

Statewide Fisheries Assessments and Surveys
Federal Aid Project F-86R-22



Federal Aid in Fish and Wildlife Restoration

Job Progress Report

Colorado Parks & Wildlife

Aquatic Research Section

Fort Collins, Colorado

August 2017

STATE OF COLORADO

John W. Hickenlooper, Governor

COLORADO DEPARTMENT OF NATURAL RESOURCES

Bob Randall, Executive Director

COLORADO PARKS & WILDLIFE

Bob Broscheid, Director

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Approved by: _____
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Date: _____

ANNUAL PERFORMANCE REPORT

State: COLORADO

Project#: F-86-R-23

Project Title: Statewide Fisheries Inventory and Surveys

Period Covered: *January 1, 2016 – December 31, 2016*

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 is also strongly tied to Federal Aid Grant F-239 – Aquatic Data Analysis. While the F-86 grant provides the funding for the field work and data entry to be completed (sportfish only), the data collected from those and other efforts are stored in CPW's aquatic data management system and covered under the F-239 grant. The statistics for this report are generated from data stored within the aquatics 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

A total of 578 surveys were conducted on 182 lakes, 147 stream segments during the grant period. A breakdown of region is provided in Table 1. A total of 130,205 fish were enumerated and 102,867 were individually measured in these surveys. These surveys can be divided into 3 general categories; 39% generated a population estimate for at least some of the species captured in the survey, 50% provided a Catch Per Unit Effort (CPUE) index and 9% just looked at what species were present or absent at the specific site (2% defined as ‘other’). A spatial summary of this work is provided in Figures 1 and 2. This level of effort is on par with that which has been performed in previous years in Colorado (Table 2).

Table 1. Breakdown by region of fisheries surveys conducted by CPW in 2016.

Year	Region	WaterType	#Surveys
2016	Northeast	Lake	131
2016	Northeast	Stream	109
2016	Northwest	Lake	79
2016	Northwest	Stream	75
2016	Southeast	Lake	25
2016	Southeast	Stream	29
2016	Southwest	Lake	44
2016	Southwest	Stream	86

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

Year	#Surveys	#Fish Enumerated
2012	598	123,433
2013	625	150,012
2014	638	114,062
2015	611	137,713
2016	578	130,205

SurveyMap

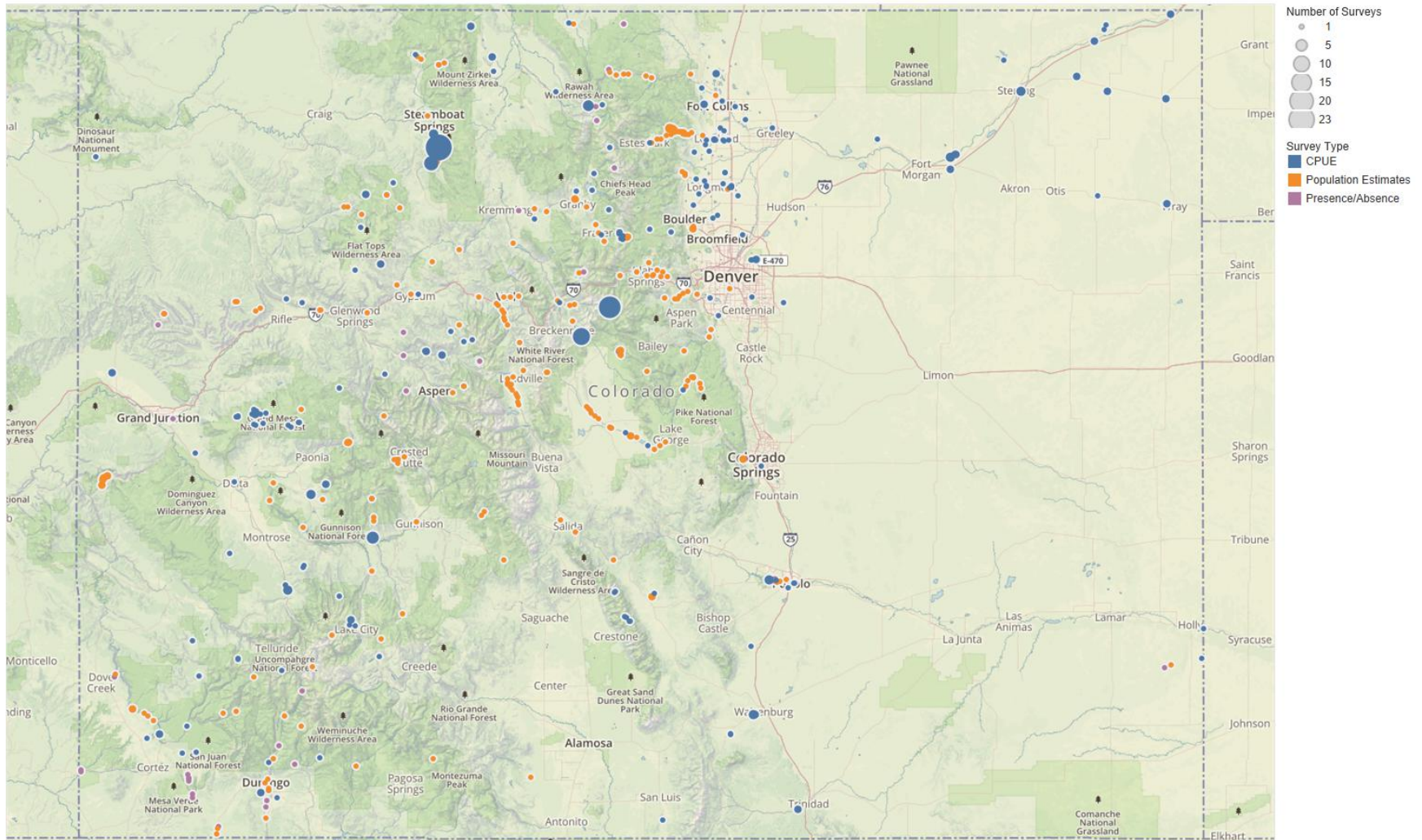


Figure 1. Location and type of surveys conducted by CPW biologists in 2016. A summary of catch for the two most popular recreational sport fish families is provided in Figure 2.

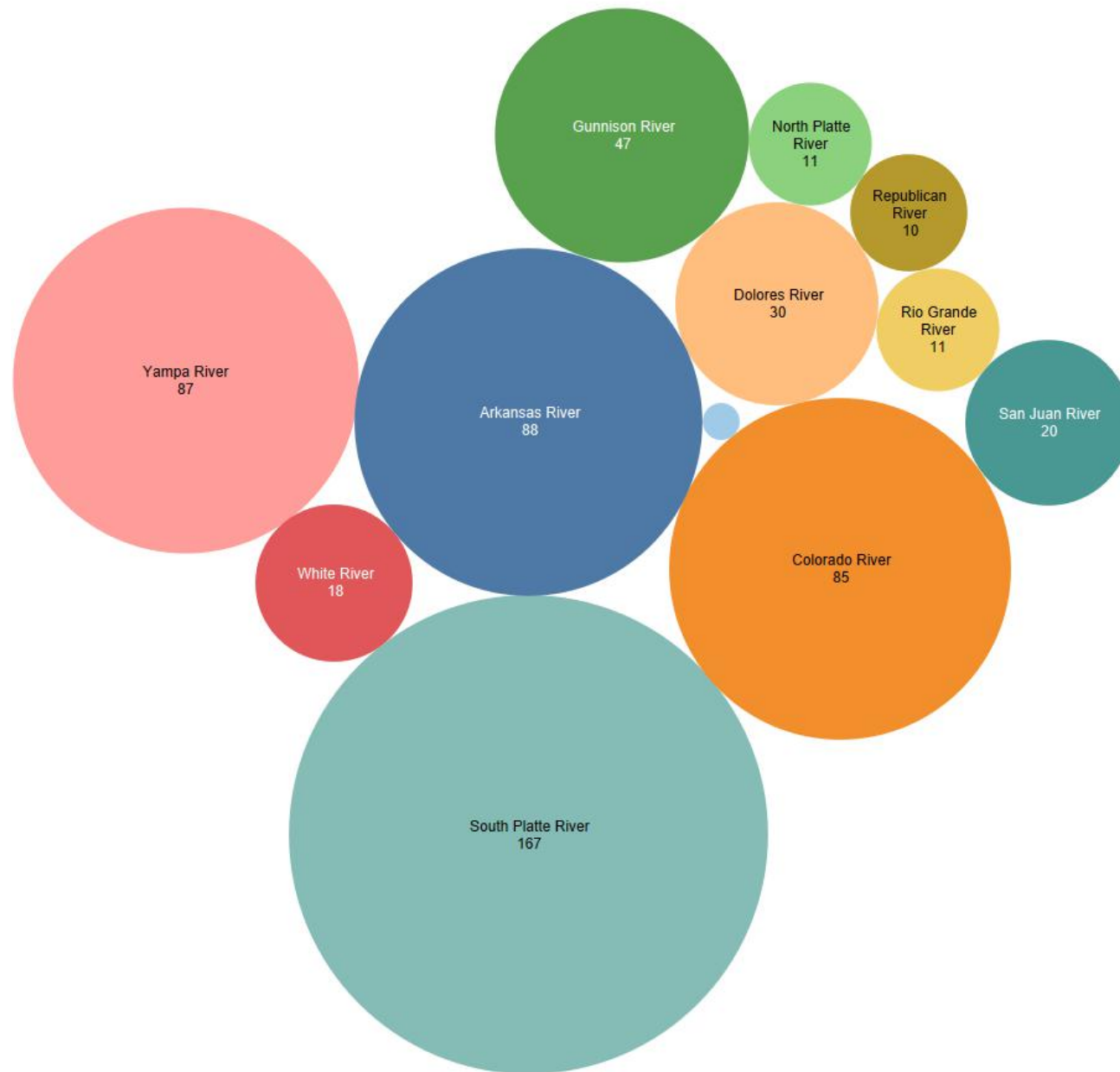


Figure 2. Number of surveys conducted by CPW staff in 2016 by drainage basin

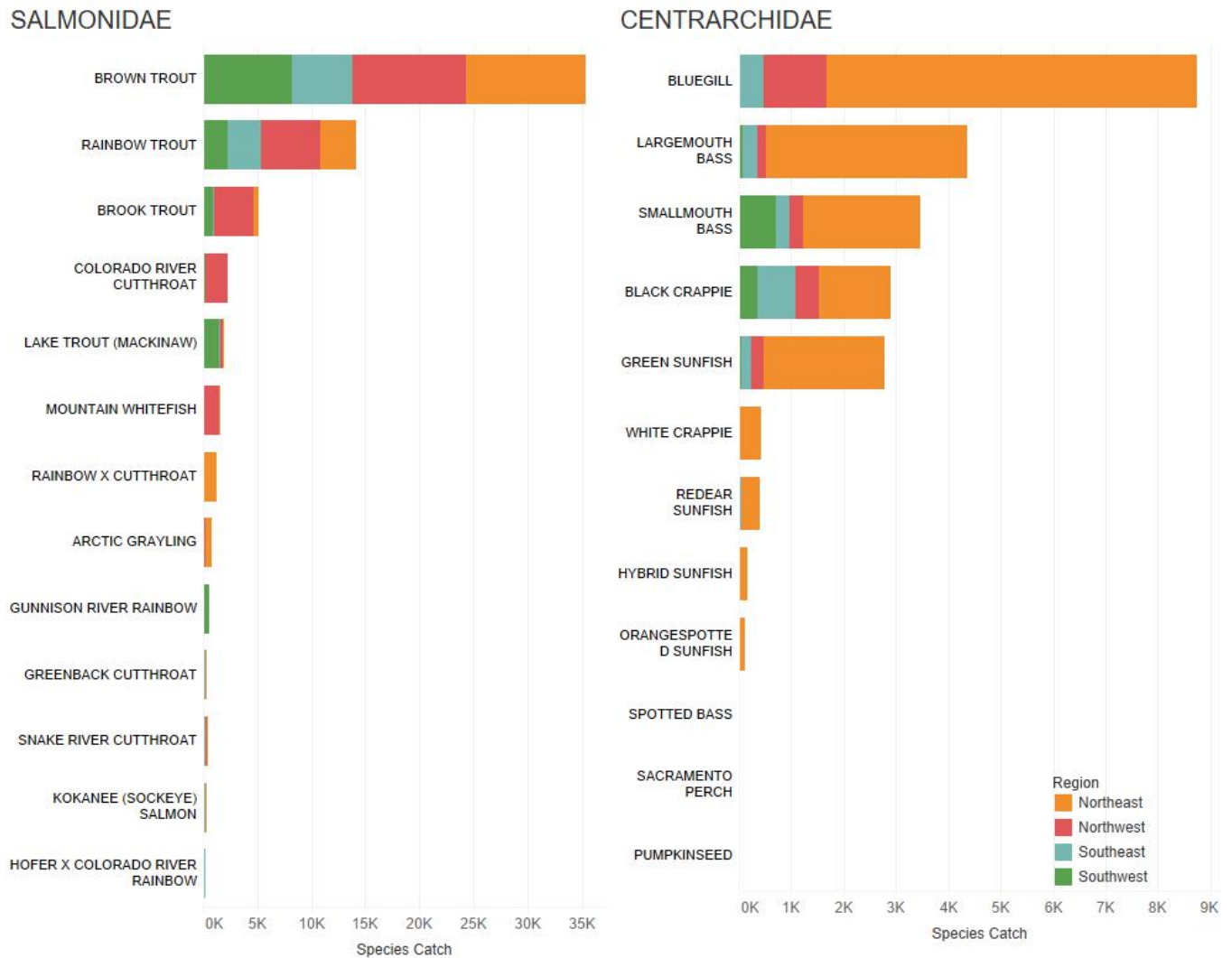


Figure 3. Catch of fish from the two most popular recreational sportfish families during 2016 CPW fisheries assessment surveys.

In addition, 3 lakes/reservoirs and 1 river segments had creel surveys conducted to estimate angler satisfaction, harvest, and estimate fishing pressure (refer to Table 2).

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 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: Historic trends and current status of fish populations only provide half of the information needed to effectively manage recreational fisheries in Colorado. 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 harvest and effort on select lakes and rivers across Colorado.
2. Collection of information on angler demographics and preferred species being targeted by different

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. Only 4 creels were conducted in 2016; 1 stream survey and 3 lake/reservoir surveys. A summary of creel effort across the state over the past 5 years is provided in Table 3. A breakdown of where the creel surveys were conducted in 2016 is provided in Table 4.

Table 3. Summary of creel survey effort in Colorado

<u>Year</u>	<u>#Creels</u>
2012	19
2013	22
2014	4
2015	10
2016	4

Table 4. Waters on which creel surveys were performed by CPW in 2016

Year	WaterType	WaterCode	WaterName
2016	River	21725	Roaring Fork ¹
2016	Lake	96695	Ridgway Reservoir ¹
2016	Lake	66160	Jerry Creek Reservoir #1 ²
2016	Lake	66162	Jerry Creek Reservoir #2 ²

¹ standard creel

² voluntary creel card

Creel data is currently analyzed using an aging software package (C-SAP) programmed by CPW and computer science and statistics staff at Colorado State University. Individual creel surveys are housed on the area biologist's computers, scattered across the state. A project to develop a new centralized creel data storage and analysis program is just about complete and should improve CPW's analysis of historic trends in fisheries usage.

PERSONNEL:

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APPENDIX 1. CPW AQUATIC SENIOR AND AREA BIOLOGISTS:

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

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NAME	AREA	TELEPHONE / FAX	ADDRESS
RAMSAY, Jim	Lower Arkansas	(719) 336-6607 (Office) (719) 336-6623 (FAX) (719) 940-0263 (Cell)	Lamar Service Center 2500 S. Main St. Lamar, CO 81052
NOBLE, Cory	Upper Ark, Front Range & Plains	(719) 227-5222 (Office) (719) 227-5297 (FAX) (719) 396-4235 (Cell)	Colorado Springs SC 4255 Sinton Rd. Colorado Springs, CO 80907
TUCKER, Carrie	Middle Ark, Huerfano, Purgatoire	(719) 561-5312 (Office) (719) 561-5321 (FAX) (719) 940-6352 (Cell)	Pueblo Service Center 600 Reservoir Rd. Pueblo, CO 81005
ATWOOD, Michael	Upper Arkansas Headwaters	(719) 530-5525 (Office) (719) 530-5554 (FAX) (719) 539-5805 (Cell)	Salida Service Center 7405 Hwy 50 Salida, CO 81201

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NAME	AREA	TELEPHONE / FAX	ADDRESS
WINKLE, Paul Area 5	All aquatic resources in Denver area including Clear Creek and Bear Creek drainages.	(303) 291-7232 (Office) (303) 291-7114 (FAX) (303) 916-1043 (Cell)	Denver Headquarters 6060 Broadway Denver, CO 80216
Vacant Area 1	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) (303) 291-7114 (FAX) (303) 981-3634 (Cell)	Denver Headquarters 6060 Broadway Denver, CO 80216
SWIGLE, Ben Area 2	All aquatic resources in the St. Vrain, Big Thompson and Boulder Creek Drainages.	(970) 472-4364 (970) 472-4458 (FAX) (970) 227-4892 (Cell)	Northeast Service Center 317 West Prospect Ft. Collins, CO 80526
BRANDT, Mandi Area 3	All aquatic resources in lower South Platte drainage including waters in CPW Area 3.	(970) 842-6330 (Office) (970) 842-6329 (FAX) (970) 768-9649 (Cell)	Brush Service Center 122 East Edison Brush, CO 80723
BATTIGE, Kyle Area 4, Area 10	All aquatic resources- North Platte, Poudre and Laramie River Drainages.	(970) 472-4396 (Office) (970) 472-4457 (FAX) (970) 217-9513 (Cell)	Northeast Service Center 317 West Prospect Ft. Collins, CO 80526
WRIGHT, Boyd	Native Cutthroat populations	(970) 472-4366 (office) (970) 472-4458 (FAX) (970) 261-4366 (Cell)	Northeast Service Center 317 West Prospect Ft. Collins, CO 80526

JOHN ALVES – SENIOR AQUATIC BIOLOGIST

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BRAUCH, Dan	Upper Gunnison River	(970) 641-7070 (Office) (970) 641-7883 (FAX) 970-497-9722 (CELL)	Gunnison Service Center 300 W. New York Ave. Gunnison, CO 81230
WHITE, Jim	San Juan Basin, Upper Dolores River Basin	(970) 375-6712 (Office) (970) 382-6672 (FAX) 970-903-1073 (CELL)	Durango Service Center 151 E. 16 th St. Durango, CO 81301
GARDUNIO, Eric	Lower Gunnison, Uncompahgre, San Miguel, Lower Dolores Rivers	(970) 252-6017 (Office) (970) 252-6053 (FAX) (970) 596-2901 (Cell)	Montrose Service Center 2300 South Townsend Montrose, CO 81401

Appendix 2. List of fisheries surveys conducted in 2016 by CPW employees

<u>Huc10</u>	<u>WaterType</u>	<u>Protocol</u>	<u>#Surveys</u>	<u>#Species</u>	<u>#Fish</u>
Northeast Region - North Platte River					
North Platte Headwaters					
Canadian River	Lake	CPUE	1	4	217
Headwaters North Platte River	Lake	CPUE	1	1	230
North Fork North Platte River	Lake	CPUE	2	5	44
Upper Laramie					
Laramie River-Grace Creek	Lake	CPUE	1	2	163
Laramie River-Grace Creek	Stream	TWO-PASS REMOVAL	1	3	247
Upper North Platte					
Big Creek	Lake	CPUE	2	7	77
Northeast Region - Republican River					
Frenchman					
Sand Creek	Lake	CPUE	2	6	472
Upper Frenchman Creek	Lake	CPUE	4	7	1,073
North Fork Republican					
Chief Creek	Lake	CPUE	3	11	3,416
Northeast Region - South Platte River					
Beaver					
Lower Beaver Creek	Lake	CPUE	2	8	1,471
Big Thompson					
Headwaters Big Thompson River	Lake	CPUE	2	12	220
Headwaters Big Thompson River	Stream	TWO-PASS REMOVAL	7	6	2,153
North Fork Big Thompson River	Stream	TWO-PASS REMOVAL	9	4	541
Outlet Big Thompson River	Lake	CPUE	14	21	1,825
Outlet Big Thompson River	Stream	TWO-PASS REMOVAL	9	9	789
Cache La Poudre					
City of Greeley-Cache La Poudre River	Lake	CPUE	4	14	721
Gordon Creek-Cache La Poudre River	Stream	TWO-PASS REMOVAL	1	4	168
Headwaters Cache La Poudre River	Lake	CPUE	5	5	215
Headwaters Cache La Poudre River	Stream	OTHER	4	2	492
Headwaters Cache La Poudre River	Stream	TWO-PASS REMOVAL	6	4	977
Horsetooth Reservoir-Cache La Poudre	Lake	CPUE	6	18	2,606
Horsetooth Reservoir-Cache La Poudre	Stream	TWO-PASS REMOVAL	1	5	125
Upper North Fork Cache La Poudre River	Stream	OTHER	1	1	60
Clear Creek					
Lower Clear Creek	Stream	TWO-PASS REMOVAL	1	2	78
Middle Clear Creek	Stream	TWO-PASS REMOVAL	7	6	674
Upper Clear Creek	Stream	TWO-PASS REMOVAL	2	6	351
Lower South Platte					
Hartley Draw-South Platte River	Lake	CPUE	2	14	1,634

<u>Huc10</u>	<u>WaterType</u>	<u>Protocol</u>	<u>#Surveys</u>	<u>#Species</u>	<u>#Fish</u>
Middle South Platte-Cherry Creek					
Big Dry Creek-South Platte River	Lake	CPUE	5	6	923
Cherry Creek-South Platte River	Lake	CPUE	1	10	470
Cottonwood Draw-South Platte River	Lake	CPUE	1	14	531
Sand Creek	Lake	CPUE	1	9	304
Middle South Platte-Sterling					
Cedar Creek	Lake	CPUE	1	17	480
City of Sterling-South Platte River	Lake	CPUE	3	17	5,553
Cottonwood Creek-South Platte River	Lake	CPUE	4	19	3,118
Dead Horse Draw-South Platte River	Lake	CPUE	7	13	1,808
South Platte Headwater					
Elevenmile Canyon-South Platte River	Stream	THREE-PASS REMOVAL	1	5	295
Elevenmile Canyon-South Platte River	Stream	TWO-PASS REMOVAL	2	4	1,106
Elevenmile Reservoir-South Platte River	Lake	CPUE	2	8	294
Elevenmile Reservoir-South Platte River	Stream	TWO-PASS REMOVAL	5	10	3,270
Headwaters Tarryall Creek	Lake	CPUE	10	2	298
Middle Fork South Platte River	Stream	TWO-PASS REMOVAL	9	8	1,866
Ruby Gulch-Tarryall Creek	Stream	OTHER	2	1	305
Ruby Gulch-Tarryall Creek	Stream	PRESENCE/ABSENCE	1	1	20
Ruby Gulch-Tarryall Creek	Stream	THREE-PASS REMOVAL	2	2	82
Ruby Gulch-Tarryall Creek	Stream	TWO-PASS REMOVAL	3	1	14
St. Vrain					
Boulder Creek-Saint Vrain Creek	Lake	CPUE	16	19	2,410
Coal Creek-Boulder Creek	Lake	CPUE	1	5	47
Headwaters Boulder Creek	Lake	CPUE	4	10	309
North Saint Vrain Creek	Stream	TWO-PASS REMOVAL	3	4	760
South Boulder Creek	Lake	CPUE	4	9	318
South Boulder Creek	Stream	TWO-PASS REMOVAL	12	7	779
Upper South Platte					
Bear Creek	Lake	CPUE	1	7	392
Bear Creek	Stream	TWO-PASS REMOVAL	7	5	2,480
Chatfield Reservoir-South Platte River	Lake	CPUE	1	9	325
Chatfield Reservoir-South Platte River	Stream	TWO-PASS REMOVAL	2	5	643
City of Lakewood-South Platte River	Stream	MARK/RECAPTURE	1	10	432
Headwaters North Fork South Platte River	Lake	CPUE	0	0	
Lost Creek-South Platte River	Lake	CPUE	1	7	284
Lost Creek-South Platte River	Stream	TWO-PASS REMOVAL	5	7	2,093
Outlet North Fork South Platte River	Stream	THREE-PASS REMOVAL	1	1	14
Trout Creek-West Creek	Stream	THREE-PASS REMOVAL	1	6	40
Trout Creek-West Creek	Stream	TWO-PASS REMOVAL	2	6	56

Northwest Region - Colorado River

Blue

Dillon Reservoir	Lake	CPUE	1	6	309
Lower Blue River	Stream	MARK/RECAPTURE	1	5	676
Middle Blue River	Lake	CPUE	2	3	52
Middle Blue River	Stream	MARK/RECAPTURE	1	5	602
Snake River	Stream	TWO-PASS REMOVAL	2	3	134
Upper Blue River	Stream	TWO-PASS REMOVAL	1	2	381

Colorado Headwaters

Big Alkali Creek-Colorado River	Stream	MARK/RECAPTURE	2	12	3,025
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<u>Huc10</u>	<u>WaterType</u>	<u>Protocol</u>	<u>#Surveys</u>	<u>#Species</u>	<u>#Fish</u>
Fraser River	Lake	CPUE	2	4	192
Fraser River	Stream	TWO-PASS REMOVAL	4	7	2,096
Glenwood Canyon-Colorado River	Stream	TWO-PASS REMOVAL	1	5	450
Headwaters Colorado River	Lake	CPUE	2	7	835
Headwaters Colorado River	Lake	OTHER	1	1	124
Headwaters Colorado River	Stream	TWO-PASS REMOVAL	3	6	885
Little Muddy Creek-Colorado River	Stream	MARK/RECAPTURE	1	6	963
Sweetwater Creek	Lake	CPUE	1	6	232
Troublesome Creek-Colorado River	Stream	MARK/RECAPTURE	1	6	1,588
Troublesome Creek-Colorado River	Stream	PRESENCE/ABSENCE	1	5	151
Williams Fork	Lake	CPUE	1	5	143
Williams Fork	Stream	FULL HABITAT	1	2	482
Williams Fork	Stream	PRESENCE/ABSENCE	1	2	469
Willow Creek	Lake	CPUE	1	6	267
Colorado Headwaters-Plateau					
Big Creek-Plateau Creek	Lake	CPUE	13	7	297
East Salt Creek	Lake	CPUE	2	13	731
Elk Creek	Stream	TWO-PASS REMOVAL	2	7	1,261
Garfield Creek-Colorado River	Lake	CPUE	1	8	572
Rifle Creek	Lake	CPUE	1	9	347
Sink Creek-Colorado River	Stream	PRESENCE/ABSENCE	1	11	111
Eagle					
Brush Creek	Stream	TWO-PASS REMOVAL	1	2	196
Gore Creek	Stream	TWO-PASS REMOVAL	3	6	1,350
Upper Eagle River	Stream	TWO-PASS REMOVAL	6	5	1,282
Roaring Fork					
Crystal River	Stream	TWO-PASS REMOVAL	1	4	132
Fryingpan River	Lake	CPUE	3	3	364
Snowmass Creek	Stream	PRESENCE/ABSENCE	1	2	60
Northwest Region - Green River					
Lower Green-Diamond					
Cliff Creek	Lake	CPUE	0	0	
Northwest Region - Gunnison River					
Lower Gunnison					
Kannah Creek-Gunnison River	Lake	CPUE	1	3	169
Northwest Region - White River					
Upper White					
North Fork White River	Lake	CPUE	0	0	
North Fork White River	Stream	THREE-PASS REMOVAL	2	2	21
North Fork White River	Stream	TWO-PASS REMOVAL	0	0	
Northwest Region - Yampa River					
Upper Yampa					
East Fork Williams Fork	Lake	CPUE	2	1	254
Headwaters Elk River	Lake	CPUE	1	3	148
Headwaters Elk River	Stream	OTHER	1	4	45

<u>Huc10</u>	<u>WaterType</u>	<u>Protocol</u>	<u>#Surveys</u>	<u>#Species</u>	<u>#Fish</u>
Headwaters Elk River	Stream	TWO-PASS REMOVAL	4	8	764
Headwaters Yampa River	Lake	CPUE	7	6	1,252
Headwaters Yampa River	Stream	THREE-PASS REMOVAL	1	2	34
Headwaters Yampa River	Stream	TWO-PASS REMOVAL	5	5	607
Oak Creek-Yampa River	Lake	CPUE	24	6	3,766
Oak Creek-Yampa River	Stream	CPUE	1	1	2
Oak Creek-Yampa River	Stream	OTHER	1	6	29
Oak Creek-Yampa River	Stream	THREE-PASS REMOVAL	1	7	167
Oak Creek-Yampa River	Stream	TWO-PASS REMOVAL	1	6	127
Trout Creek-Yampa River	Stream	OTHER	1	1	38
Trout Creek-Yampa River	Stream	TWO-PASS REMOVAL	1	2	11

Southeast Region - Arkansas River

Arkansas Headwaters

Headwaters Arkansas River	Stream	TWO-PASS REMOVAL	5	4	908
Headwaters Grape Creek	Lake	CPUE	4	6	217
Headwaters Grape Creek	Stream	THREE-PASS REMOVAL	1	7	171
Headwaters Grape Creek	Stream	TWO-PASS REMOVAL	1	8	238
Texas Creek	Lake	CPUE	2	2	40

Fountain

Middle Fountain Creek	Lake	CPUE	1	6	53
Upper Fountain Creek	Stream	PRESENCE/ABSENCE	1	2	14
Upper Fountain Creek	Stream	TWO-PASS REMOVAL	2	4	59

Horse

Lower Horse Creek	Lake	CPUE	1	12	496
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Huerfano

Upper Cucharas River	Lake	CPUE	7	20	1,000
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Purgatorie

Trinidad Lake-Purgatorie River	Lake	CPUE	2	10	374
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Upper Arkansas

Dry Creek-Arkansas River	Lake	CPUE	4	13	379
Dry Creek-Arkansas River	Stream	MARK/RECAPTURE	2	10	1,415
Dry Creek-Arkansas River	Stream	PRESENCE/ABSENCE	2	9	200
Greenhorn Creek	Lake	CPUE	1	9	145
Outlet Four Mile Creek	Stream	CPUE	2	2	36
Pueblo Reservoir-Arkansas River	Lake	CPUE	3	16	1,145
Pueblo Reservoir-Arkansas River	Stream	MARK/RECAPTURE	1	6	620

Upper Arkansas-John Martin Reservoir

Dry Creek-Arkansas River	Lake	CPUE	2	5	1,672
Granada Creek-Arkansas River	Lake	CPUE	2	10	64
John Martin Reservoir	Lake	CPUE	1	14	592
Kiowa Creek	Lake	CPUE	1	8	356
Neenoshe Reservoir-Arkansas River	Lake	CPUE	7	15	2,250
Outlet Adobe Creek	Lake	CPUE	1	8	441

Upper Arkansas-Lake Meredith

Lake Meredith	Lake	CPUE	2	10	1,718
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Southeast Region - Cimmaron River

<u>Huc10</u>	<u>WaterType</u>	<u>Protocol</u>	<u>#Surveys</u>	<u>#Species</u>	<u>#Fish</u>
Bear					
Horse Creek-Bear Creek	Lake	CPUE	2	10	1,145
Southwest Region - Dolores River					
Lower Dolores					
West Creek	Stream	TWO-PASS REMOVAL	4	4	536
San Miguel					
Upper San Miguel River	Lake	CPUE	1	1	34
Upper San Miguel River	Stream	CPUE	1	3	60
Upper Dolores					
Headwaters Dolores River	Stream	TWO-PASS REMOVAL	3	4	218
McPhee Reservoir-Dolores River	Lake	CPUE	1	5	110
Ponderosa Gorge-Dolores River	Stream	TWO-PASS REMOVAL	5	6	1,347
West Dolores River	Lake	CPUE	1	4	113
Southwest Region - Gunnison River					
East-Taylor					
East River	Stream	THREE-PASS REMOVAL	1	1	13
East River	Stream	TWO-PASS REMOVAL	6	3	746
North Fork Gunnison					
Anthracite Creek	Stream	THREE-PASS REMOVAL	1	4	111
East Muddy Creek	Stream	CPUE	1	1	20
Hubbard Creek-North Fork Gunnison River	Stream	THREE-PASS REMOVAL	3	8	569
Outlet North Fork Gunnison River	Lake	CPUE	2	2	64
West Muddy Creek	Stream	TWO-PASS REMOVAL	1	2	25
Tomichi					
Quartz Creek	Stream	TWO-PASS REMOVAL	2	3	515
Uncompahgre					
Dry Creek	Lake	CPUE	1	1	18
Lower Uncompahgre River	Lake	CPUE	1	6	89
Upper Uncompahgre River	Lake	CPUE	4	4	2,372
Upper Uncompahgre River	Stream	TWO-PASS REMOVAL	1	4	448
Upper Gunnison					
Black Canyon of the Gunnison	Stream	MARK/RECAPTURE	2	2	4,756
Cebolla Creek	Stream	THREE-PASS REMOVAL	2	3	477
Cimarron River	Stream	CPUE	1	1	7
Lake Fork	Lake	CPUE	2	2	83
Lake Fork	Stream	MARK/RECAPTURE	1	6	590
Lake Fork	Stream	THREE-PASS REMOVAL	1	1	74
Smith Fork-Gunnison River	Lake	CPUE	2	8	690
Smith Fork-Gunnison River	Stream	CPUE	1	1	3
Smith Fork-Gunnison River	Stream	MARK/RECAPTURE	1	11	2,627
Smith Fork-Gunnison River	Stream	TWO-PASS REMOVAL	1	1	28
Soap Creek-Blue Mesa Reservoir	Lake	CPUE	6	9	7,237
Soap Creek-Blue Mesa Reservoir	Stream	PRESENCE/ABSENCE	1	1	4
Soap Creek-Blue Mesa Reservoir	Stream	TWO-PASS REMOVAL	3	2	202
South Beaver Creek-Gunnison River	Stream	MARK/RECAPTURE	1	8	1,264

<u>Huc10</u>	<u>WaterType</u>	<u>Protocol</u>	<u>#Surveys</u>	<u>#Species</u>	<u>#Fish</u>
Southwest Region - Rio Grande River					
Alamosa-Trinchera					
Alamosa River	Stream	TWO-PASS REMOVAL	2	1	73
Sanchez Reservoir	Lake	CPUE	1	6	342
Rio Grande Headwaters					
Clear Creek	Lake	CPUE	1	3	149
San Luis					
Headwaters San Luis Creek	Stream	PRESENCE/ABSENCE	1	5	89
Southwest Region - San Juan River					
Animas					
Animas River Canyon	Stream	PRESENCE/ABSENCE	1	2	4
Animas River Canyon	Stream	TWO-PASS REMOVAL	1	2	8
Electra Lake-Animas River	Lake	CPUE	1	3	45
Electra Lake-Animas River	Stream	PRESENCE/ABSENCE	1	1	21
Electra Lake-Animas River	Stream	THREE-PASS REMOVAL	1	3	28
Headwaters Animas River	Lake	CPUE	1	3	24
Headwaters Animas River	Stream	TWO-PASS REMOVAL	1	1	314
Headwaters Florida River	Stream	PRESENCE/ABSENCE	0	0	
Lightner Creek-Animas River	Stream	MARK/RECAPTURE	1	7	362
Lightner Creek-Animas River	Stream	TWO-PASS REMOVAL	1	2	29
Middle Animas Valley	Stream	MARK/RECAPTURE	1	11	609
Middle Animas Valley	Stream	PRESENCE/ABSENCE	3	10	124
Middle Animas Valley	Stream	THREE-PASS REMOVAL	1	3	117
Middle Animas Valley	Stream	TWO-PASS REMOVAL	1	7	153
Outlet Florida River	Lake	CPUE	1	1	5
McElmo					
Upper McElmo Creek	Lake	CPUE	2	6	123
Yellow Jacket Canyon	Stream	PRESENCE/ABSENCE	1	9	99
Piedra					
Middle Piedra River	Stream	TWO-PASS REMOVAL	1	3	128
Upper San Juan					
East Fork San Juan River	Stream	TWO-PASS REMOVAL	1	5	106
Vallecito Creek	Lake	CPUE	1	6	50