

# Statewide Fisheries Assessments and Surveys

Federal Aid Project F-86-R-34



Federal Aid in Fish and Wildlife Restoration

Job Progress Report

Colorado Parks & Wildlife

Aquatic Research Section

Fort Collins, Colorado

October 2021

**STATE OF COLORADO**

Jared Polis, Governor

**COLORADO DEPARTMENT OF NATURAL RESOURCES**

Dan Gibbs, Executive Director

**COLORADO PARKS & WILDLIFE**

Dan Prenzlów, Director

**WILDLIFE COMMISSION**

|                                    |                    |
|------------------------------------|--------------------|
| Marvin McDaniel, Chair             | Dallas May         |
| Carrie Besnette Hauser, Vice-Chair | Duke Phillips IV   |
| Marie Haskett, Secretary           | Luke B. Schafer    |
| Taishya Adams                      | James Jay Tutchton |
| Betsy Blecha                       | Eden Vardy         |
| Charles Garcia                     |                    |

Ex Officio/Non-Voting Members: Kate Greenberg, Dan Gibbs and Dan Prenzlów

**AQUATIC RESEARCH STAFF**

George J. Schisler, Aquatic Research Leader  
Kelly Carlson, Aquatic Research Program Assistant  
Pete Cadmus, Aquatic Research Scientist/Toxicologist, Water Pollution Studies  
Eric R. Fetherman, Aquatic Research Scientist, Salmonid Disease Studies  
Ryan Fitzpatrick, Aquatic Research Scientist, Eastern Plains Native Fishes  
Eric E. Richer, Aquatic Research Scientist/Hydrologist, Stream Habitat Restoration  
Matthew C. Kondratieff, Aquatic Research Scientist, Stream Habitat Restoration  
Dan Kowalski, Aquatic Research Scientist, Stream & River Ecology  
Adam G. Hansen, Aquatic Research Scientist, Coldwater Lakes and Reservoirs  
Kevin B. Rogers, Aquatic Research Scientist, Colorado Cutthroat Studies  
Kevin G. Thompson, Aquatic Research Scientist, 3-Species and Boreal Toad Studies  
Andrew J. Treble, Aquatic Research Scientist, Aquatic Data Management and Analysis  
Brad Neuschwanger, Hatchery Manager, Fish Research Hatchery  
Tracy Davis, Hatchery Technician, Fish Research Hatchery  
Andrew Perkins, Hatchery Technician, Fish Research Hatchery

Jim Guthrie, Federal Aid Coordinator  
Alexandria Austermann, Librarian

Prepared by: \_\_\_\_\_  
Andrew J. Treble, Aquatic Research Data Analyst

Approved by: \_\_\_\_\_  
Matt Nicholl, Aquatic Section Chief

Date: \_\_\_\_\_

## Table of Contents

|  |                                     |
|--|-------------------------------------|
| Wildlife Commission and CPW staff .....  | i                                   |
| Signature Page: .....  | ii                                  |
| Table of Contents .....  | iii                                 |
| List of Tables .....   | iv                                  |
| List of Figures.....   | <b>Error! Bookmark not defined.</b> |
| Title Page .....   | 1                                   |
| Job No. 1. Statewide Stream and lake inventory and data collection.....                          | 1                                   |
| Job No. 2. Angler harvest and effort statistics (Creel) .....                                    | 8                                   |
| Personnel .....  | 11                                  |
| Appendix 1. CPW Aquatic Senior and Area Biologists: .....  | 12                                  |
| Appendix 2. List of fisheries surveys conducted in 2020 by CPW employees .....                   | 16                                  |
| Appendix 3. Summary of species catch on the East Slope by CPW sportfish biologists in 2020.....  | 22                                  |
| Appendix 4. Summary of species catch on the West Slope by CPW sportfish biologists in 2020. .... | 23                                  |

## List of Tables

|  |   |
|--|---|
| Table 1. Breakdown by region of fisheries surveys conducted by CPW in 2020. .... | 2 |
| Table 2. Comparison of fisheries assessment efforts by CPW in recent years. .... | 2 |
| Table 3. Summary of catch for SGCN by CPW sportfish biologists in 2020. ....     | 4 |
| Table 4. Summary of creel survey effort in Colorado over the past 10 years. .... | 9 |
| Table 5. Waters on which creel surveys were performed by CPW in 2020 .....       | 9 |

## List of Figures

|  |   |
|--|---|
| Figure 1. Location and type of surveys conducted by CPW biologists in 2020. ....   | 5 |
| Figure 2. The number of surveys conducted by CPW sportfish staff in 2020 by drainage basin. ....   | 6 |
| Figure 3. Catch of top five species from the four most popular recreational sportfish families during 2020 CPW fisheries assessment surveys..... | 7 |

# ANNUAL PERFORMANCE REPORT

**State:** COLORADO

**Project#:** F-86-R-33

**Project Title:** Statewide Fisheries Inventory and Surveys

**Period Covered:** *January 1, 2020 - December 31, 2020*

**Project Objective:**

To conduct monitoring and creel surveys on recreational fisheries to track fish population status and angler use on lakes and streams across Colorado.

**Relationship with Other Grants:**

This project was formerly tied to Federal Aid Grant F-239 - Aquatic Data Analysis; however, the F-239 project was removed from Federal Aid in 2019 and is now funded by State license revenues. The F-86 grant contributes to the funding of fieldwork and data entry related to recreational and sportfish surveys. The data collected from those and other efforts are stored in CPW's centralized Aquatic **DA**tA **MA**nagement System (ADAMAS), which was formerly funded under the F-239 grant but is now funded by game cash. The statistics for this report are generated from data stored within the ADAMAS database. Additional sources of data (aquatic species conservation surveys, aquatic research data, and scientific collection permit data) are also held in ADAMAS, but are not included in this report.

**Job No. 1. Statewide Stream and lake inventory and data collection**

Inventory fish populations on selected public lakes and streams. Compilation of this data allows Colorado Parks and Wildlife (CPW) to assess and evaluate the success of fisheries management activities, including fish stocking, special regulations, and fish removal on selected lakes and streams.

**Job Objective:** The development, implementation, and evaluation of management strategies for those fish populations and waters managed to provide recreational sport fishing, or those waters having the potential for enhancement based on an evaluation of results of inventory and data collection.

**Need:** Management of the state's vast aquatic resources requires standardized data collection and analysis procedures, as well as a centralized data source that is easily accessible to biologists, managers, and researchers.

**Specific Objectives:**

1. Gather population and biomass estimates of recreational fish species by conducting backpack, barge, and shore-based electrofishing surveys on select stream reaches
2. Collect vital population statistics of recreational fish species using Catch Per Unit Effort

surveys (involving boat electrofishing, gill nets, and trap nets) on select lakes and reservoirs

**Approach:**

Action #1- Maintain current and accurate data from aquatic biological surveys statewide

- Level 1 Action Category - Data Collection and Analysis
- Level 2 Action Strategy - Research, Survey, or monitoring-fish & wildlife populations
- Level 3 Action Activity - N/A

Despite a myriad of difficulties associated with the global COVID-19 pandemic, a total of 460 sportfish surveys were conducted on 157 lakes and 143 stream segments during the grant period. A breakdown of these surveys by region and water type is provided in Table 1. A total of 80,029 fish were enumerated, with 57,215 of those being individually measured in these surveys. These surveys can be divided into three general categories; 35.4% generated a population estimate for at least some of the species captured in the survey, 43.9% provided a Catch Per Unit Effort (CPUE) index, and 20.7% just looked at what species were present at the specific site. A spatial summary of this work is provided in Figures 1 and 2. This level of effort is less than that performed in previous years, but as mentioned earlier, was hindered by all the work restrictions surrounding the global COVID-19 pandemic (Table 2). A summary of the total catch for the four most popular recreational sportfish families is provided in Figure 3.

**Table 1.** Breakdown by region of fisheries surveys conducted by CPW in 2020.

| Year | Region    | WaterType | #Surveys | #Creels |
|------|-----------|-----------|----------|---------|
| 2020 | Northeast | Lake      | 72       | 1       |
| 2020 | Northeast | Stream    | 48       |         |
| 2020 | Northwest | Lake      | 77       |         |
| 2020 | Northwest | Stream    | 91       |         |
| 2020 | Southeast | Lake      | 33       |         |
| 2020 | Southeast | Stream    | 52       | 2       |
| 2020 | Southwest | Lake      | 19       | 1       |
| 2020 | Southwest | Stream    | 68       |         |

**Table 2.** Comparison of fisheries assessment efforts by CPW in recent years.

| Year | #Surveys | #Fish Enumerated | #Creels |
|------|----------|------------------|---------|
| 2010 | 506      | 121,418          | 13      |
| 2011 | 579      | 114,992          | 9       |
| 2012 | 615      | 127,537          | 19      |
| 2013 | 647      | 161,926          | 22      |
| 2014 | 644      | 126,503          | 4       |
| 2015 | 625      | 134,506          | 10      |
| 2016 | 593      | 140,874          | 4       |
| 2017 | 661      | 134,071          | 8       |
| 2018 | 699      | 159,047          | 4       |
| 2019 | 685      | 163,155          | 8       |
| 2020 | 460      | 80,029           | 3       |





While the purpose of this Federal Aid Grant and report is the inventory and assessment of recreational sportfish species, state and federally listed species are either also in this category (i.e. cutthroat trout species) or are incidentally encountered as part of this work. Table 3. Provides a summary of listed species that were present in sportfish surveys conducted by CPW personnel in 2020.

**Table 3.** Summary of catch for Species of Greatest Conservation Need by CPW sportfish biologists in 2020.

| Conservation Status   | Drainage     | Common Name                     |     |
|-----------------------|--------------|---------------------------------|-----|
| Federally Threatened  | Arkansas     | GREENBACK CUTTHROAT, BEAR CREEK | 60  |
| State Special Concern | Colorado     | COLORADO RIVER CUTTHROAT        | 538 |
|                       |              | IOWA DARTER                     | 1   |
|                       |              | ROUNDTAIL CHUB                  | 20  |
|                       | Dolores      | COLORADO RIVER CUTTHROAT        | 143 |
|                       |              | ROUNDTAIL CHUB                  | 29  |
|                       | Gunnison     | COLORADO RIVER CUTTHROAT        | 59  |
|                       | Rio Grande   | RIO GRANDE CUTTHROAT            | 329 |
|                       | San Juan     | COLORADO RIVER CUTTHROAT        | 61  |
|                       | South Platte | IOWA DARTER                     | 6   |
|                       | White        | COLORADO RIVER CUTTHROAT        | 392 |
|                       |              | ROUNDTAIL CHUB                  | 4   |
|                       | Yampa        | COLORADO RIVER CUTTHROAT        | 943 |
|                       |              | MOUNTAIN SUCKER                 | 28  |

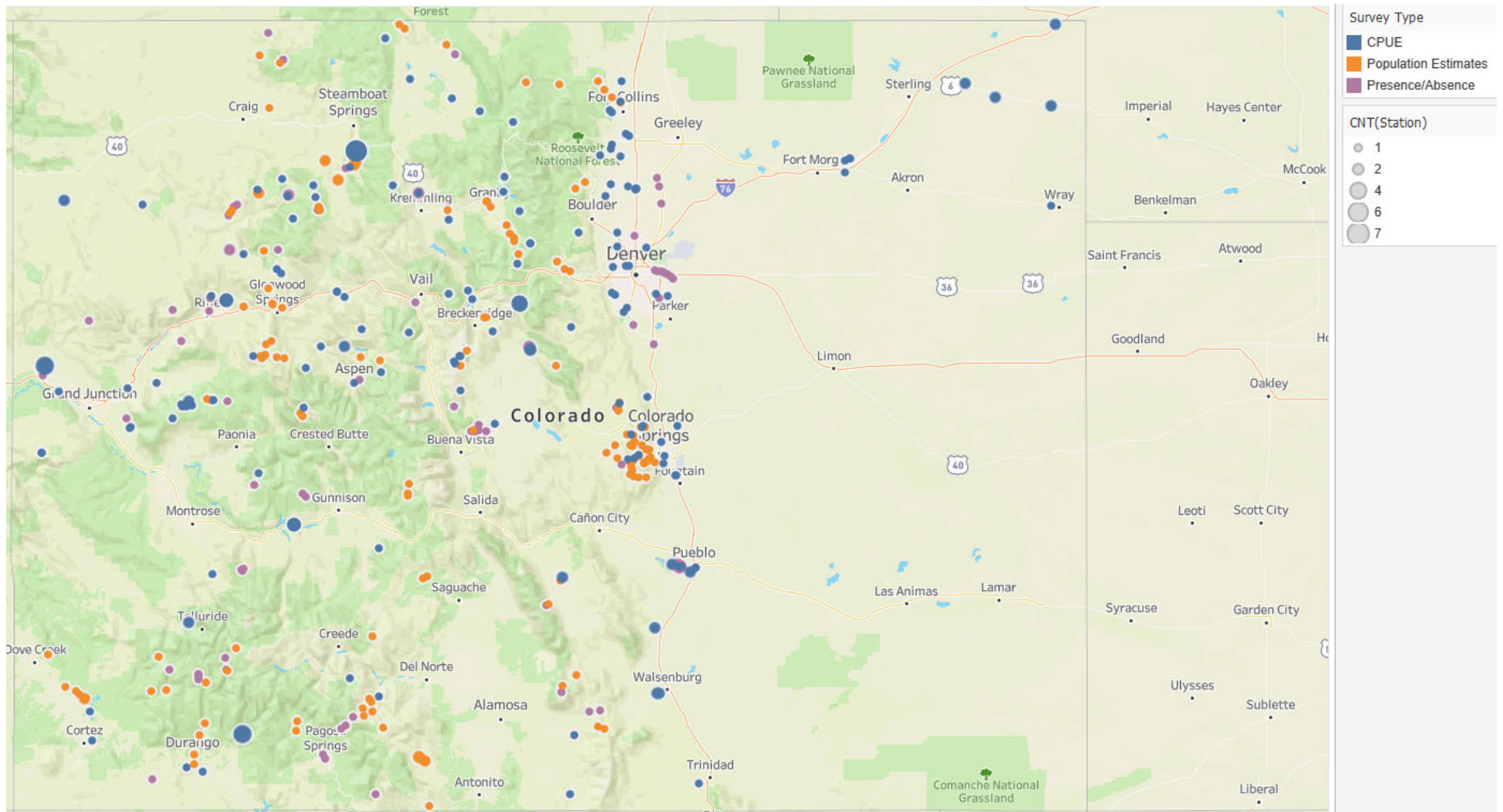
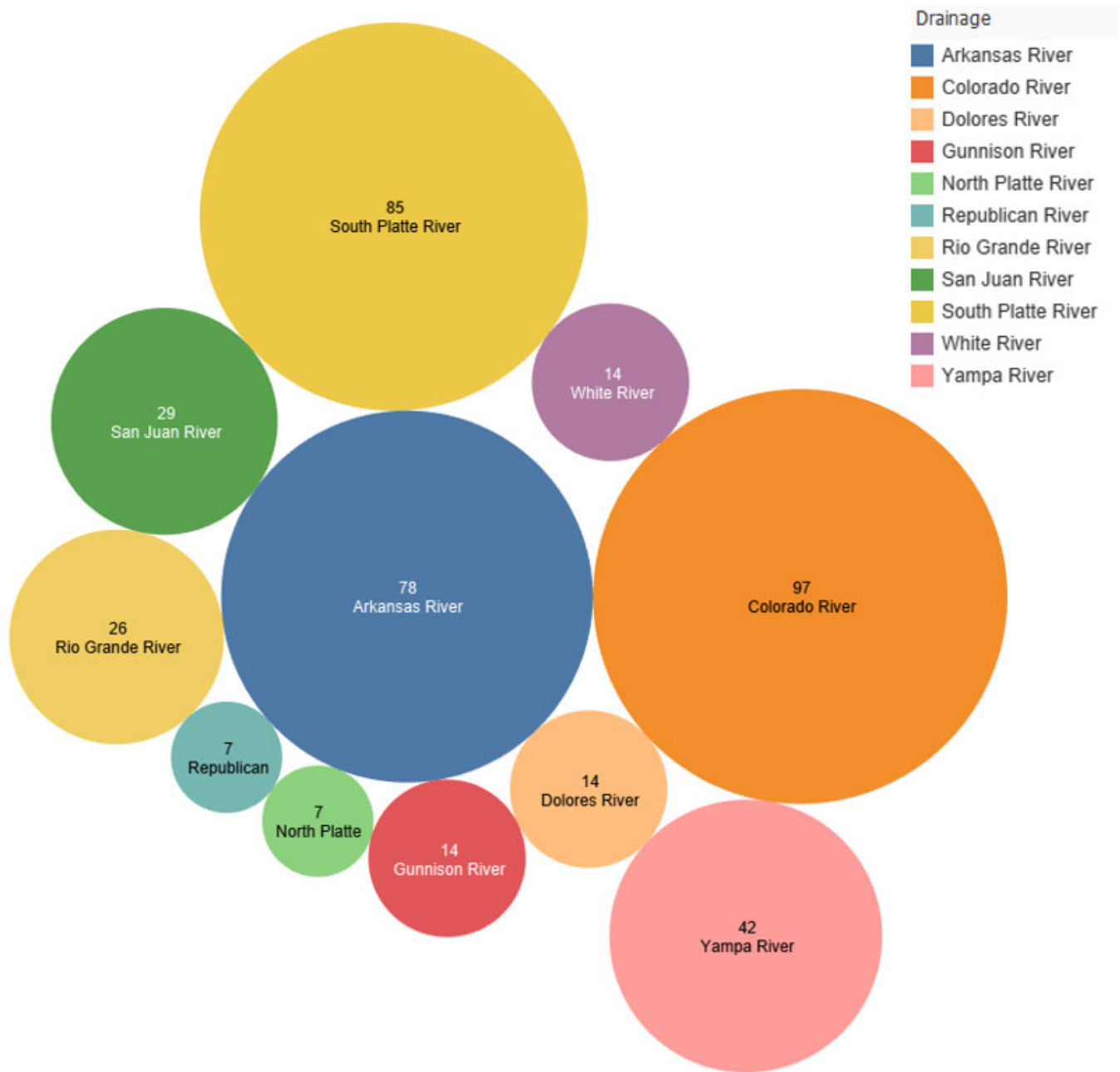
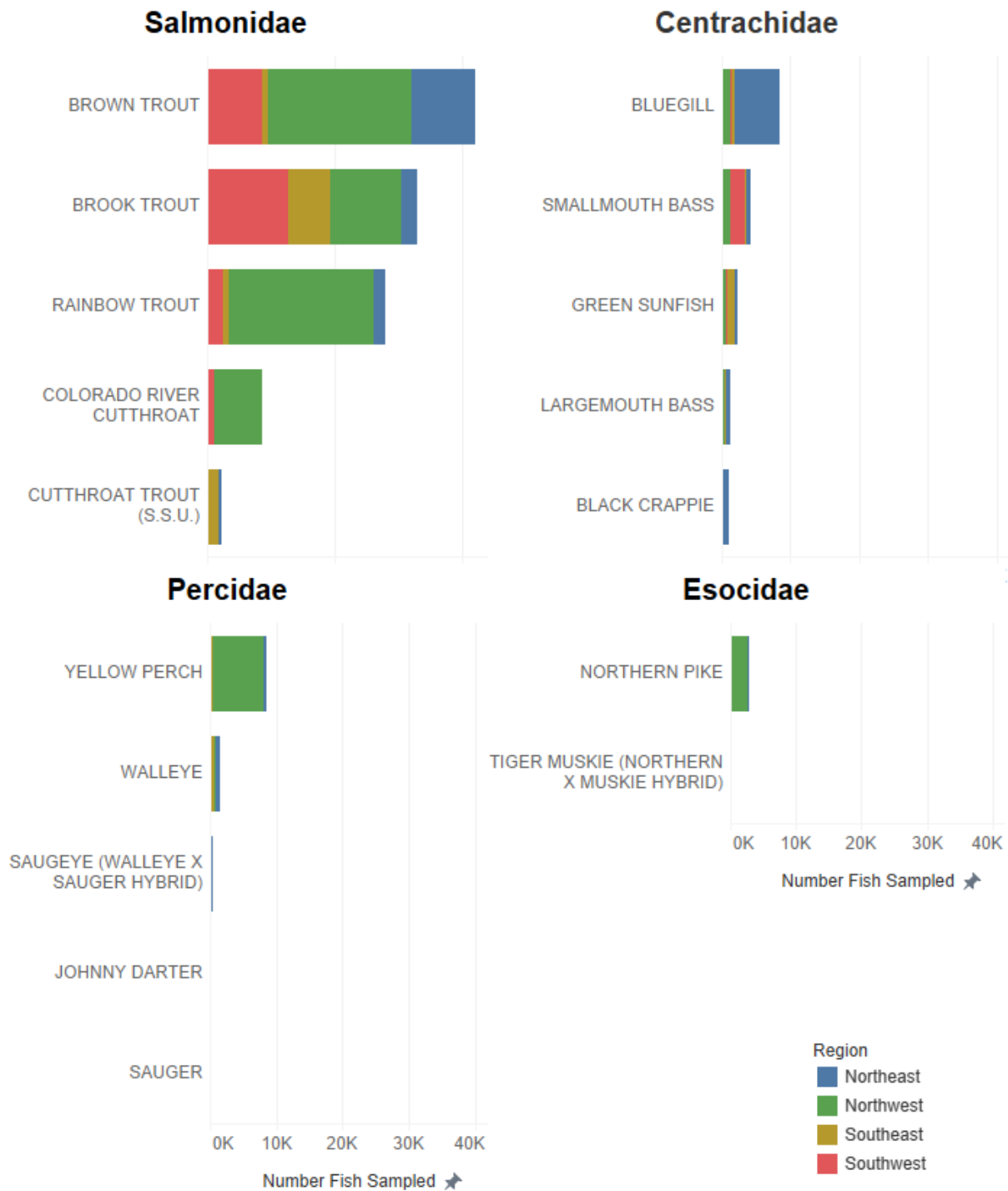


Figure 1. Location and type of surveys conducted by CPW biologists in 2020.



**Figure 2.** The number of surveys conducted by CPW sportfish staff in 2020 by drainage basin.



**Figure 3.** Catch of top five species from the four most popular recreational sportfish families during 2020 CPW fisheries assessment surveys.

Fisheries data from across the state is maintained by the collecting biologist within each of the regional CPW offices, but is also submitted to the centralized Aquatic Data Management System (ADAMAS), managed by the Aquatic Research Section of CPW in Fort Collins, CO. This data is integrated with data from the aquatic species conservation program, the aquatic research program, CPW's water quality program, as well as data submitted from external scientific collection permit holders.

CPW explains the rationale for conducting fishery surveys and publishes the results of these surveys on our website:

<http://cpw.state.co.us/thingstodo/Pages/FisheryManagementSurveys.aspx>

### **Job No. 2. Angler harvest and effort statistics (Creel)**

Survey anglers at select lakes and streams across Colorado. Obtain counts of shore fisherman and boat fisherman, counts and measurements of fish species harvested, and estimates of those released. Conduct interviews with anglers to find out how long they fished, what they were fishing with, what their preferred species is, and what level of satisfaction they would assign to their trip.

**Job Objective:** Estimate angler effort and harvest

**Need:** Historical trends and the current status of fish populations only provide half of the information needed to manage recreational fisheries in Colorado effectively. Accurate estimates of angler harvest and effort are needed to ensure both sustainable fisheries and satisfied anglers.

### **Specific Objectives:**

1. Efficient and accurate estimation of angler effort and harvest on select lakes and rivers across Colorado
2. Collection of information on angler demographics and preferred species being targeted by different angler types (i.e. shore fishermen, boat fishermen, and other types)

### **Approach:**

Action #1- Maintain current and accurate data from aquatic biological surveys statewide

- Level 1 Action Category - Data Collection and Analysis
- Level 2 Action Strategy - Research, Survey, or monitoring-fish & wildlife populations
- Level 3 Action Activity - N/A

Budget cutbacks in 2015 reduced the number of creel surveys that CPW performs across the state. A total of four creels were conducted in 2020; two stream-reach surveys and two lake/reservoir surveys. A summary of creel effort across the state over the past 11 years is provided in Table 4. A breakdown of where the creel surveys were conducted in 2020 is provided in Table 5.

**Table 4.** Summary of creel survey effort in Colorado over the past 11 years.

| Year | #Creels |
|------|---------|
| 2010 | 13      |
| 2011 | 9       |
| 2012 | 19      |
| 2013 | 22      |
| 2014 | 4       |
| 2015 | 10      |
| 2016 | 4       |
| 2017 | 8       |
| 2018 | 4       |
| 2019 | 8       |
| 2020 | 4       |

**Table 5.** Waters on which creel surveys were performed by CPW in 2020.

| Year | Region    | WaterType | WaterCode | WaterName                        |
|------|-----------|-----------|-----------|----------------------------------|
| 2020 | Northeast | Lake      | 57059     | Zimmerman Lake <sup>3</sup>      |
| 2020 | Southwest | Lake      | 11976     | Blue Mesa Reservoir <sup>1</sup> |
| 2020 | Southeast | Stream    | 29048     | Arkansas River #9B <sup>1</sup>  |
| 2020 | Southeast | Stream    | 33807     | Arkansas River #9C <sup>1</sup>  |

<sup>1</sup> standard creel

<sup>2</sup> voluntary creel card

<sup>3</sup> Passive Creel

A new centralized Creel data storage and analysis program came online in 2019. Previously, creel survey data were housed and analyzed locally on individual biologist computers. The new proprietary CREEL system, programmed in C#, has all of its analytic capabilities based on (and tested against) the old C-SAP program but now centrally houses all of the creel data from across the state on a SQL server in Denver. Biologists can design surveys, enter results, query, retrieve, and analyze data from anywhere on the agency's network. Historical data from over 600 creel surveys, going back to 1987, have been uploaded to the new system and are now all stored together

and accessible to everyone within the agency.

More information about CPW's creel analysis program is available at

<https://cpw.state.co.us/learn/Pages/ResearchAquaticData.aspx#Creel%20Survey%20Analysis>

## Personnel

Jim Guthrie

CPW Financial Initiatives Program Manager

6060 Broadway, Denver, CO 80216

Ph: 303-291-7563

Email: [jim.guthrie@state.co.us](mailto:jim.guthrie@state.co.us)

Matt Nicholl

CPW Aquatic Section Manager

6060 Broadway, Denver, CO 80216

Ph: 303-291-7356

Email: [matt.nicholl@state.co.us](mailto:matt.nicholl@state.co.us)

Andrew Treble

Aquatic Research Data Analyst

317 W. Prospect, Fort Collins, Co 80526

Ph: 970-472-4372

Email: [Andrew.Treble@state.co.us](mailto:Andrew.Treble@state.co.us)



**Appendix 1. CPW Aquatic Senior and Area Biologists:**

**LORI MARTIN - SENIOR AQUATIC BIOLOGIST**  
**NORTHWEST REGION - COLO RIVER DRAINAGES**  
 Northwest Region Service Center  
 711 Independent Avenue  
 Grand Junction, CO 81505  
 (970) 255-6186 (Grand Junction Office) | (970) 201-7427 (Cell)  
 (970) 255-6111 (FAX)

| NAME   | AREA  | TELEPHONE / FAX  | ADDRESS   |
|--|---|--|---|
| <b>BILLY ATKINSON</b><br>(Area 10 Mgmt. Biologist)     | Upper Yampa River drainage  | (970) 871-2868 (Office)<br>(970) 871-2853 (FAX)<br>(970) 846-9381 (Cell) | Steamboat Springs SC<br>925 Weiss Dr.<br>Steamboat Sprgs.<br>80477          |
| <b>KENDALL BAKICH</b><br>(Area 8 Mgmt. Biologist)      | Eagle, Roaring Fork, Fryingpan, and middle Colorado river drainages | (970) 947-2924 (Office)<br>(970) 947-2936 (FAX)<br>(970) 355-4771 (Cell) | Glenwood Springs SC<br>0088 Wildlife Way<br>Glenwood Sprgs.<br>81601        |
| <b>JON EWERT</b><br>(Area 9 Mgmt. Biologist)           | Upper Colorado and Blue river drainages                             | (970) 725-6214 (Office)<br>(970) 725-6217 (FAX)<br>(970) 509-9150 (Cell) | Hot Sulphur Springs SC<br>346 Grand Co. Rd. 362<br>Hot Sulphur Sprgs. 80451 |
| <b>TORY EYRE</b><br>(Area 6 Mgmt. Biologist)           | Lower Yampa, White, and Green river drainages                       | (970) 878-6074 (Office)<br>(970) 878-6077 (FAX)<br>(970) 942-3053 (Cell) | Meeker SC<br>73485 Hwy.64<br>Meeker 81641                                   |
| <b>BEN FELT</b><br>(Area 7 Mgmt. Biologist)            | Lower Colorado & Gunnison R. drainages; Grand Mesa (Grand Cnty)     | (970) 255-6126 (Office)<br>(970) 255-6111 (FAX)<br>(970) 778-2481 (Cell) | Grand Junction Office<br>711 Independent Ave.<br>Grand Junction<br>81505    |
| <b>JENN LOGAN</b><br>(Region Native Species Biologist) | NW Region (Areas 6-10)  | (970) 947-2923 (Office)<br>(970) 947-2936 (FAX)<br>(970) 309-9397 (Cell) | Glenwood Springs SC<br>0088 Wildlife Way<br>Glenwood Sprgs.<br>81601        |

**JOSH NEHRING - SENIOR AQUATIC BIOLOGIST**  
**SOUTHEAST REGION - ARKANSAS RIVER DRAINAGE**  
Southeast Regional Service Center  
4255 Sinton Rd.  
Colorado Springs, CO 80907  
(719) 227-5224 (Office)  
(719) 227-5297 (FAX)  
(719) 641-4933 (Cell)

| NAME   | AREA                             | TELEPHONE / FAX   | ADDRESS  |
|--|----------------------------------|---|--|
| <b>JIM RAMSAY</b><br>(Area 12 Mgmt. Biologist)         | Lower Arkansas                   | (719) 336-6607<br>(Office)<br>(719) 336-6623 (FAX)<br>(719) 940-0263 (Cell) | Lamar Service Center<br>2500 S. Main St.<br>Lamar, CO 81052          |
| <b>CORY NOBLE</b><br>(Area 14 Mgmt. Biologist)         | Upper Ark, Front Range & Plains  | (719) 227-5222<br>(Office)<br>(719) 227-5297 (FAX)<br>(719) 396-4235 (Cell) | Colorado Springs SC<br>4255 Sinton Rd.<br>Colorado Springs, CO 80907 |
| <b>CARRIE TUCKER</b><br>(Area 11 Mgmt. Biologist)      | Middle Ark, Huerfano, Purgatoire | (719) 561-5312<br>(Office)<br>(719) 561-5321 (FAX)<br>(719) 940-6352 (Cell) | Pueblo Service Center<br>600 Reservoir Rd.<br>Pueblo, CO 81005       |
| <b>ALEX TOWNSEND</b><br>(Area 13 Mgmt. Biologist)      | Upper Arkansas Headwaters        | (719) 530-5525<br>(Office)<br>(719) 530-5554 (FAX)<br>(719) 539-5805 (Cell) | Salida Service Center<br>7405 Hwy 50<br>Salida, CO 81201             |
| <b>PAUL FOUTZ</b><br>(Region Native Species Biologist) | SE Region (Areas 11-14)          | (719) 227-5217<br>(Office)<br>(719) 227-5297 (FAX)<br>(719) 482-5697 (Cell) | Colorado Springs SC<br>4255 Sinton Rd.<br>Colorado Springs, CO 80907 |

**JEFF SPOHN - SENIOR AQUATIC BIOLOGIST  
NORTHEAST REGION- PLATTE RIVER DRAINAGES  
6060 Broadway  
Denver, CO 80216  
(303) 291-8676 (Office) | (303) 981-3634 (Cell)**

| <b>NAME</b>   | <b>AREA</b>   | <b>TELEPHONE / FAX</b>   | <b>ADDRESS</b>   |
|---|---|--|--|
| <b>PAUL WINKLE<br/>(Area 5 Mgmt. Biologist)</b>     | All aquatic resources in Denver area, including Clear Creek and Bear Creek drainages.   | (303) 291-7232 (Office)<br>(303) 291-7114 (FAX)<br>(303) 916-1043 (Cell) | Denver Headquarters<br>6060 Broadway<br>Denver, CO 80216               |
| <b>TYLER SWARR<br/>(Area 1 Mgmt. Biologist)</b>     | All aquatic resources in South Platte River drainage from Park County downstream to Chatfield Reservoir, including the North Fork of the South Platte River drainage. | (303) 838-5305 (Office)<br>(303) 291-7114 (FAX)<br>(303) 981-3634 (Cell) | Denver Headquarters<br>6060 Broadway<br>Denver, CO 80216               |
| <b>BEN SWIGLE<br/>(Area 2 Mgmt. Biologist)</b>      | All aquatic resources in the St. Vrain, Big Thompson and Boulder Creek Drainages.   | (970) 472-4364<br>(970) 472-4458 (FAX)<br>(970) 227-4892 (Cell)          | Northeast Service Center<br>317 West Prospect<br>Ft. Collins, CO 80526 |
| <b>MANDI BRANDT<br/>(Area 3 Mgmt. Biologist)</b>    | All aquatic resources in lower South Platte drainage and the North Fork of the Republican River, including waters in CPW Area 3.                                      | (970) 842-6330 (Office)<br>(970) 842-6329 (FAX)<br>(970) 768-9649 (Cell) | Brush Service Center<br>122 East Edison<br>Brush, CO 80723             |
| <b>KYLE BATTIGE<br/>(Area 4,10 Mgmt. Biologist)</b> | All aquatic resources- North Platte, Poudre and Laramie River Drainages.  | (970) 472-4396 (Office)<br>(970) 472-4457 (FAX)<br>(970) 217-9513 (Cell) | Northeast Service Center<br>317 West Prospect<br>Ft. Collins, CO 80526 |
| <b>BOYD WRIGHT<br/>(Region Native Species)</b>      | NE Region (Areas 1-5)   | (970) 472-4366 (office)<br>(970) 472-4458 (FAX)<br>(970)                 | Northeast Service Center<br>317 West Prospect                          |

| Biologist)   |  | 261-4366 (Cell)   | Ft. Collins, CO 80526  |
|--|--|---|--|
| <b>JOHN ALVES - SENIOR AQUATIC BIOLOGIST</b><br><b>SOUTHWEST REGION - SAN JUAN, DOLORES, GUNNISON AND RIO GRANDE RIVER</b><br><b>SW Region Office</b><br><b>415 Turner Drive</b><br><b>Durango, CO 81303</b><br><b>(970) 375-6721   (970) 964-8367 (Cell)</b><br><b>(970) 375-6705 (FAX)</b> |  |   |  |
| NAME   | AREA   | TELEPHONE/ FAX  | ADDRESS  |
| <b>ESTEVAN VIGIL</b><br>(Area 17 Mgmt. Biologist)  | Rio Grande River   | (719) 587-6908<br>(Office)<br>(719) 587-6934<br>(FAX)<br>719-588-3204<br>(CELL)   | Monte Vista<br>Service Center<br>0722 S. Road 1E<br>Monte Vista, CO<br>81144     |
| <b>DAN BRAUCH</b><br>(Area 16 Mgmt. Biologist)   | Upper Gunnison River   | (970) 641-7070<br>(Office)<br>(970) 641-7883<br>(FAX)<br>970-497-9722<br>(CELL)   | Gunnison Service<br>Center<br>300 W. New York<br>Ave.<br>Gunnison, CO<br>81230   |
| <b>JIM WHITE</b><br>(Area 15 Mgmt. Biologist)  | San Juan Basin, Upper<br>Dolores River Basin                           | (970) 375-6712<br>(Office)<br>(970) 382-6672<br>(FAX)<br>970-903-1073<br>(CELL)   | Durango Service<br>Center<br>151 E. 16 <sup>th</sup> St.<br>Durango, CO<br>81301 |
| <b>ERIC GARDUNIO</b><br>(Area 18 Mgmt. Biologist)  | Lower Gunnison,<br>Uncompahgre, San<br>Miguel, Lower Dolores<br>Rivers | (970) 252-6017<br>(Office)<br>(970) 252-6053<br>(FAX)<br>(970) 596-2901<br>(Cell) | Montrose Service<br>Center<br>2300 South<br>Townsend<br>Montrose, CO<br>81401    |

## Appendix 2. List of fisheries surveys conducted in 2020 by CPW employees

| <u>Huc10</u>                                 | <u>WaterType</u> | <u>Protocol</u>  | <u>#Surveys</u> | <u>#Species</u> | <u>#Fish</u> |
|--|------------------|------------------|-----------------|-----------------|--------------|
| <b>Northeast Region - North Platte River</b> |                  |                  |                 |                 |              |
| <b>North Platte Headwaters</b>               |                  |                  |                 |                 |              |
| Canadian River                               | Stream           | PRESENCE/ABSENCE | 1               | 0               | 0            |
| Canadian River                               | Stream           | TWO-PASS REMOVAL | 1               | 1               | 18           |
| Headwaters North Platte River                | Lake             | CPUE             | 1               | 3               | 25           |
| Illinois River                               | Lake             | CPUE             | 1               | 2               | 70           |
| Michigan River                               | Lake             | CPUE             | 1               | 4               | 400          |
| <b>Upper North Platte</b>                    |                  |                  |                 |                 |              |
| Big Creek                                    | Lake             | CPUE             | 1               | 1               | 1            |
| Big Creek                                    | Stream           | TWO-PASS REMOVAL | 2               | 3               | 136          |
| <b>Northeast Region - Republican River</b>   |                  |                  |                 |                 |              |
| <b>Frenchman</b>                             |                  |                  |                 |                 |              |
| Sand Creek                                   | Lake             | CPUE             | 2               | 6               | 1,980        |
| Upper Frenchman Creek                        | Lake             | CPUE             | 4               | 7               | 1,945        |
| <b>North Fork Republican</b>                 |                  |                  |                 |                 |              |
| Chief Creek                                  | Lake             | CPUE             | 1               | 9               | 748          |
| <b>Northeast Region - South Platte River</b> |                  |                  |                 |                 |              |
| <b>Beaver</b>                                |                  |                  |                 |                 |              |
| Lower Beaver Creek                           | Lake             | CPUE             | 1               | 5               | 1,510        |
| <b>Big Thompson</b>                          |                  |                  |                 |                 |              |
| Dry Creek-Little Thompson River              | Lake             | CPUE             | 1               | 4               | 666          |
| Outlet Big Thompson River                    | Lake             | CPUE             | 5               | 21              | 917          |
| <b>Cache La Poudre</b>                       |                  |                  |                 |                 |              |
| Gordon Creek-Cache La Poudre River           | Stream           | PRESENCE/ABSENCE | 2               | 0               | 0            |
| Gordon Creek-Cache La Poudre River           | Stream           | TWO-PASS REMOVAL | 1               | 2               | 90           |
| Headwaters Cache La Poudre River             | Lake             | CPUE             | 1               | 2               | 91           |
| Headwaters Cache La Poudre River             | Stream           | TWO-PASS REMOVAL | 2               | 4               | 506          |
| Horsetooth Reservoir-Cache La Poudre River   | Lake             | CPUE             | 4               | 18              | 1,759        |
| Horsetooth Reservoir-Cache La Poudre River   | Stream           | THREE-PASS       | 1               | 6               | 389          |
| Horsetooth Reservoir-Cache La Poudre River   | Stream           | TWO-PASS REMOVAL | 2               | 7               | 1,366        |
| Rabbit Creek-North Fork Cache La Poudre      | Stream           | TWO-PASS REMOVAL | 1               | 8               | 194          |
| <b>Clear Creek</b>                           |                  |                  |                 |                 |              |
| Lower Clear Creek                            | Lake             | CPUE             | 3               | 9               | 290          |
| Middle Clear Creek                           | Stream           | THREE-PASS       | 1               | 2               | 74           |
| Middle Clear Creek                           | Stream           | TWO-PASS REMOVAL | 2               | 4               | 57           |
| Upper Clear Creek                            | Lake             | CPUE             | 1               | 1               | 16           |
| <b>Lower South Platte</b>                    |                  |                  |                 |                 |              |
| Hartley Draw-South Platte River              | Lake             | CPUE             | 2               | 11              | 757          |
| <b>Middle South Platte-Cherry Creek</b>      |                  |                  |                 |                 |              |
| Big Dry Creek-South Platte River             | Lake             | CPUE             | 3               | 12              | 298          |
| Big Dry Creek-South Platte River             | Stream           | PRESENCE/ABSENCE | 1               | 7               | 169          |
| Cherry Creek-South Platte River              | Lake             | CPUE             | 1               | 5               | 82           |
| Cherry Creek-South Platte River              | Stream           | PRESENCE/ABSENCE | 1               | 3               | 114          |

| <u>Huc10</u>                             | <u>WaterType</u> | <u>Protocol</u>  | <u>#Surveys</u> | <u>#Species</u> | <u>#Fish</u> |
|--|------------------|------------------|-----------------|-----------------|--------------|
| Little Dry Creek-South Platte River      | Stream           | PRESENCE/ABSENCE | 3               | 13              | 1,582        |
| Sand Creek                               | Lake             | CPUE             | 1               | 5               | 91           |
| Sand Creek                               | Stream           | PRESENCE/ABSENCE | 8               | 7               | 417          |
| <b>Middle South Platte-Sterling</b>      |                  |                  |                 |                 |              |
| Dead Horse Draw-South Platte River       | Lake             | CPUE             | 3               | 13              | 244          |
| <b>South Platte Headwater</b>            |                  |                  |                 |                 |              |
| Headwaters Tarryall Creek                | Lake             | CPUE             | 1               | 1               | 1            |
| Middle Fork South Platte River           | Lake             | CPUE             | 4               | 1               | 22           |
| Middle Fork South Platte River           | Stream           | THREE-PASS       | 1               | 1               | 238          |
| Middle Fork South Platte River           | Stream           | TWO-PASS REMOVAL | 1               | 3               | 21           |
| Ruby Gulch-Tarryall Creek                | Lake             | CPUE             | 6               | 1               | 30           |
| Ruby Gulch-Tarryall Creek                | Stream           | PRESENCE/ABSENCE | 4               | 0               | 0            |
| South Fork South Platte River            | Lake             | CPUE             | 2               | 6               | 182          |
| South Fork South Platte River            | Stream           | PRESENCE/ABSENCE | 7               | 1               | 45           |
| South Fork South Platte River            | Stream           | TWO-PASS REMOVAL | 1               | 1               | 86           |
| <b>St. Vrain</b>                         |                  |                  |                 |                 |              |
| Boulder Creek-Saint Vrain Creek          | Lake             | CPUE             | 6               | 13              | 2,301        |
| Coal Creek-Boulder Creek                 | Lake             | CPUE             | 1               | 7               | 280          |
| South Boulder Creek                      | Lake             | CPUE             | 3               | 8               | 212          |
| South Saint Vrain Creek                  | Stream           | TWO-PASS REMOVAL | 2               | 3               | 276          |
| <b>Upper South Platte</b>                |                  |                  |                 |                 |              |
| Bear Creek                               | Lake             | CPUE             | 2               | 13              | 281          |
| Chatfield Reservoir-South Platte River   | Lake             | CPUE             | 1               | 5               | 260          |
| City of Lakewood-South Platte River      | Lake             | CPUE             | 1               | 8               | 108          |
| East Plum Creek                          | Stream           | PRESENCE/ABSENCE | 1               | 6               | 104          |
| Headwaters North Fork South Platte River | Lake             | CPUE             | 7               | 0               | 0            |
| Lost Creek-South Platte River            | Stream           | THREE-PASS       | 1               | 1               | 70           |
| Outlet North Fork South Platte River     | Lake             | CPUE             | 1               | 5               | 34           |
| West Plum Creek                          | Stream           | PRESENCE/ABSENCE | 1               | 5               | 225          |
| <b>Northwest Region - Colorado River</b> |                  |                  |                 |                 |              |
| <b>Blue</b>                              |                  |                  |                 |                 |              |
| Dillon Reservoir                         | Lake             | CPUE             | 1               | 5               | 484          |
| Middle Blue River                        | Lake             | CPUE             | 1               | 2               | 40           |
| Upper Blue River                         | Stream           | TWO-PASS REMOVAL | 2               | 3               | 801          |
| <b>Colorado Headwaters</b>               |                  |                  |                 |                 |              |
| Deep Creek                               | Lake             | CPUE             | 2               | 3               | 122          |
| Fraser River                             | Lake             | CPUE             | 1               | 3               | 119          |
| Fraser River                             | Stream           | TWO-PASS REMOVAL | 6               | 11              | 5,377        |
| Glenwood Canyon-Colorado River           | Stream           | TWO-PASS REMOVAL | 1               | 3               | 105          |
| Headwaters Colorado River                | Lake             | CPUE             | 2               | 7               | 1,021        |
| Headwaters Colorado River                | Stream           | TWO-PASS REMOVAL | 2               | 8               | 815          |
| Muddy Creek                              | Lake             | CPUE             | 2               | 8               | 261          |
| Muddy Creek                              | Lake             | OTHER            | 2               | 1               | 239          |
| Troublesome Creek-Colorado River         | Stream           | MARK/RECAPTURE   | 1               | 6               | 1,801        |
| Williams Fork                            | Lake             | CPUE             | 1               | 6               | 171          |
| <b>Colorado Headwaters-Plateau</b>       |                  |                  |                 |                 |              |
| Big Creek-Plateau Creek                  | Lake             | CPUE             | 7               | 12              | 854          |
| Big Salt Wash-Colorado River             | Lake             | CPUE             | 1               | 9               | 229          |
| Cache Creek-Colorado River               | Stream           | PRESENCE/ABSENCE | 1               | 1               | 3            |
| Canyon Creek-Colorado River              | Stream           | TWO-PASS REMOVAL | 4               | 4               | 297          |
| Clear Creek-Roan Creek                   | Stream           | PRESENCE/ABSENCE | 1               | 5               | 247          |

| <u>Huc10</u>                             | <u>WaterType</u> | <u>Protocol</u>  | <u>#Surveys</u> | <u>#Species</u> | <u>#Fish</u> |
|--|------------------|------------------|-----------------|-----------------|--------------|
| Divide Creek                             | Lake             | CPUE             | 1               | 1               | 6            |
| East Salt Creek                          | Lake             | CPUE             | 8               | 13              | 397          |
| East Salt Creek                          | Stream           | CPUE             | 1               | 3               | 31           |
| East Salt Creek                          | Stream           | PRESENCE/ABSENCE | 2               | 8               | 228          |
| Elk Creek                                | Stream           | TWO-PASS REMOVAL | 2               | 7               | 1,142        |
| Garfield Creek-Colorado River            | Lake             | CPUE             | 3               | 8               | 7,313        |
| Jerry Creek-Colorado River               | Lake             | CPUE             | 1               | 6               | 147          |
| Parachute Creek                          | Stream           | PRESENCE/ABSENCE | 1               | 1               | 1            |
| Rifle Creek                              | Lake             | CPUE             | 1               | 10              | 459          |
| Rifle Creek                              | Stream           | PRESENCE/ABSENCE | 3               | 8               | 555          |
| Vega Reservoir-Plateau Creek             | Lake             | CPUE             | 1               | 1               | 21           |
| Vega Reservoir-Plateau Creek             | Stream           | TWO-PASS REMOVAL | 1               | 3               | 107          |
| <b>Eagle</b>                             |                  |                  |                 |                 |              |
| Brush Creek                              | Stream           | TWO-PASS REMOVAL | 2               | 1               | 1            |
| Gore Creek                               | Lake             | CPUE             | 2               | 1               | 16           |
| Gypsum Creek                             | Lake             | CPUE             | 1               | 1               | 103          |
| Lower Eagle River                        | Lake             | CPUE             | 3               | 11              | 1,026        |
| Upper Eagle River                        | Lake             | CPUE             | 1               | 1               | 2            |
| Upper Eagle River                        | Stream           | PRESENCE/ABSENCE | 1               | 1               | 14           |
| Upper Eagle River                        | Stream           | TWO-PASS REMOVAL | 1               | 2               | 15           |
| <b>Roaring Fork</b>                      |                  |                  |                 |                 |              |
| Crystal River                            | Lake             | CPUE             | 2               | 1               | 75           |
| Crystal River                            | Stream           | PRESENCE/ABSENCE | 1               | 2               | 86           |
| Crystal River                            | Stream           | TWO-PASS REMOVAL | 8               | 5               | 322          |
| Fryingpan River                          | Lake             | CPUE             | 8               | 7               | 809          |
| Fryingpan River                          | Stream           | TWO-PASS REMOVAL | 4               | 2               | 119          |
| Middle Roaring Fork River                | Lake             | CPUE             | 1               | 6               | 25           |
| Outlet Roaring Fork River                | Stream           | TWO-PASS REMOVAL | 2               | 2               | 15           |
| Upper Roaring Fork River                 | Stream           | PRESENCE/ABSENCE | 1               | 1               | 68           |
| Woody Creek-Roaring Fork River           | Lake             | CPUE             | 1               | 2               | 93           |
| <b>Northwest Region - Dolores River</b>  |                  |                  |                 |                 |              |
| <b>Lower Dolores</b>                     |                  |                  |                 |                 |              |
| West Creek                               | Lake             | CPUE             | 2               | 0               | 0            |
| <b>Northwest Region - Gunnison River</b> |                  |                  |                 |                 |              |
| <b>Lower Gunnison</b>                    |                  |                  |                 |                 |              |
| Kannah Creek-Gunnison River              | Lake             | CPUE             | 2               | 6               | 1,105        |
| Kannah Creek-Gunnison River              | Stream           | PRESENCE/ABSENCE | 1               | 0               | 0            |
| <b>Northwest Region - White River</b>    |                  |                  |                 |                 |              |
| <b>Lower White</b>                       |                  |                  |                 |                 |              |
| Red Wash-White River                     | Lake             | CPUE             | 2               | 7               | 199          |
| <b>Upper White</b>                       |                  |                  |                 |                 |              |
| Coal Creek-White River                   | Stream           | PRESENCE/ABSENCE | 7               | 6               | 295          |
| Coal Creek-White River                   | Stream           | THREE-PASS       | 1               | 2               | 89           |
| Coal Creek-White River                   | Stream           | TWO-PASS REMOVAL | 2               | 3               | 236          |
| Crooked Wash-White River                 | Lake             | CPUE             | 1               | 7               | 94           |
| North Fork White River                   | Lake             | CPUE             | 1               | 0               | 0            |
| South Fork White River                   | Lake             | CPUE             | 1               | 1               | 5            |
| South Fork White River                   | Stream           | PRESENCE/ABSENCE | 1               | 2               | 43           |
| South Fork White River                   | Stream           | TWO-PASS REMOVAL | 1               | 0               | 0            |
| <b>Northwest Region - Yampa River</b>    |                  |                  |                 |                 |              |

| <u>Huc10</u>                             | <u>WaterType</u> | <u>Protocol</u>  | <u>#Surveys</u> | <u>#Species</u> | <u>#Fish</u> |
|--|------------------|------------------|-----------------|-----------------|--------------|
| <b>Little Snake</b>                      |                  |                  |                 |                 |              |
| Fourmile Creek                           | Stream           | TWO-PASS REMOVAL | 1               | 1               | 20           |
| Slater Creek                             | Stream           | PRESENCE/ABSENCE | 2               | 8               | 366          |
| Slater Creek                             | Stream           | TWO-PASS REMOVAL | 1               | 6               | 62           |
| <b>Upper Yampa</b>                       |                  |                  |                 |                 |              |
| East Fork Williams Fork                  | Lake             | CPUE             | 2               | 1               | 17           |
| East Fork Williams Fork                  | Stream           | PRESENCE/ABSENCE | 2               | 2               | 273          |
| East Fork Williams Fork                  | Stream           | TWO-PASS REMOVAL | 1               | 1               | 63           |
| Elkhead Creek                            | Lake             | MARK/RECAPTURE   | 1               | 3               | 1,615        |
| Headwaters Yampa River                   | Lake             | CPUE             | 2               | 6               | 307          |
| Headwaters Yampa River                   | Stream           | OTHER            | 1               | 3               | 98           |
| Headwaters Yampa River                   | Stream           | PRESENCE/ABSENCE | 3               | 1               | 151          |
| Headwaters Yampa River                   | Stream           | THREE-PASS       | 2               | 3               | 76           |
| Headwaters Yampa River                   | Stream           | TWO-PASS REMOVAL | 8               | 13              | 2,846        |
| Oak Creek-Yampa River                    | Lake             | CPUE             | 8               | 4               | 2,113        |
| Oak Creek-Yampa River                    | Stream           | MARK/RECAPTURE   | 3               | 7               | 1,175        |
| Oak Creek-Yampa River                    | Stream           | TWO-PASS REMOVAL | 1               | 5               | 525          |
| South Fork Williams Fork                 | Lake             | CPUE             | 1               | 1               | 6            |
| South Fork Williams Fork                 | Stream           | TWO-PASS REMOVAL | 2               | 1               | 13           |
| Trout Creek-Yampa River                  | Stream           | TWO-PASS REMOVAL | 2               | 5               | 196          |
| <b>Southeast Region - Arkansas River</b> |                  |                  |                 |                 |              |
| <b>Arkansas Headwaters</b>               |                  |                  |                 |                 |              |
| Headwaters Grape Creek                   | Lake             | CPUE             | 2               | 7               | 370          |
| Headwaters Grape Creek                   | Stream           | PRESENCE/ABSENCE | 1               | 0               | 0            |
| Headwaters Grape Creek                   | Stream           | TWO-PASS REMOVAL | 2               | 9               | 624          |
| <b>Fountain</b>                          |                  |                  |                 |                 |              |
| Middle Fountain Creek                    | Lake             | CPUE             | 4               | 15              | 418          |
| Middle Fountain Creek                    | Stream           | THREE-PASS       | 2               | 1               | 39           |
| Middle Fountain Creek                    | Stream           | TWO-PASS REMOVAL | 6               | 4               | 295          |
| Monument Creek                           | Lake             | CPUE             | 4               | 9               | 68           |
| Monument Creek                           | Stream           | TWO-PASS REMOVAL | 2               | 3               | 133          |
| Upper Fountain Creek                     | Lake             | CPUE             | 3               | 4               | 54           |
| Upper Fountain Creek                     | Stream           | PRESENCE/ABSENCE | 1               | 1               | 9            |
| Upper Fountain Creek                     | Stream           | TWO-PASS REMOVAL | 14              | 9               | 670          |
| <b>Huerfano</b>                          |                  |                  |                 |                 |              |
| Headwaters Huerfano River                | Stream           | PRESENCE/ABSENCE | 1               | 1               | 19           |
| Headwaters Huerfano River                | Stream           | THREE-PASS       | 1               | 1               | 14           |
| Headwaters Huerfano River                | Stream           | TWO-PASS REMOVAL | 1               | 1               | 19           |
| Upper Cucharas River                     | Lake             | CPUE             | 4               | 16              | 447          |
| <b>Purgatorie</b>                        |                  |                  |                 |                 |              |
| Trinidad Lake-Purgatorie River           | Lake             | CPUE             | 1               | 8               | 137          |
| <b>Upper Arkansas</b>                    |                  |                  |                 |                 |              |
| Beaver Creek                             | Lake             | CPUE             | 1               | 1               | 64           |
| Beaver Creek                             | Stream           | PRESENCE/ABSENCE | 1               | 1               | 129          |
| Beaver Creek                             | Stream           | THREE-PASS       | 2               | 2               | 165          |
| Beaver Creek                             | Stream           | TWO-PASS REMOVAL | 5               | 4               | 429          |
| Dry Creek-Arkansas River                 | Lake             | CPUE             | 8               | 18              | 2,081        |
| Dry Creek-Arkansas River                 | Stream           | PRESENCE/ABSENCE | 6               | 5               | 318          |
| Greenhorn Creek                          | Lake             | CPUE             | 2               | 10              | 277          |
| Headwaters Four Mile Creek               | Stream           | TWO-PASS REMOVAL | 3               | 1               | 153          |
| Pueblo Reservoir-Arkansas River          | Lake             | CPUE             | 2               | 12              | 727          |



| <u>Huc10</u>                                 | <u>WaterType</u> | <u>Protocol</u>  | <u>#Surveys</u> | <u>#Species</u> | <u>#Fish</u> |
|--|------------------|------------------|-----------------|-----------------|--------------|
| <b>Southeast Region - South Platte River</b> |                  |                  |                 |                 |              |
| <b>Upper South Platte</b>                    |                  |                  |                 |                 |              |
| East Plum Creek                              | Lake             | CPUE             | 1               | 4               | 53           |
| Trout Creek-West Creek                       | Lake             | CPUE             | 1               | 5               | 460          |
| Trout Creek-West Creek                       | Stream           | PRESENCE/ABSENCE | 1               | 0               | 0            |
| Trout Creek-West Creek                       | Stream           | TWO-PASS REMOVAL | 3               | 7               | 445          |
| <b>Southwest Region - Cimmaron River</b>     |                  |                  |                 |                 |              |
| <b>Upper Gunnison</b>                        |                  |                  |                 |                 |              |
| Cimarron River                               | Stream           | PRESENCE/ABSENCE | 1               | 0               | 0            |
| <b>Southwest Region - Dolores River</b>      |                  |                  |                 |                 |              |
| <b>San Miguel</b>                            |                  |                  |                 |                 |              |
| Upper San Miguel River                       | Stream           | CPUE             | 2               | 2               | 74           |
| Upper San Miguel River                       | Stream           | OTHER            | 1               | 1               | 1            |
| <b>Upper Dolores</b>                         |                  |                  |                 |                 |              |
| Headwaters Dolores River                     | Stream           | PRESENCE/ABSENCE | 1               | 2               | 30           |
| Headwaters Dolores River                     | Stream           | TWO-PASS REMOVAL | 2               | 3               | 106          |
| McPhee Reservoir-Dolores River               | Lake             | CPUE             | 1               | 10              | 341          |
| Ponderosa Gorge-Dolores River                | Stream           | TWO-PASS REMOVAL | 6               | 10              | 2,473        |
| West Dolores River                           | Stream           | TWO-PASS REMOVAL | 1               | 1               | 26           |
| <b>Southwest Region - Gunnison River</b>     |                  |                  |                 |                 |              |
| <b>Lower Gunnison</b>                        |                  |                  |                 |                 |              |
| Tongue Creek-Gunnison River                  | Lake             | CPUE             | 1               | 1               | 30           |
| <b>North Fork Gunnison</b>                   |                  |                  |                 |                 |              |
| West Muddy Creek                             | Stream           | OTHER            | 1               | 1               | 4            |
| <b>Tomichi</b>                               |                  |                  |                 |                 |              |
| Quartz Creek                                 | Stream           | TWO-PASS REMOVAL | 1               | 2               | 132          |
| Razor Creek                                  | Lake             | CPUE             | 1               | 3               | 353          |
| <b>Uncompahgre</b>                           |                  |                  |                 |                 |              |
| Upper Uncompahgre River                      | Lake             | CPUE             | 1               | 1               | 1,973        |
| <b>Upper Gunnison</b>                        |                  |                  |                 |                 |              |
| Beaver Creek-Blue Mesa Reservoir             | Stream           | PRESENCE/ABSENCE | 2               | 2               | 1,832        |
| Cimarron River                               | Stream           | PRESENCE/ABSENCE | 2               | 0               | 0            |
| Smith Fork-Gunnison River                    | Stream           | CPUE             | 1               | 2               | 8            |
| Smith Fork-Gunnison River                    | Stream           | PRESENCE/ABSENCE | 1               | 0               | 0            |
| Soap Creek-Blue Mesa Reservoir               | Lake             | CPUE             | 3               | 3               | 293          |
| <b>Southwest Region - Rio Grande River</b>   |                  |                  |                 |                 |              |
| <b>Alamosa-Trinchera</b>                     |                  |                  |                 |                 |              |
| Headwaters Sangre de Cristo Creek            | Stream           | PRESENCE/ABSENCE | 2               | 2               | 9            |
| Headwaters Sangre de Cristo Creek            | Stream           | TWO-PASS REMOVAL | 2               | 2               | 122          |
| La Jara Creek                                | Stream           | TWO-PASS REMOVAL | 8               | 4               | 444          |
| Sanchez Reservoir                            | Lake             | CPUE             | 1               | 3               | 46           |
| Trinchera Creek-Sangre de Cristo Creek       | Lake             | CPUE             | 1               | 3               | 30           |
| <b>Conejos</b>                               |                  |                  |                 |                 |              |
| Rio de Los Pinos                             | Stream           | THREE-PASS       | 1               | 1               | 124          |

| <u>Huc10</u>                             | <u>WaterType</u> | <u>Protocol</u>  | <u>#Surveys</u> | <u>#Species</u> | <u>#Fish</u> |
|--|------------------|------------------|-----------------|-----------------|--------------|
| <b>Rio Grande Headwaters</b>             |                  |                  |                 |                 |              |
| Goose Creek                              | Lake             | CPUE             | 1               | 1               | 30           |
| South Fork Rio Grande                    | Lake             | CPUE             | 1               | 2               | 20           |
| South Fork Rio Grande                    | Stream           | THREE-PASS       | 2               | 2               | 162          |
| South Fork Rio Grande                    | Stream           | TWO-PASS REMOVAL | 4               | 4               | 319          |
| <b>Saguache</b>                          |                  |                  |                 |                 |              |
| Headwaters Saguache Creek                | Stream           | TWO-PASS REMOVAL | 1               | 1               | 13           |
| Middle Creek-Saguache Creek              | Stream           | TWO-PASS REMOVAL | 2               | 1               | 35           |
| <b>Southwest Region - San Juan River</b> |                  |                  |                 |                 |              |
| <b>Animas</b>                            |                  |                  |                 |                 |              |
| Animas River Canyon                      | Stream           | PRESENCE/ABSENCE | 1               | 2               | 10           |
| Animas River Canyon                      | Stream           | TWO-PASS REMOVAL | 1               | 1               | 25           |
| Cascade Creek                            | Stream           | PRESENCE/ABSENCE | 4               | 1               | 9            |
| Cascade Creek                            | Stream           | THREE-PASS       | 1               | 2               | 61           |
| Electra Lake-Animas River                | Stream           | TWO-PASS REMOVAL | 2               | 3               | 32           |
| Headwaters Animas River                  | Stream           | PRESENCE/ABSENCE | 1               | 1               | 1            |
| Headwaters Animas River                  | Stream           | TWO-PASS REMOVAL | 1               | 2               | 393          |
| Lightner Creek-Animas River              | Stream           | THREE-PASS       | 1               | 10              | 111          |
| Middle Animas Valley                     | Lake             | CPUE             | 1               | 7               | 244          |
| Middle Animas Valley                     | Stream           | TWO-PASS REMOVAL | 1               | 5               | 149          |
| Outlet Florida River                     | Lake             | CPUE             | 1               | 5               | 63           |
| <b>McElmo</b>                            |                  |                  |                 |                 |              |
| Upper McElmo Creek                       | Lake             | CPUE             | 1               | 4               | 28           |
| <b>Middle San Juan</b>                   |                  |                  |                 |                 |              |
| Headwaters La Plata River                | Stream           | PRESENCE/ABSENCE | 1               | 3               | 196          |
| <b>Piedra</b>                            |                  |                  |                 |                 |              |
| Upper Piedra River                       | Stream           | TWO-PASS REMOVAL | 2               | 5               | 474          |
| <b>Upper San Juan</b>                    |                  |                  |                 |                 |              |
| Navajo River                             | Stream           | PRESENCE/ABSENCE | 1               | 1               | 34           |
| Pagosa Springs-San Juan River            | Stream           | PRESENCE/ABSENCE | 2               | 6               | 120          |
| Vallecito Creek                          | Lake             | CPUE             | 5               | 7               | 200          |
| West Fork San Juan River                 | Stream           | PRESENCE/ABSENCE | 3               | 4               | 148          |

Appendix 3. Summary of species catch on the East Slope by CPW sportfish biologists in 2020.

| Family                  | Common Name                             | Northeast     |              |               | Southeast    |              |
|-------------------------|---|---------------|--------------|---------------|--------------|--------------|
|                         |   | North Platte  | Republican   | South Platte  | Arkansas     | South Platte |
| CATOSTOMIDAE            | LONGNOSE SUCKER                         | 323           |              | 247           | 45           | 3            |
|                         | WHITE SUCKER                            |               | 3            | 533           | 422          | 535          |
| CENTRARCHIDAE           | BLACK CRAPPIE                           |               | 44           | 999           | 23           |              |
|                         | BLUEGILL                                |               | 3,245        | 3,270         | 498          | 29           |
|                         | GREEN SUNFISH                           |               | 200          | 203           | 1,120        | 19           |
|                         | HYBRID SUNFISH                          |               | 21           | 3             |              |              |
|                         | LARGEMOUTH BASS                         |               | 269          | 391           | 162          |              |
|                         | PUMPKINSEED                             |               |              | 73            |              |              |
|                         | REDEAR SUNFISH                          |               | 465          | 69            | 1            |              |
|                         | SMALLMOUTH BASS                         |               |              | 579           | 293          |              |
|                         | SPOTTED BASS                            |               |              |               | 15           |              |
|                         | WHITE CRAPPIE                           |               |              | 35            | 38           |              |
| CLUPEIDAE               | GIZZARD SHAD                            |               |              | 1,804         | 339          |              |
| CYPRINIDAE              | BIGMOUTH SHINER                         |               |              | 140           |              |              |
|                         | CENTRAL STONEROLLER                     |               |              | 10            |              | 28           |
|                         | COMMON CARP                             |               |              | 144           | 89           |              |
|                         | CREEK CHUB                              |               |              | 176           |              |              |
|                         | FATHEAD MINNOW                          | 1             |              | 621           | 145          | 72           |
|                         | GOLDEN SHINER                           |               |              | 68            | 4            |              |
|                         | GOLDFISH                                |               |              |               | 7            |              |
|                         | HYBRID GRASS CARP (TRIPLOID)            |               |              | 1             |              |              |
|                         | LONGNOSE DACE                           | 2             |              | 340           | 478          |              |
|                         | RED SHINER                              |               |              | 247           |              |              |
|                         | SAND SHINER                             |               |              | 613           | 20           |              |
|                         | SPOTTAIL SHINER                         |               |              | 20            |              |              |
| ESOCIDAE                | NORTHERN PIKE                           |               |              | 2             | 26           |              |
|                         | TIGER MUSKIE (NORTHERN X MUSKIE HYBRID) |               |              | 1             | 18           | 1            |
| FUNDULIDAE              | NORTHERN PLAINS KILLIFISH               |               |              |               | 8            |              |
| GASTEROSTEIDAE          | BROOK STICKLEBACK                       |               |              | 142           |              |              |
| ICTALURIDAE             | BLACK BULLHEAD                          |               |              | 12            |              |              |
|                         | CHANNEL CATFISH                         |               | 408          | 261           | 189          |              |
|                         | FLATHEAD CATFISH                        |               |              |               | 2            |              |
|                         | YELLOW BULLHEAD                         |               | 11           | 1             |              |              |
| MORONIDAE               | PALMETTO BASS (WIPER)                   |               |              | 243           | 76           |              |
|                         | STRIPED BASS                            |               |              |               | 6            |              |
|                         | WHITE BASS                              |               |              | 249           |              |              |
| OSMERIDAE               | RAINBOW SMELT                           |               |              | 5             |              |              |
| PERCIDAE                | IOWA DARTER                             |               |              | 6             |              |              |
|                         | JOHNNY DARTER                           |               |              | 26            |              |              |
|                         | SAUGER                                  |               |              |               | 29           |              |
|                         | SAUGEYE (WALLEYE X SAUGER HYBRID)       |               |              | 50            | 281          |              |
|                         | WALLEYE                                 |               |              | 724           | 611          |              |
|                         | YELLOW PERCH                            |               | 7            | 347           | 213          |              |
| POECILIIDAE             | WESTERN MOSQUITOFISH                    |               |              | 180           |              |              |
| SALMONIDAE              | ARCTIC CHAR                             |               |              | 1             |              |              |
|                         | BROOK TROUT                             | 113           |              | 558           | 1,364        | 241          |
|                         | BROWN TROUT                             | 102           |              | 2,363         | 257          |              |
|                         | CUTTTHROAT TROUT (S.S.U.)               |               |              | 133           | 444          |              |
|                         | GREENBACK CUTTHROAT                     |               |              | 65            |              |              |
|                         | GREENBACK CUTTHROAT, BEAR CREEK         |               |              |               | 60           |              |
|                         | HAYDEN CREEK CUTTHROAT                  |               |              |               | 37           |              |
|                         | KOKANEE (SOCKEYE) SALMON                |               |              | 7             | 2            |              |
|                         | LAKE TROUT (MACKINAW)                   |               |              | 30            |              |              |
|                         | MOUNTAIN WHITEFISH                      |               |              | 13            |              |              |
|                         | RAINBOW TROUT                           | 41            |              | 419           | 230          | 11           |
|                         | RAINBOW X CUTTHROAT                     | 68            |              | 22            | 96           | 3            |
|                         | SPLAKE (BROOK X LAKE HYBRID)            |               |              | 8             |              |              |
| <b>Drainage Totals</b>  |   | <b>650</b>    | <b>4,673</b> | <b>16,454</b> | <b>7,648</b> | <b>942</b>   |
| <b>East Slope Total</b> |   | <b>30,367</b> |              |               |              |              |

Appendix 4. Summary of species catch on the West Slope by CPW sportfish biologists in 2020.

| Family                                  | Common Name                  | Northwest     |              |            |              |              | Southwest    |              |              |
|---|------------------------------|---------------|--------------|------------|--------------|--------------|--------------|--------------|--------------|
|   |                              | Colorado      | Gunnison     | White      | Yampa        | Dolores      | Gunnison     | Rio Grande   | San Juan     |
| CATOSTOMIDAE                            | BLUEHEAD SUCKER              | 39            |              |            |              | 3            |              |              | 14           |
|   | FLANNELMOUTH SUCKER          |               |              | 63         |              |              |              |              | 8            |
|   | LONGNOSE SUCKER              | 247           |              |            | 1            |              |              | 5            |              |
|   | MOUNTAIN SUCKER              |               |              |            | 28           |              |              |              |              |
|   | WHITE SUCKER                 | 1,603         |              |            | 184          | 77           | 231          | 14           | 196          |
|   | WHITE-BLUEHEAD SUCKER HYBRID | 12            |              |            | 1            |              |              |              |              |
| CENTRARCHIDAE                           | WHITE-FLANNELMOUTH HYBRID    | 1             |              |            |              | 1            |              |              | 5            |
|   | BLACK CRAPPIE                | 53            |              | 27         |              | 5            |              |              |              |
|   | BLUEGILL                     | 358           | 979          | 27         |              |              |              |              | 23           |
|   | GREEN SUNFISH                | 687           |              | 49         |              | 3            |              |              | 2            |
|   | HYBRID SUNFISH               | 4             | 1            |            |              |              |              |              |              |
|   | LARGEMOUTH BASS              | 394           | 56           | 20         | 10           |              |              |              | 16           |
| CLUPEIDAE                               | SMALLMOUTH BASS              | 226           | 44           |            | 970          | 50           | 1,973        |              | 10           |
|   | GIZZARD SHAD                 | 151           |              |            |              |              |              |              |              |
| COTTIDAE                                | MOTTLED SCULPIN              | 1,872         |              | 229        | 1,328        | 440          |              |              | 325          |
| CYPRINIDAE                              | COMMON CARP                  | 52            |              | 36         |              | 10           |              | 33           |              |
|   | CREEK CHUB                   | 137           |              |            | 25           |              |              |              |              |
|   | FATHEAD MINNOW               | 55            |              |            | 24           | 181          |              | 72           | 93           |
|   | GOLDFISH                     | 9             |              |            |              |              |              |              |              |
|   | HYBRID GRASS CARP (TRIPLOID) | 10            |              |            |              |              |              |              |              |
|   | LONGNOSE DACE                | 15            |              |            |              |              |              |              |              |
|   | RED SHINER                   | 91            |              |            |              |              |              |              |              |
|   | REDSIDE SHINER               |               |              |            | 21           |              |              |              |              |
|   | ROUNDTAIL CHUB               | 20            |              | 4          |              | 29           |              |              |              |
|   | SPECKLED DACE                | 35            |              |            | 98           | 283          |              |              | 235          |
|   | ESOCIDAE                     | NORTHERN PIKE | 45           |            | 11           | 2,469        |              |              | 5            |
| TIGER MUSKIE (NORTHERN X MUSKIE HYBRID) |                              | 1             |              |            |              |              |              |              |              |
| ICTALURIDAE                             | BLACK BULLHEAD               | 41            |              | 34         |              |              |              |              |              |
|   | CHANNEL CATFISH              | 10            |              |            |              |              |              | 1            |              |
| PERCIDAE                                | IOWA DARTER                  | 1             |              |            |              |              |              |              |              |
|   | JOHNNY DARTER                |               |              |            |              |              |              |              | 9            |
|   | WALLEYE                      | 21            | 22           |            | 126          | 34           |              |              | 50           |
| SALMONIDAE                              | YELLOW PERCH                 | 7,703         |              | 21         |              | 159          |              |              | 11           |
|   | ARCTIC GRAYLING              | 71            |              |            |              |              |              |              |              |
|   | BROOK TROUT                  | 2,621         |              | 29         | 136          | 87           | 2,099        | 547          | 469          |
|   | BROWN TROUT                  | 4,312         |              |            | 1,316        | 1,384        | 133          | 274          | 367          |
|   | COLORADO RIVER CUTTHROAT     | 538           |              | 392        | 943          | 143          | 59           |              | 61           |
|   | KOKANEE (SOCKEYE) SALMON     | 291           |              |            |              | 4            | 1            |              | 42           |
|   | LAKE TROUT (MACKINAW)        | 365           |              |            |              |              |              |              |              |
|   | MOUNTAIN WHITEFISH           | 92            |              |            | 363          |              |              |              |              |
|   | RAINBOW TROUT                | 3,797         | 3            | 5          | 1,874        | 158          | 190          | 39           | 212          |
|   | RAINBOW X CUTTHROAT          | 57            |              | 13         | 5            |              |              |              | 1            |
|   | RIO GRANDE CUTTHROAT         |               |              |            |              |              |              | 329          |              |
|   | SAN JUAN CR1                 |               |              |            |              |              |              |              | 117          |
|   | SNAKE RIVER CUTTHROAT        | 1             |              |            |              |              |              |              |              |
| SPLAKE (BROOK X LAKE HYBRID)            |                              |               | 1            |            |              |              |              |              |              |
| TIGER TROUT                             | 217                          |               |              |            |              |              | 35           |              |              |
| <b>Drainage Totals</b>                  |                              | <b>26,255</b> | <b>1,105</b> | <b>961</b> | <b>9,922</b> | <b>3,051</b> | <b>4,686</b> | <b>1,354</b> | <b>2,286</b> |
| <b>West Slope Total</b>                 | <b>49,620</b>                |               |              |            |              |              |              |              |              |