed numeric criteria before it would be considered impaired. The following rules generally apply for evaluations of conventional chemical parameters to determine support of applicable general uses:

**Beneficial Use Supported-** For each parameter, if ≥10 samples are available for an AU within the most recent 5-years, then the AU is considered to be supporting its designated use(s) if <10% of the samples exceed the numeric criterion.

**Beneficial Not Supported-** For each parameter, if ≥10 samples are available for an AU within the most recent 5-years, then the AU is considered to be impaired—not supporting its designated uses—if ≥10% of the samples exceed the numeric criterion.

3. Table 1: Total Dissolved Solids (TDS) Results for STORET Site 4951830

Table 1 includes all TDS results for the period from April 3, 1996 through November 25, 2008.

- All TDS results demonstrating attainment of the standard are highlighted in gray. Records are grouped by ≥10 samples exceeding the 1200 mg/l numeric criterion for total dissolved solids (TDS) within the most recent five year period, as well as the preceding ~ five year period.
- Grouping the records in this manner demonstrates the ≥10% exceedance of samples is also violated.
- Table 1 results demonstrate violation of the water quality criterion for TDS for Kanab Creek and tributaries based on Utah's standards and assessment methodology for attainment/impairment of a waterbody.
- Table 1 results demonstrate impairment of Kanab Creek and tributaries for TDS.

Table 1: Total Dissolved Solids Data for STORET Site 4951830

| Storet ID | Sampling Date | Activity | Parameter | Result Value (mg/l) |
|---|---|---|---|---|
| 4951830 | 11/25/2008 10:00 | Sample-Routine | Total dissolved solids | 1458 |
| 4951830 | 10/28/2008 14:35 | Sample-Routine | Total dissolved solids | 1460 |
| 4951830 | 9/22/2008 11:00 | Sample-Routine | Total dissolved solids | 1542 |
| 4951830 | 8/25/2008 15:50 | Sample-Routine | Total dissolved solids | 1398 |
| 4951830 | 7/30/2008 10:00 | Sample-Routine | Total dissolved solids | 1550 |
| 4951830 | 6/16/2008 14:30 | Sample-Routine | Total dissolved solids | 1354 |
| 4951830 | 5/26/2008 12:20 | Sample-Routine | Total dissolved solids | 1542 |
| 4951830 | 4/28/2008 8:30 | Sample-Routine | Total dissolved solids | 1464 |
| 4951830 | 2/26/2008 7:30 | Sample-Routine | Total dissolved solids | 752 |
| 4951830 | 1/23/2008 14:20 | Sample-Routine | Total dissolved solids | 794 |
| 4951830 | 12/26/2007 16:35 | Sample-Routine | Total dissolved solids | 1808 |
| 4951830 | 11/24/2007 9:40 | Sample-Routine | Total dissolved solids | 1594 |
| | | | | |
| 4951830 | 10/29/2007 11:30 | Sample-Routine | Total dissolved solids | 1412 |
| 4951830 | 9/26/2007 8:43 | Sample-Routine | Total dissolved solids | 1394 |
| 4951830 | 8/28/2007 12:30 | Sample-Routine | Total dissolved solids | 1656 |
| 4951830 | 7/30/2007 11:45 | Sample-Routine | Total dissolved solids | 1142 |
| 4951830 | 6/25/2007 9:30 | Sample-Routine | Total dissolved solids | 1566 |
| 4951830 | 5/28/2007 10:15 | Sample-Routine | Total dissolved solids | 1484 |
| 4951830 | 4/24/2007 15:50 | Sample-Routine | Total dissolved solids | 1442 |
| 4951830 | 3/26/2007 15:55 | Sample-Routine | Total dissolved solids | 1716 |
| 4951830 | 2/26/2007 17:10 | Sample-Routine | Total dissolved solids | 744 |
| 4951830 | 1/29/2007 13:20 | Sample-Routine | Total dissolved solids | 1010 |
| 4951830 | 12/29/2006 12:10 | Sample-Routine | Total dissolved solids | 802 |
| 4951830 | 11/24/2006 13:00 | Sample-Routine | Total dissolved solids | 772 |
| 4951830 | 10/23/2006 17:15 | Sample-Routine | Total dissolved solids | 1572 |
| 4951830 | 9/19/2006 11:10 | Sample-Routine | Total dissolved solids | 1396 |
| 4951830 | 8/28/2006 13:45 | Sample-Routine | Total dissolved solids | 1390 |
| | | | | |
| 4951830 | 7/31/2006 13:30 | Sample-Routine | Total dissolved solids | 372 |
| 4951830 | 6/19/2006 9:00 | Sample-Routine | Total dissolved solids | 1458 |
| 4951830 | 4/24/2006 14:20 | Sample-Routine | Total dissolved solids | 718 |

| | | | | |
|---|---|---|---|---|
| 4951830 | 3/27/2006 10:10 | Sample-Routine | Total dissolved solids | 960 |
| 4951830 | 1/30/2006 10:50 | Sample-Routine | Total dissolved solids | 730 |
| 4951830 | 12/28/2005 11:40 | Sample-Routine | Total dissolved solids | 838 |

| Storet ID | Sampling Date | Activity | Parameter | Result Value (mg/l) |
|---|---|---|---|---|
| 4951830 | 11/22/2005 10:30 | Sample-Routine | Total dissolved solids | 904 |
| 4951830 | 10/31/2005 18:00 | Sample-Routine | Total dissolved solids | 990 |
| 4951830 | 9/21/2005 11:00 | Sample-Routine | Total dissolved solids | 1290 |
| 4951830 | 8/31/2005 10:45 | Sample-Routine | Total dissolved solids | 1348 |
| 4951830 | 7/28/2005 16:25 | Sample-Routine | Total dissolved solids | 1260 |
| 4951830 | 7/5/2005 18:40 | Sample-Routine | Total dissolved solids | 1338 |
| 4951830 | 5/28/2005 14:10 | Sample-Routine | Total dissolved solids | 952 |
| 4951830 | 4/29/2005 18:00 | Sample-Routine | Total dissolved solids | 956 |
| 4951830 | 3/29/2005 16:30 | Sample-Routine | Total dissolved solids | 730 |
| 4951830 | 2/25/2005 13:50 | Sample-Routine | Total dissolved solids | 900 |
| 4951830 | 1/21/2005 15:15 | Sample-Routine | Total dissolved solids | 734 |
| 4951830 | 12/28/2004 18:00 | Sample-Routine | Total dissolved solids | 766 |
| 4951830 | 11/23/2004 11:55 | Sample-Routine | Total dissolved solids | 864 |
| 4951830 | 10/19/2004 8:30 | Sample-Routine | Total dissolved solids | 1920 |
| 4951830 | 9/20/2004 11:00 | Sample-Routine | Total dissolved solids | 598 |
| 4951830 | 7/27/2004 15:35 | Sample-Routine | Total dissolved solids | 1522 |
| 4951830 | 6/28/2004 16:15 | Sample-Routine | Total dissolved solids | 1676 |
| 4951830 | 5/26/2004 14:10 | Sample-Routine | Total dissolved solids | 1608 |
| 4951830 | 4/26/2004 8:30 | Sample-Routine | Total dissolved solids | 1644 |
| | | | | |
| 4951830 | 3/13/2004 10:15 | Sample-Routine | Total dissolved solids | 1032 |
| 4951830 | 2/24/2004 8:20 | Sample-Routine | Total dissolved solids | 790 |
| 4951830 | 12/29/2003 10:40 | Sample-Routine | Total dissolved solids | 1146 |
| 4951830 | 11/24/2003 16:00 | Sample-Routine | Total dissolved solids | 1476 |
| 4951830 | 10/28/2003 12:05 | Sample-Routine | Total dissolved solids | 1578 |
| 4951830 | 9/12/2003 16:15 | Sample-Routine | Total dissolved solids | 1590 |
| 4951830 | 8/22/2003 12:30 | Sample-Routine | Total dissolved solids | 1764 |
| 4951830 | 7/28/2003 17:00 | Sample-Routine | Total dissolved solids | 1808 |
| 4951830 | 6/24/2003 16:20 | Sample-Routine | Total dissolved solids | 1742 |
| 4951830 | 4/7/2003 17:30 | Sample-Routine | Total dissolved solids | 1832 |

| 4951830 | 3/24/2003 15:30 | Sample-Routine | Total dissolved solids | 696 |
|---|---|---|---|---|
| 4951830 | 12/31/2002 14:00 | Sample-Routine | Total dissolved solids | 880 |
| 4951830 | 11/18/2002 13:10 | Sample-Routine | Total dissolved solids | 1630 |
| 4951830 | 9/24/2002 10:10 | Sample-Routine | Total dissolved solids | 1720 |
| 4951830 | 8/12/2002 14:05 | Sample-Routine | Total dissolved solids | 1730 |
| | | | | |
| 4951830 | 7/17/2002 14:45 | Sample-Routine | Total dissolved solids | 1704 |
| 4951830 | 6/25/2002 10:50 | Sample-Routine | Total dissolved solids | 1744 |
| **Storet ID** | **Sampling Date** | **Activity** | **Parameter** | **Result Value (mg/l)** |
| 4951830 | 5/29/2002 16:00 | Sample-Routine | Total dissolved solids | 1628 |
| 4951830 | 4/26/2002 12:30 | Sample-Routine | Total dissolved solids | 1740 |
| 4951830 | 1/24/2002 17:35 | Sample-Routine | Total dissolved solids | 1188 |
| 4951830 | 12/28/2001 17:15 | Sample-Routine | Total dissolved solids | 912 |
| 4951830 | 11/17/2001 17:10 | Sample-Routine | Total dissolved solids | 1706 |
| 4951830 | 10/22/2001 13:55 | Sample-Routine | Total dissolved solids | 1696 |
| 4951830 | 9/17/2001 15:30 | Sample-Routine | Total dissolved solids | 1726 |
| 4951830 | 8/20/2001 7:30 | Sample-Routine | Total dissolved solids | 1358 |
| 4951830 | 7/10/2001 13:15 | Sample-Routine | Total dissolved solids | 1652 |
| 4951830 | 5/21/2001 11:30 | Sample-Routine | Total dissolved solids | 1624 |
| | | | | |
| 4951830 | 4/16/2001 10:00 | Sample-Routine | Total dissolved solids | 602 |
| 4951830 | 3/16/2001 14:00 | Sample-Routine | Total dissolved solids | 1024 |
| 4951830 | 2/26/2001 10:00 | Sample-Routine | Total dissolved solids | 946 |
| 4951830 | 1/13/2001 10:45 | Sample-Routine | Total dissolved solids | 748 |
| 4951830 | 12/18/2000 15:00 | Sample-Routine | Total dissolved solids | 740 |
| 4951830 | 11/20/2000 13:40 | Sample-Routine | Total dissolved solids | 970 |
| 4951830 | 10/21/2000 11:30 | Sample-Routine | Total dissolved solids | 1678 |
| 4951830 | 9/25/2000 7:30 | Sample-Routine | Total dissolved solids | 1646 |
| 4951830 | 7/7/2000 10:30 | Sample-Routine | Total dissolved solids | 1698 |
| 4951830 | 5/17/2000 14:25 | Sample-Routine | Total dissolved solids | 2262 |
| 4951830 | 4/25/2000 11:15 | Sample-Routine | Total dissolved solids | 1714 |
| 4951830 | 3/20/2000 16:50 | Sample-Routine | Total dissolved solids | 822 |
| 4951830 | 2/25/2000 13:40 | Sample-Routine | Total dissolved solids | 1114 |
| 4951830 | 1/11/2000 10:10 | Sample-Routine | Total dissolved solids | 714 |
| 4951830 | 12/7/1999 16:45 | Sample-Routine | Total dissolved solids | 1540 |
| 4951830 | 11/10/1999 11:00 | Sample-Routine | Total dissolved solids | 1474 |

| | | | | |
|---|---|---|---|---|
| 4951830 | 10/25/1999 9:00 | Sample-Routine | Total dissolved solids | 1810 |
| 4951830 | 9/22/1999 10:00 | Sample-Routine | Total dissolved solids | 1206 |
| 4951830 | 4/3/1996 18:22 | Sample-Routine | Total dissolved solids | 1862 |

4. Assessment - Assessment Conclusion

The table summarizes EPA's findings regarding the existing and readily available data and compares this data to Utah's water quality criterion for TDS and assessment methodology for conventional parameters. Based on this assessment, EPA is adding Kanab Creek-2 and its tributary Lower Robinson Creek to Utah's 2008 and 2010 section 303(d) lists as being impaired for TDS.

EPA will solicit public comments on the addition of these waterbodies to the State's Section 303(d) list and, following consideration of any public comments received, will transmit a final determination regarding these waters to the State for incorporation in its 2008 and 2010 Section 303(d) lists.

## V. References

The following list includes documents that were used directly or indirectly as a basis for EPA's review and approval of the deferral waters. This list is not meant to be an exhaustive list of all records, but to provide the primary documents the Region relied upon in making its decisions regarding the State's list.

40 C.F.R. Part 130 Water Quality Planning and Management

40 C.F.R. Part 131 Water Quality Standards

Utah's Water Quality Standards (UAC R317-2-14. Numeric Criteria. Table 2.14.1 – *Numeric Criteria for Domestic, Recreation, and Agricultural Uses.*

April 1991, *Guidance for Water Quality-Based Decisions: The TMDL Process*, EPA 440/4-91-001.

July 24, 1992 Federal Register Notice, *40 CFR Parts 122, 123, 130, Revision of Regulation*, 57 FR 33040.

August 23, 1999 Federal Register Notice, *Proposed Revisions to the Water Quality Management and Planning Regulations*, 64 FR 46012

USEPA. 2004. *Guidance for 2004 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act*. U.S. Environmental Protection Agency Office of Water, Office of Wetlands, Oceans, and Watershed, Assessment and Watershed Protection Division. Washington, DC.

USEPA. 2005. *Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act*. U.S. Environmental Protection Agency Office of Water, Office of Wetlands, Oceans, and Watershed, Assessment and Watershed Protection Division. Washington, DC.

STORET (and WQX): EPA's repository and framework for sharing water monitoring data: http://www.epa.gov/storet/