

Memorandum

Date: November 12, 2020

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From: Allison Scott
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Subject: 2017 Caples Creek Phase 4 Survey

From August 28th through August 31st, 2017, the Heritage and Wild Trout Program statewide crew conducted a total of 18 phase 4 direct observation snorkel surveys on Caples Creek (Figure 1).

Each survey site was snorkeled in an upstream direction with two to three divers. Fish were identified to species and categorized by size class: YOY (young of the year); small (less than 6 inches); medium (6 to 12 inches); large (12 to 18 inches); and extra-large (greater than 18 inches). Trout that were difficult to identify (e.g., small, fast, far away) were recorded as unidentified trout. Water temperature, habitat type, section length, average width, and average depth were collected in each section as habitat data (Figure 2; Table 1).

Eight sections were surveyed about 2.5 miles upstream from the confluence with the Silver Fork American River. These habitat units contained mostly Coastal Rainbow Trout *Oncorhynchus mykiss* (Figure 3; Table 2). Brook Trout *Salvelinus fontinalis* and unidentified trout were also observed, though in smaller numbers (Table 3, 4). Most habitat units surveyed were flatwater with a variety of cover types including undercut banks, woody debris, and large boulders.

Three sections were snorkeled about 0.4 miles downstream from the confluence with Kirkwood Creek. These sections contained almost exclusively Coastal Rainbow Trout; however, one Brown Trout *Salmo trutta* was observed in the first middle section (Table 5). Fish observations were highest in the flatwater section. Two other sections were deep pools with murky water, which could account for lower fish observations.

Six habitat units were surveyed about one mile downstream from the El Dorado and Amador county line (Figure 1). These habitat units contained almost exclusively Brook Trout (Figure 4). Habitat was comprised of long stretches of flatwater with predominantly cobble substrate and overhanging vegetation (Figure 5).

The last section was near the El Dorado and Amador county line. Both Coastal Rainbow and Brook trout were observed in this pool.

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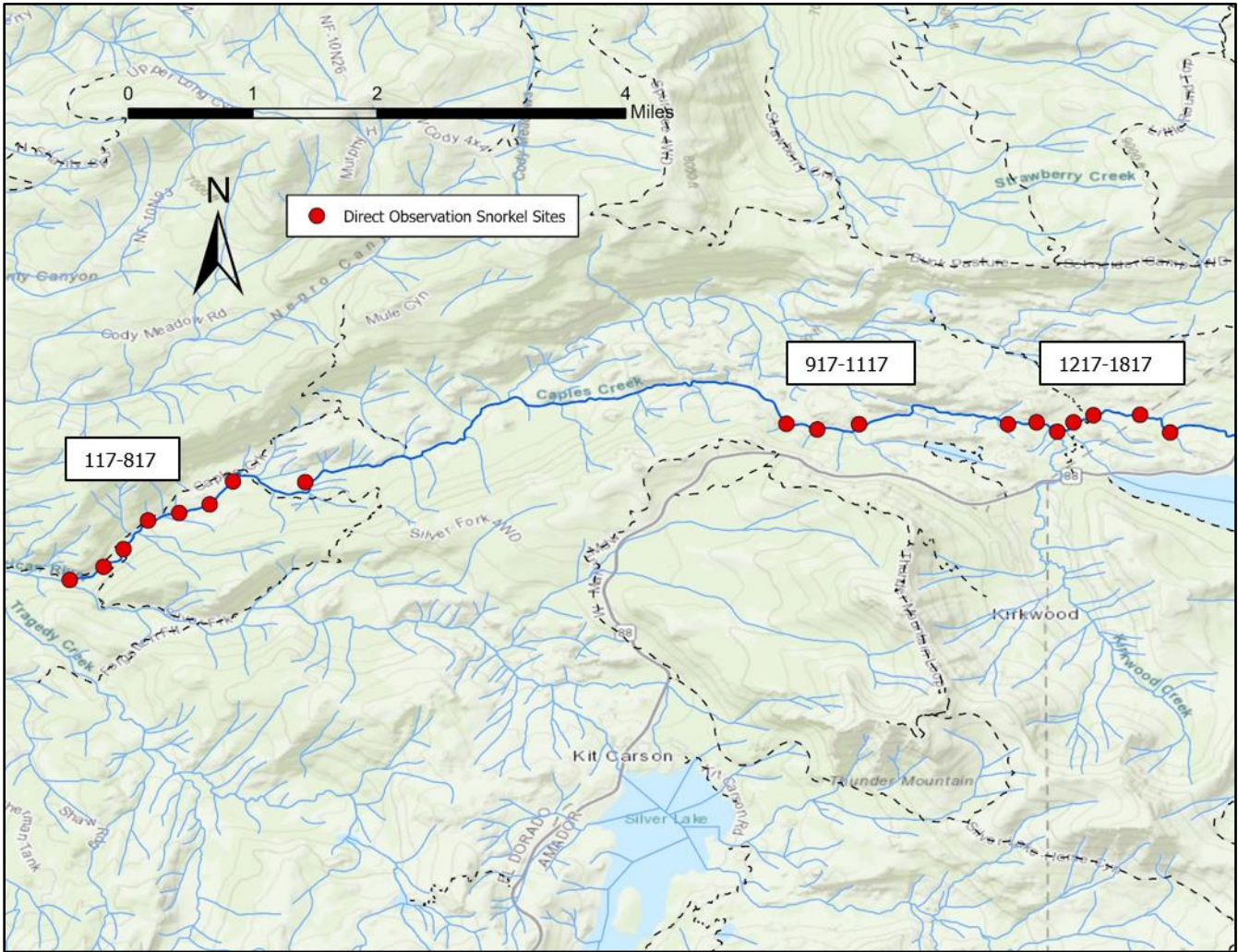


Figure 1. Map of 2017 Caples Creek direct observation snorkel sites.



Figure 2 Crew members collecting habitat data in a lower section of Caples Creek.



Figure 3. Small Rainbow Trout in section 817 of Caples Creek.



Figure 4. Brook Trout YOY in section 1517 in Caples Creek.



Figure 5. Direct observation snorkel survey on an upper section of Caples Creek.

Table 1. Summary of habitat data collected during direct observation snorkel surveys.

| Section Number | Habitat Type | Section Length (ft) | Average width (ft) | Average Depth (ft) | Water Temperature (°C) |
|-----------------------|---------------------|----------------------------|---------------------------|---------------------------|-------------------------------|
| 117 | Flatwater | 57.0 | 45.9 | 3.0 | 16 |
| 217 | Flatwater | 226.5 | 48.4 | 1.7 | 16 |
| 317 | Flatwater | 57.3 | 30.4 | 2.4 | 14 |
| 417 | Flatwater | 303.0 | 36.7 | 2.2 | 15 |
| 517 | Riffle | 130.3 | 37.6 | 1.7 | 14 |
| 617 | Pool | 116.4 | 43.4 | 4.2 | 14 |
| 717 | Riffle | 102.0 | 47.7 | 1.2 | 14 |
| 817 | Flatwater | 160.5 | 28.3 | 2.5 | 14 |
| 917 | Flatwater | 89.2 | 25.1 | 1.5 | 12 |
| 1017 | Pool | 47.8 | 22.7 | 2.5 | 14 |
| 1117 | Pool | 42.4 | 27.4 | 4.0 | 14 |
| 1217 | Flatwater | 257.1 | 33.0 | 1.7 | 11 |
| 1317 | Flatwater | 222.5 | 29.4 | 2.4 | 11 |
| 1417 | Flatwater | 147.3 | 30.8 | 2.1 | 13 |
| 1517 | Flatwater | 159.0 | 29.4 | 1.8 | 13 |
| 1617 | Flatwater | 110.8 | 29.4 | 2.7 | 12 |
| 1717 | Flatwater | 119.5 | 30.2 | 2.1 | 12 |
| 1817 | Pool | n/a | n/a | n/a | n/a |

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Table 2. Number of Rainbow Trout observed in each snorkel section.

| Section Number | YOY | Small <6" | Medium 6"-12" | Large 12"-18" | Extra Large >18" | Total |
|-----------------------|------------|---------------------|----------------------|----------------------|----------------------------|--------------|
| 117 | 0 | 5 | 8 | 1 | 0 | 14 |
| 217 | 0 | 6 | 4 | 0 | 0 | 10 |
| 317 | 0 | 4 | 4 | 2 | 0 | 10 |
| 417 | 0 | 3 | 2 | 4 | 0 | 9 |
| 517 | 0 | 4 | 13 | 0 | 0 | 17 |
| 617 | 0 | 4 | 4 | 0 | 0 | 8 |
| 717 | 0 | 8 | 4 | 1 | 0 | 13 |
| 817 | 0 | 45 | 6 | 3 | 0 | 54 |
| 917 | 0 | 3 | 5 | 0 | 0 | 8 |
| 1017 | 0 | 1 | 2 | 1 | 0 | 4 |
| 1117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1217 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1517 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1617 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1717 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1817 | 0 | 0 | 5 | 2 | 0 | 7 |

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Table 3. Number of Brook Trout observed in each snorkel section.

| Section Number | YOY | Small <6" | Medium 6"-12" | Large 12"-18" | Extra Large >18" | Total |
|-----------------------|------------|---------------------|----------------------|----------------------|----------------------------|--------------|
| 117 | 0 | 0 | 1 | 0 | 0 | 1 |
| 217 | 0 | 0 | 0 | 1 | 0 | 1 |
| 317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 517 | 0 | 0 | 0 | 0 | 0 | 0 |
| 617 | 0 | 0 | 0 | 0 | 0 | 0 |
| 717 | 0 | 0 | 0 | 0 | 0 | 0 |
| 817 | 0 | 0 | 0 | 0 | 0 | 0 |
| 917 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1017 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1217 | 0 | 0 | 0 | 8 | 0 | 8 |
| 1317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1417 | 0 | 2 | 18 | 5 | 0 | 25 |
| 1517 | 19 | 10 | 2 | 1 | 0 | 32 |
| 1617 | 5 | 39 | 6 | 0 | 0 | 50 |
| 1717 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1817 | 0 | 5 | 2 | 0 | 0 | 7 |

Table 4. Number of unidentified trout observed in each snorkel section.

| Section Number | YOY | Small <6" | Medium 6"-12" | Large 12"-18" | Extra Large >18" | Total |
|-----------------------|------------|---------------------|----------------------|----------------------|----------------------------|--------------|
| 117 | 0 | 2 | 2 | 0 | 0 | 4 |
| 217 | 0 | 0 | 0 | 0 | 0 | 0 |
| 317 | 0 | 0 | 4 | 0 | 0 | 4 |
| 417 | 0 | 2 | 2 | 0 | 0 | 4 |
| 517 | 0 | 4 | 0 | 0 | 0 | 4 |
| 617 | 0 | 0 | 1 | 0 | 0 | 1 |
| 717 | 0 | 0 | 0 | 0 | 0 | 0 |
| 817 | 0 | 0 | 0 | 0 | 0 | 0 |
| 917 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1017 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1117 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1217 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1317 | 0 | 0 | 1 | 2 | 0 | 3 |
| 1417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1517 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1617 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1717 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1817 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 5. Number of Brown Trout observed in section 917. Brown Trout were only observed in this snorkel section.

| Section Number | YOY | Small <6" | Medium 6"-12" | Large 12"-18" | Extra Large >18" | Total |
|-----------------------|------------|---------------------|----------------------|----------------------|----------------------------|--------------|
| 917 | 0 | 0 | 0 | 1 | 0 | 1 |