

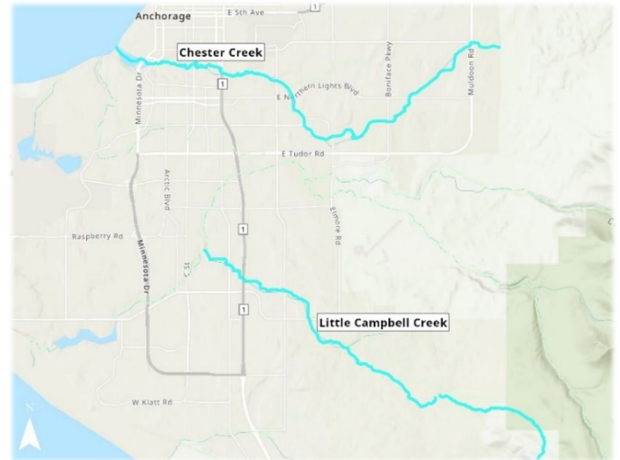


Category 5 Summary

Little Campbell Creek and Chester Creek

Abstract

Analysis of samples collected in 2020-2022 indicate Alaska Water Quality Standard impairment thresholds were exceeded for *Escherichia coli* (*E. coli*) at Little Campbell Creek and Chester Creek. These waterbody assessment units are currently listed as Category 4a for fecal coliform, with an ongoing Total Maximum Daily Load. The Alaska Department of Environmental Conservation recommends placing Little Campbell Creek and Chester Creek to Category 5 for *E. coli* in the 2024 Integrated Report.



For all waterbody assessment units, categories are assigned to both individual parameters and to entire waterbody assessment units. When a waterbody assessment unit has parameters in both Categories 4 and 5, overall it will be placed in Category 5. Waterbodies in Category 5 are prioritized for further data collection, restoration and watershed planning efforts that protect water quality. Waterbodies in Category 4 already have an established Total Maximum Daily Load or alternative waterbody recovery plan. Table 1 shows the category placement for individual parameters analyzed from Little Campbell Creek and Chester Creek, as well their overall category placements, for both the final 2022 Integrated Report, and the draft 2024 Integrated Report.

Table 1. Little Campbell Creek and Chester Individual Parameter Categories and overall waterbody assessment unit category for the final 2022 Integrated Report, and the draft 2024 Integrated Report

Waterbody	Little Campbell Creek		Chester Creek	
	2022	2024	2022	2024
Category 2 Parameters	None	Cadmium, copper, lead, selenium, zinc, dissolved oxygen, pH	None	Cadmium, copper, lead, selenium, zinc, dissolved oxygen, pH
Category 3 Parameters	Dissolved oxygen, pH, temperature, turbidity, and <i>E. coli</i>	Turbidity, mercury	Dissolved oxygen, pH	Antimony, arsenic, barium, beryllium, cobalt, iron, manganese, molybdenum, nickel, silver, thallium, turbidity, vanadium, mercury
Category 4a Parameters	Fecal coliform	Fecal coliform	Fecal coliform	Fecal coliform
Category 5 Parameters	None	<i>E. coli</i>	None	<i>E. coli</i>
Overall Category	4a	5	4a	5

Table 1. Current waterbody status and applicable water quality standard¹

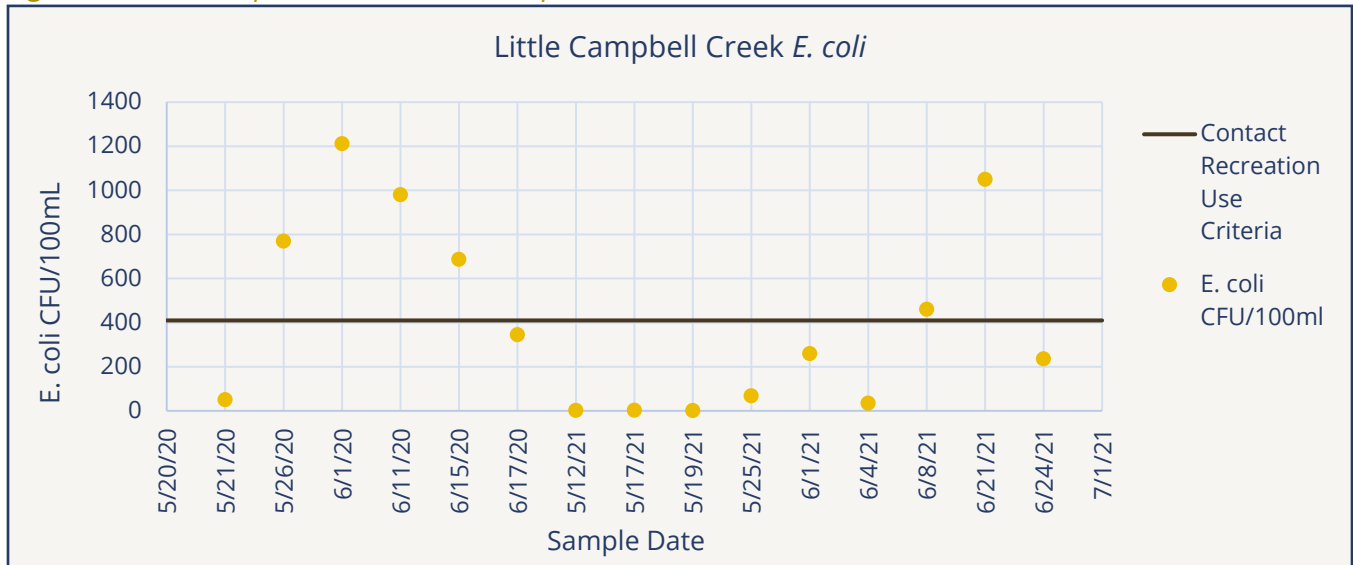
Assessment Unit Name (Assessment Unit ID)	Little Campbell Creek (AK_R_2040106_004) and Chester Creek (AK_R_2040108_003)
2022 Overall Waterbody Category	Overall category 4a for fecal coliform impairment. Individual category for fecal coliform will remain in 4a.
2024 Proposed Overall Waterbody Category	5 for recent <i>E. coli</i> criteria exceedances
Parameter Category Change	Little Campbell Creek <i>E. coli</i> is proposed to move from Category 3 to 5. Chester Creek was previously unassessed for <i>E. coli</i> and is proposed for placement in Category 5
Water Quality Standard	Bacteria, for freshwater uses
Designated Use Class	(12)(B) Water Recreation (i) Contact Recreation
Criteria	In a 30-day period, the geometric mean of samples may not exceed 126 <i>E. coli</i> colony forming units (CFU)/ 100ml, and not more than 10% of the samples may exceed a statistical threshold value (STV) of 410 <i>E. coli</i> CFU/100 ml.

Results

Little Campbell Creek

In 2020 and 2021 a total of 15 *E. coli* samples were collected from Campbell Creek. Individual sample results exceeded 410 CFU/100mL during more than 10% of the time per water year.

Figure 1. Little Campbell Creek *E. coli* sample results and criteria



Chester Creek

In 2021 and 2022 a total of 10 *E. coli* samples were collected from Chester Creek. Individual sample result exceeded 410 CFU/100mL during more than 10% of the time per water year.

¹ See 18 AAC 70 Water Quality Standards, page 15 for complete list of designated uses for bacteria

Figure 2. Chester Creek E. coli sample results and criteria

