

2020 303(d) List Monitoring Plan

LBD evaluates impairments identified in Regulation #93 – Colorado's Section 303(d) List of Impaired Waters and Monitoring and Evaluation (M&E) List (Colorado Department of Public Health and Environment, Water Quality Control Commission. Reg #93., 2020) within the CEA to ensure that adequate monitoring is being done in segments where there are impairments.

Regulation #93 consists of 3 components:

1. The list of Water-Quality-Limited Segments Requiring total maximum daily loads (TMDLs) fulfills requirements of section 303(d) of the federal Clean Water Act, which requires that states submit to the U.S. Environmental Protection Agency a list of those waters for which technology-based effluent limitations and other required controls are not stringent enough to implement water quality standards.
2. Colorado's Monitoring and Evaluation List identifies water bodies where there is reason to suspect water quality problems, but there is also uncertainty regarding one or more factors, such as the representative nature of the data. Water bodies that are impaired, but it is unclear whether the cause of impairment is attributable to pollutants as opposed to pollution, are also placed on the Monitoring and Evaluation List. This Monitoring and Evaluation list is a state-only document that is not subject to EPA approval.
3. The list of Water-Quality-Limited Segments Not Requiring a TMDL identifies segments where data is available that indicates that at least one classified use is not being supported, but a TMDL is not needed.

The objectives of the 303(d) List Monitoring Plan are to:

- Evaluate the current 303(d) and M&E listed water bodies within the CEA;
- Evaluate current water quality sampling programs being conducted by various agencies to determine if 303(d) listed waters are being monitored appropriately;
- Develop monitoring plan for segments that are determined to need additional sampling.

2020 Review of Impaired Segments

In January 2020, the Water Quality Control Commission adopted the most recent version of Regulation #93, which became effective on March 3, 2020. The most current 303(d) and M&E list showed that 15 stream segments are currently listed as impaired within Grand County; 7 of these segments, COUCUC01, COUCUC02, COUCUC03, COUCUC08, COUCUC09, COUCUC10a, COUCUC10c and four water bodies (COUCUC12) are located within the LBD CEA as shown in Figure 5. Of the 7 listed

segments within the LBD CEA, the impaired uses are for Recreation, Water Supply, and Aquatic Life Use. The primary analytes of concern are arsenic (total), E. coli, copper (dissolved), silver, zinc, pH, stream temperature, and macroinvertebrates. There are seventeen new listings within the CEA for arsenic, pH, copper, silver, zinc, and E. Coli. Eleven segments were delisted for macroinvertebrates, copper, dissolved oxygen, manganese, and iron. These changes are detailed below.

It is worth noting arsenic is a national/statewide water quality issue. Arsenic is a naturally occurring, toxic element found in soil, bedrock, and water. Arsenic is colorless and odorless and a known carcinogen. Arsenic is regulated at the federal level under multiple agencies and 7 different acts including two associated with the Colorado Department of Public Health and Environment.⁶ In 2013, Colorado implemented a major update to the arsenic water quality standards. These standards have led to some interesting and costly regulatory compliance solutions in Colorado. At this time, there are no feasible treatment processes available to effectively treatment stream segments for arsenic.⁷

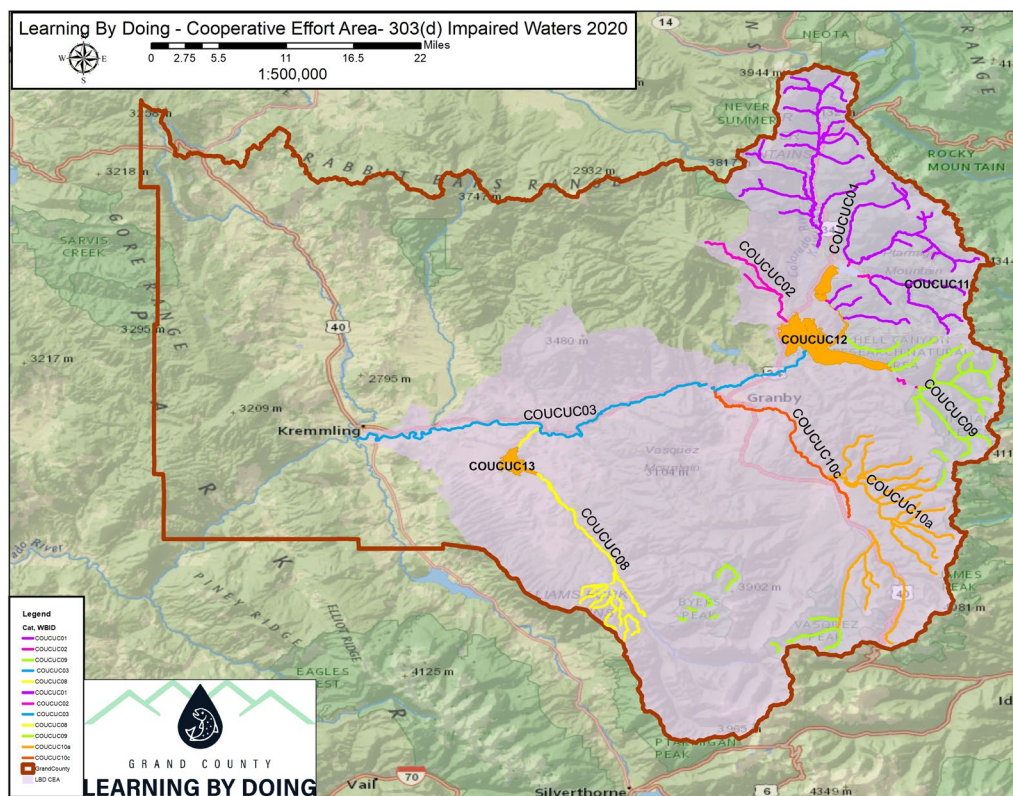


Figure 5 - Grand County Impaired Segments

⁶ Environmental Protection Agency. Arsenic Fact Sheet 2013. https://www.epa.gov/sites/production/files/2014-03/documents/arsenic_factsheet_cdc_2013.pdf

⁷ Rocky Mountain Water – Updates to Colorado's Arsenic Regulations – Dan Delaughter, PE. Pg 12 -15. https://www.apogeeepublications.com/emags/RMW_March2020/



Below is a detailed breakdown of the listed segment portions, analytes, and listing classifications:

1. **COUCUC01 Mainstem of the Colorado River, including all tributaries and wetlands, within Rocky Mountain National Park, or which flows into Rocky Mountain Park.**
 - COUCUC01-A Mainstem of the Colorado River, including all tributaries and wetlands, within or flowing into Rocky Mountain National Park
 - Aquatic Life Use – Zinc (Dissolved) – 303(d) * *New listing 2020*

2. **COUCUC02 Mainstem of the Colorado River, including all tributaries and wetlands within, or flowing into Arapahoe National Recreation Area.**
 - COUCUC02_B Willow Creek, Stillwater Creek, and Arapaho Creek
 - Aquatic Life Use – Temperature – 303(d)

 - COUCUC02_C Colorado River from Shadow Mountain Reservoir to Granby Reservoir
 - Aquatic Life Use – Temperature – 303(d)

 - COUCUC02_D Mainstem of Colorado River from North Inlet to Grand Lake
 - Aquatic Life Use – Zinc (Dissolved) – M&E List* *New listing 2020*
 - Aquatic Life Use – Silver (Dissolved) – M&E List* *New listing 2020*
 - Aquatic Life Use – Copper (Dissolved) – 303(d)

 - COUCUC02_E Mainstem of East Inlet
 - Aquatic Life Use – Zinc (Dissolved) – M&E List* *New listing 2020*
 - Aquatic Life Use – Silver (Dissolved) – M&E List* *New listing 2020*
 - Aquatic Life Use – Copper (Dissolved) – 303(d) * *New listing 2020*

 - COUCUC02_I Arapaho Creek downstream of Monarch Lake
 - Aquatic Life Use – Silver (Dissolved) – M&E List* *New listing 2020*
 - Aquatic Life Use – Temperature – 303(d) * *New listing 2020*

 - COUCUC02_L Stillwater Creek, including tributaries and wetlands, within or flowing into Arapaho Recreation Area
 - Water Supply Use – Arsenic (Total) – 303(d) * *New listing 2020*
 - Water Supply Use – Silver (Dissolved) – 303(d) * *New listing 2020*
 - Aquatic Life Use – Temperature – 303(d) * *New listing 2020*

3. COUCUC03 - Mainstem of the Colorado River from the outlet of Lake Granby to the confluence with Roaring Fork River.

- COUCUC03_A Colorado River from outlet of Lake Granby to Windy Gap Reservoir
 - Water Supply use – Arsenic – M&E List
- COUCUC03_B Colorado River from Windy Gap Reservoir to 578 Road Bridge
 - Water Supply use – Arsenic – M&E List
- COUCUC03_C Colorado River from 578 Road Bridge to Gore Canyon
 - Water Supply use – Arsenic – M&E List
 - Aquatic Life Use – Temperature – 303(d)

4. COUCUC08 - Mainstem of the Williams Fork River, including all tributaries and wetlands from the source to the confluence with the Colorado River, except for those tributaries listed in Segment 9.

- COUCUC08_B Mainstem of Williams Fork River below Kinney Creek
 - Water Supply use – Arsenic – M&E List* New listing 2020

5. COUCUC09 – All tributaries to the Colorado and Fraser Rivers, including of all wetlands, within the Never Summer, Indian Peaks, Byers, Vasquez, Eagles Nest and Flat Top Wilderness Areas.

- COUCUC09_B Roaring Fork Arapaho Creek and its tributaries.
 - Aquatic Life Use – Macroinvertebrates – 303(d) * New listing 2020

6. COUCUC10a - Mainstem of the Fraser River from the source to a point immediately below the Rendezvous Bridge. All tributaries to the Fraser River, including wetlands, from the source to the confluence with the Colorado River, except for those tributaries included in Segment 9.

- COUCUC10a_B - Ranch Creek and its tributaries.
 - Aquatic Life Use – Temperature – 303(d)
- COUCUC10a_D - Vasquez Creek and its tributaries.
 - Aquatic Life Use – Macroinvertebrates (provisional) – 303(d)
 - Aquatic Life Use – Copper – 303(d)
- COUCUC10a_E - Mainstem of Fraser River from source to Leland Creek



- Aquatic Life Use – Copper – 303(d) *new listing in 2020.

7. COUCUC10c - Mainstem of the Fraser River from a point immediately below the Hammond Ditch to the confluence with the Colorado River.

- COUCUC10c_A Fraser River from below the Hammond Ditch in Town of Fraser to Fraser Canyon near Tabernash.
 - Aquatic Life Use – pH – M&E List *new listing in 2020
 - Water Supply Use – Arsenic (total) – 303(d)
- COUCUC10c_B Fraser River from Fraser Canyon near Tabernash to the Town of Granby
 - Water Supply Use – Arsenic (total) – 303(d)
- COUCUC10c_C From Town of Granby to confluence with the Colorado River
 - Recreation – E. coli – 303(d) *new listing in 2020
 - Water Supply Use – Arsenic (total)– 303(d)

8. COUCUC12 – Lakes and reservoirs within Arapaho National Recreation Area, including Grand Lake, Shadow Mountain Lake and Lake Granby.

- COUCUC12_B - Shadow Mountain Reservoir
 - Water Supply Use – Arsenic (total) – 303(d)
- COUCUC12_C – Lake Granby
 - Water Supply Use – Arsenic (total) – 303(d)
- COUCUC12D – Willow Creek Reservoir
 - Water Supply Use – Arsenic (total) – 303(d)

9. COUCUC13 – All lakes and reservoirs tributary to the Colorado River from the boundary of Rocky Mountain National Park and Arapaho National Recreation Area to a point below the confluence of the Roaring Fork River, except for specific listings in Upper Colorado Segments 11 and 12 and the Blue and Eagle Rivers.

- COUCUC13_D Williams Fork Reservoir
 - Water Supply Use – Arsenic (total) – M&E List*new listing in 2020



2020 LBD Monitoring to Support 303(d) Listings

The Listing Methodology sets forth criteria that will be utilized to decide which waters will be included on the Section 303(d) List and the Monitoring and Evaluation List under Regulation #93. The water quality assessment process depends on analysis of sufficient reliable data. Generally, only data from the previous five years is assessed.⁸ In order for a 303(d) listing there has to be a representative data set, which is defined in the Section 303(d) Listing Methodology 2020 Listing Cycle. The impairments listed in these segments were evaluated against the 2020 Monitoring Summary (Appendix B). This evaluation showed that there is sufficient monitoring being conducted by various entities throughout the CEA. The 4 impaired segments within the CEA were evaluated against known water quality monitoring.

⁸ Colorado Department of Public Health. Water Quality Control Division. Section 303(d) Listing Methodology 2020 Listing Cycle. March 2019.