



# 2021 303(d) Evaluation List and Monitoring Plan

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Learning By Doing (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, 2021<sup>4</sup>) within the CEA. LBD strives to monitor segments with known impairments.

Regulation #93 consists of three components:

1. The list of Water-Quality-Limited Segments Requiring total maximum daily loads (TMDLs) fulfills section 303(d) requirements of the federal Clean Water Act. Which requires states to 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, except there is uncertainty regarding one or more factors, such as the representative nature of the data. For example, suppose it is unclear whether the cause of impairment is attributable to pollutants instead of pollution in impaired water bodies. In that case, they go on the Monitoring and Evaluation List. The Monitoring and Evaluation (M & E) list is a state-only document not subject to EPA approval.
3. The list of Water-Quality-Limited Segments Not Requiring a TMDL identifies segments where data indicates at least one classified use is not supported, but a TMDL is not needed.

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

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

## 2021 Review of Impaired Segments

In June 2021, the Water Quality Control Commission adopted the most recent version of Regulation #93, which became effective on August 14, 2021. The recently adopted 303(d) and M&E list shows seventeen stream segments listed as impaired within Grand County; Ten of these segments, **COUCUC01, COUCUC02, COUCUC03, COUCUC05, COUCUC09, COUCUC10a, COUCUC10c, and five water bodies in segments COUCUC12 and COUCUC13** are located within the LBD CEA as shown in Figure 5. The twelve listed segments within the LBD CEA the impaired uses are Recreation, Water Supply, and Aquatic Life Use. The primary analytes of concern are arsenic (total), E. coli, Copper

(dissolved), Iron, Manganese, Selenium, Silver, Zinc, pH, stream/lake/reservoir temperature, and macroinvertebrates. In addition, there are two new listings within the CEA for lake/reservoir temperature. These changes are detailed below.

In regards to arsenic, 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 as well as a known carcinogen. Arsenic regulation at the federal level is under multiple agencies and seven different acts, including two associated with the Colorado Department of Public Health and Environment.<sup>5</sup> In 2013, Colorado implemented a significant update to the arsenic water quality standards. These standards have led to some interesting and costly regulatory compliance solutions in Colorado. Unfortunately, at this time, there are no feasible treatment processes available to effectively treatment stream segments for arsenic.<sup>6</sup>

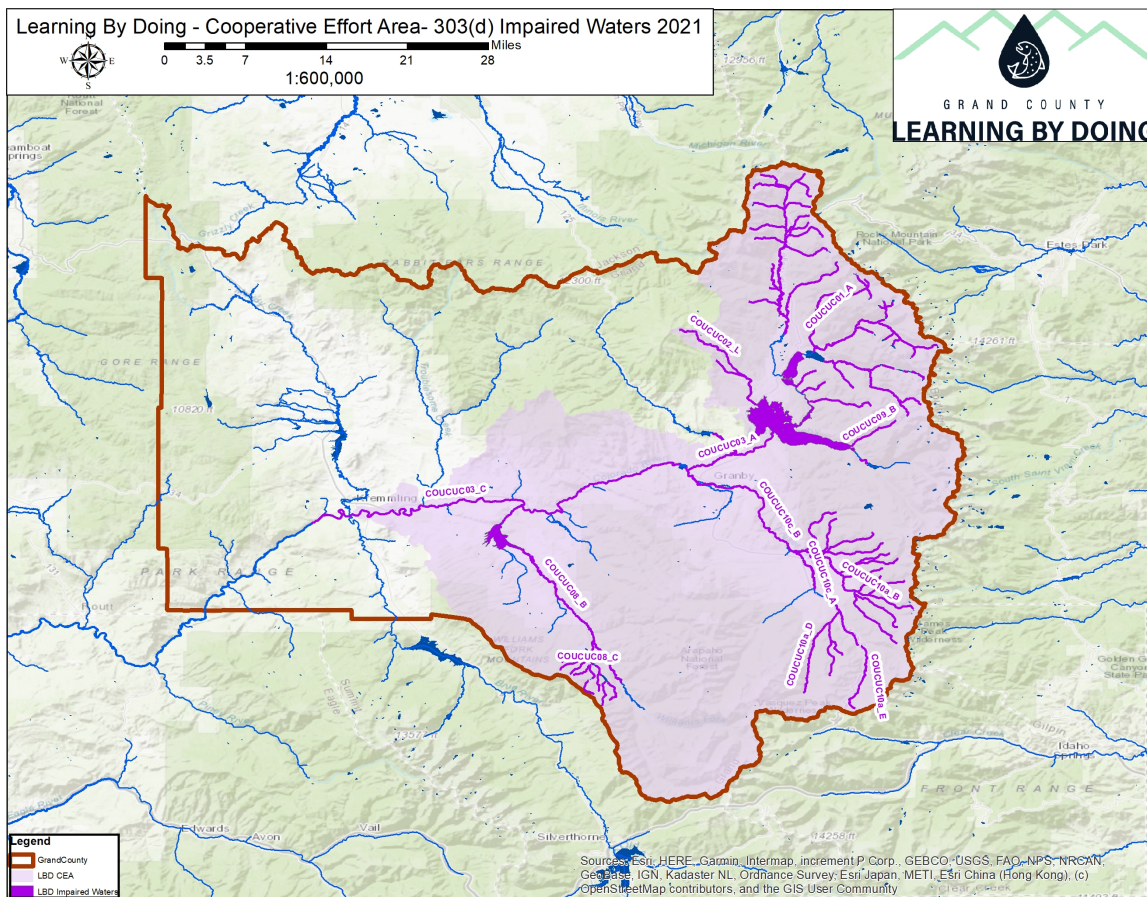


Figure 5. Grand County Impaired Waters.



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\_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  
Aquatic Life Use – Silver (Dissolved) – M&E List  
Aquatic Life Use – Copper (Dissolved) – 303(d)
- COUCUC02\_E Mainstem of East Inlet  
Aquatic Life Use – Zinc (Dissolved) – M&E List  
Aquatic Life Use – Silver (Dissolved) – M&E List  
Aquatic Life Use – Copper (Dissolved) – 303(d)
- COUCUC02\_I Arapaho Creek downstream of Monarch Lake  
Aquatic Life Use – Silver (Dissolved) – M&E List  
Aquatic Life Use – Temperature – 303(d)
- COUCUC02\_L Stillwater Creek, including tributaries and wetlands, within or flowing into Arapaho Recreation Area  
Water Supply Use – Arsenic (Total) – 303(d)  
Water Supply Use – Manganese (Dissolved) – 303(d)  
Aquatic Life Use – Temperature – 303(d)

**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. COUCUC05 - Mainstem of Willow Creek from the outlet of Willow Creek Reservoir to the confluence with the Colorado River.**

- COUCUC05\_B Mainstem of Willow Creek from the outlet of Willow Creek Reservoir to the confluence with the Colorado River.

Water Supply use – Arsenic – M&E List

Water Supply Use – Manganese (Dissolved)

**5. 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

- COUCUC08\_C Ute Creek and its tributaries

Water Supply use – Arsenic – M&E List

Aquatic Life Use – Zinc (Dissolved) – 303(d) List

**6. 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)

**7. 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– 303(d)



Aquatic Life Use – Copper – 303(d)

- COUCUC10a\_E - Mainstem of Fraser River from source to Leland Creek

Aquatic Life Use – Copper (Dissolved) – 303(d)

**8. 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

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 the Town of Granby to confluence with the Colorado River.

Recreation – E. coli – 303(d)

Water Supply Use – Arsenic (total)– 303(d)

**9. 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 *\*new listing in 2021*

Water Supply Use – Arsenic (total) – 303(d)

- COUCUC12E – Grand Lake *\*new listing in 2021*

Aquatic Life Use – Temperature – 303(d)

**10. 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



## 2021 LBD Monitoring to Support 303(d) Listings

The Listing Methodology defines the criteria the WQCD uses to evaluate which waters are considered impaired under Section 303(d) List and the Monitoring and Evaluation List under Regulation #93. The water quality assessment process depends on the analysis of sufficient and reliable data. Generally, the WQCD only uses data from the previous five years for assessment.<sup>4</sup> For a 303(d) listing, there has to be a representative data set. The LBD Monitoring Committee compares the 2021 LBD Monitoring Summary (Appendix B) with the known impairments to ensure that LBD monitors the appropriate analytes. This evaluation shows there is sufficient monitoring throughout the CEA.

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<sup>4</sup> Colorado Department of Public Health. Water Quality Control Division. Section 303(d) Listing Methodology 2022 Listing Cycle. May 2020.

<sup>5</sup> Environmental Protection Agency. Arsenic Fact Sheet 2013.  
[https://www.epa.gov/sites/production/files/2014-03/documents/arsenic\\_factsheet\\_cdc\\_2013.pdf](https://www.epa.gov/sites/production/files/2014-03/documents/arsenic_factsheet_cdc_2013.pdf)

<sup>6</sup> Rocky Mountain Water – Updates to Colorado's Arsenic Regulations – Dan Delaughter, PE. Pg 12 -15.  
[https://www.apogeepublications.com/emags/RMW\\_March2020/](https://www.apogeepublications.com/emags/RMW_March2020/)