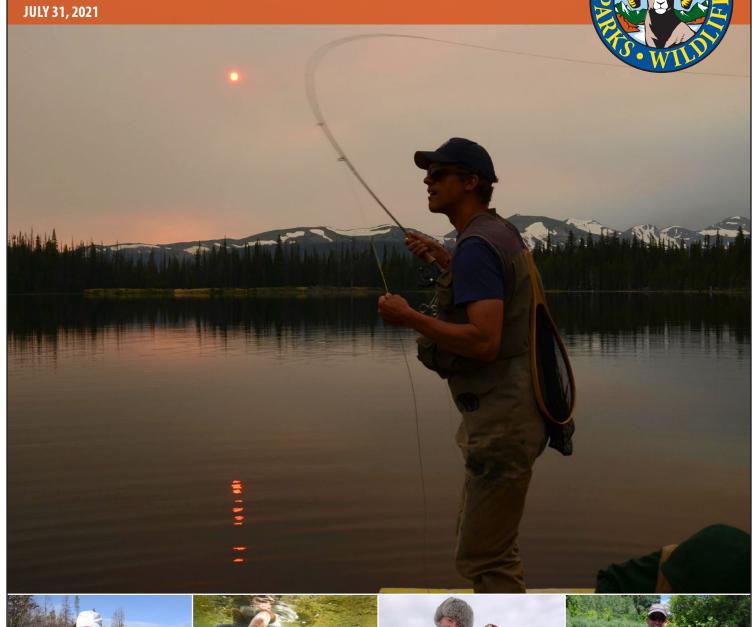
2020 Colorado Angler Survey Summary Report

Nitsa Platis & George J. Schisler, Aquatic Research Section











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Tracy Davis, Hatchery Technician, Fish Research Hatchery
Andrew Perkins, Hatchery Technician, Fish Research Hatchery

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Executive Summary

This angler survey was conducted in 2020 on a stratified sample of resident and non-resident Colorado anglers who purchased licenses in 2019. A total of 6,000 questionnaires were mailed out to 4,151 Colorado residents and 1,849 non-residents. Of these, 1,284 respondents completed the mail-in survey and 361 respondents completed the survey online through Qualtrics, providing a total sample size of 1,645 anglers, and a response rate of 27.4%. Angler responses to the questionnaire were evaluated based on both residency and by angling frequency category. Additional evaluations were made based on age groups to address potential future demographic changes in Colorado.

Eighty-nine percent of survey respondents reported fishing in 2019. The most common reason provided for not participating was that these anglers always purchase a Colorado fishing license but do not always fish each year. A full 58% of respondents reported that they had purchased a license in each of the last five years. Of the license types available, 40% reported purchasing an annual resident license. Anglers fished an average of 16 days and took an average of 11 trips. Resident anglers traveled an average of 62 miles (one way) per trip, while non-residents traveled an average of 182 miles (one way) per trip.

Over 40% of anglers reported that they fished in a State Park in 2019, compared with the 2012 survey in which only 27.1% of anglers reported that they had fished at a State Park. It appears that greater awareness and participation by anglers at State Parks has occurred since the 2012 survey. Elevemile State Park was the most commonly reported as fished by respondents, followed by Chatfield and Lake Pueblo State Parks. Larimer County was the most commonly reported county fished by respondents.

Anglers most often reported targeting rainbow trout (23%), brown trout (16%), brook trout (12%) and cutthroat trout (10%). Respondents most often reported fishing in lakes or reservoirs in the mountains (31%), followed by smaller rivers of streams in the mountains (22%). The most common fishing method was spinning, spin casting, or bait casting (50%), followed by fly fishing (38%). The most commonly reported tackle used was flies (28%), followed by lures (27%).

Satisfaction among anglers was similar, but trending slightly lower than reported in previous years, with 72% of anglers reporting being very or somewhat satisfied with their fishing experience in Colorado. While still high, availability of stocked fish was the trailing metric when compared to satisfaction reported for numbers, size, and variety of fish that anglers caught. When asked about preferences for prioritization in the hatchery system, rainbow (28%), brown (23%), and cutthroat trout (15%) were the most commonly reported coldwater species. Among warm and coolwater species, walleye/sauger (23%), largemouth/smallmouth bass (23%) and

wiper/white/striped bass (14%) were the preferred species. Anglers generally reported that striking a balance between size and number of fish they could catch was a higher priority than either maximizing size or number of fish they could catch.

Anglers most often obtained their information about fishing and fishery management in Colorado by word of mouth (22%) or the Colorado Parks and Wildlife website (17%), but a plurality of respondents would prefer to get their information via email (39%). Changing demographics in Colorado, specifically as delineated by age groups, suggest some changes in preferences for anglers in the future. Some of these differences are potential lower tolerance for crowding among younger anglers, increased preferences for availability of native cutthroat trout, and increased likelihood of younger anglers to release more of the fish they catch.

The substantial amount of data collected as a result of this survey will be used to help guide Colorado's fish hatchery and management activities into the future, and provide a benchmark for angler preferences in future surveys.

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Introduction

The last statewide angler survey was conducted in 2012 (Lischka 2013). The objective of this study was to assess anglers' fishing experiences in Colorado in 2019, to help us understand fishing pressure throughout the state, anglers' satisfaction with their fishing experience in Colorado, and their attitudes towards various management concerns. This survey was also intended to identify any changes in preferences over time of our angling public. Results of this study will ultimately be used to inform and contribute to future fisheries management plans for the state of Colorado.

Methods

A total of 816,861 fishing licenses were sold throughout Colorado in 2019. Of which, 567,076 fishing licenses were sold to Colorado residents and 249,785 licenses sold to non-residents of Colorado. A random sample of 6,000 individuals who purchased a fishing license in 2019 were selected for this study, including 4,151 Colorado residents and 1,849 non-residents. Individuals who were selected to participate in the survey were mailed a nine-page survey, cover letter, and postage-paid return envelope. These surveys went out in two rounds. The first was mailed around May 4th, 2020, with a reminder postcard sent on May 11, 2020. The second round was mailed around June 12, 2020, with a reminder postcard sent on July 16, 2020. Respondents had the option to complete the survey and return it by mail, or access and complete the survey online via Qualtrics. The survey contained a total of 26 questions which were divided into five main categories: "Fishing Participation", "Fishing Preferences", "Fishing Experiences in Colorado", "Colorado's Fish Hatcheries", and "About You". Questions contained a variety of response formats including: multiple choice, select all that apply, fill in the blank, and open response. Survey data from mailed and online survey responses were entered in Google Sheets and analyzed using RStudio. The original survey questionnaire is included in Appendix A. This includes summaries of results for each survey question for resident, non-resident and both resident and non-resident combined. Specific survey responses are addressed in the following Results and Discussion. Tables of responses were also generated for anglers based on angling frequency category and age category to provide further insight into angler responses and trends.

Results and Discussion

Survey Response Rate

Of the 6,000 surveys distributed to selected participants, 467 of the surveys were returned as undeliverable and 44 surveys were classified as invalid. A total of 1,284 respondents completed the mail-in survey and 361 respondents completed the survey online through Qualtrics, providing a total sample size of 1,645 anglers, and a response rate of 27.4%. Due to a complication with the

online survey, we were unable to determine whether 24 of the total 1,645 respondents were Colorado residents or non-residents. Excluding these 24 respondents, there were a total of 1,202 (74.2%) Colorado resident respondents and 419 (25.8%) non-resident respondents.

Fishing Participation and Angling Activity

Of the original 1,645 samples, 1,466 individuals reported they fished in 2019 and 179 individuals reported they did not fish in 2019. A high proportion of anglers who purchased a license did not participate in angling (11%; n = 1.645). This was an interesting result, particularly given the most common reason those respondents provided for not going fishing in 2019, which was that the participants always purchase a fishing license, but do not always fish each year (45%; n =221). The second most common response was that the participants had limited time due to work and family obligations (26%). This was also a theme reported in the 2012 survey for a reduction in planned angling activity (Lischka 2013). In that survey, less leisure or vacation time, increased work obligations, and increased family obligations were the top three reasons provided. Respondents in the current survey also indicated a high propensity to purchase licenses, with 58% (n = 1.458) reporting that they had purchased a license in each of the past five years. These results suggest CPW has a dedicated customer base of anglers who purchase licenses despite knowing that they may not actually participate in a given year. The type of licenses reported as purchased in the questionnaire somewhat mirrored the known unique number of license holders in each category, which was the basis for the sample scheme on the survey. Among residents (n = 1,177), this included a high proportion of annual resident licenses (55%), senior annual resident licenses (21%), and resident combination licenses (16%). Among non-residents (n = 468), the five-day nonresident license was most common (46%), followed by the one-day non-resident license (24%), and the annual nonresident license (18%).

Average days fished was reported to be 20 for residents (n = 1,051), and five for non-residents (n = 393). Number of fishing trips taken averaged 14 for residents (n = 1,024) and three for non-residents (n = 390). Residents reported traveling an average of 62 miles (n = 1,024) for each fishing trip, whereas non-residents reported traveling an average of 503 miles (n = 383) per trip. The angling-days reported require further delineation with respect to license type for interpretation (Table 1). By using licenses sold in each category (Kowalski 2021), along with the average days fished in each category, it is possible to estimate the number of recreation-days generated in Colorado in 2019. This technique has been used in the past to estimate recreation-days, and while not exact, can provide a relatively good measure. Days reported as fished by each license type are simply multiplied by the number of licenses sold in those categories. The caveat is that single-day license holders may have purchased more than one single-day license. Responses to the questionnaire indicate that these single-day license holders averaged three days of angling. Therefore, in the case of single-day license holders, and for unrepresented license types in the survey that made up a small portion of total licenses, such as resident youth and low

Table 1. Days fished in 2019 by license type ($n_{\text{annual resident}} = 656$; $n_{\text{senior resident}} = 251$; $n_{\text{combo resident}} = 191$; $n_{\text{annual non-resident}} = 87$; $n_{\text{five-day non-resident}} = 211$; $n_{\text{one-day non-resident}} = 115$).

	Annual resident (n=656)			Sen	ior re	sident (1)	Combo resident (n=191)		
	n	x	range	n	x	range	n	x	range
Days fished (<i>n</i> =1,511)	656	21	1-250	251	17	1-120	191	21	1-250
	Annual non- resident (n=87)			Five-day non- resident (n=211)			One-day non- resident (n=115)		
	n	x	range	n	x	range	n	x	range
Days fished (<i>n</i> =1,511)	87	14	1-125	211	5	1-60	115	3	1-15

income senior licenses, a single angling day was allocated to each of these licenses sold. This produces a minimum estimate of angling recreation-days in Colorado for 2019. That total is 11,092,512 recreation-days, which is comparable to previous calculations based on a statewide mail-in angler survey. For instance, based on figures produced from the 2008 angler mail-in survey (Holsman 2010) angling recreation-days were estimated to be 10,603,604 per year in Colorado.

Angling participation at State Parks was relatively high, with 40% of all respondents (n = 1,440) reporting that they had visited a State Park. State Park visitation was higher among resident anglers (49%; n = 1,048) than among nonresidents (17%; n = 392). This is compared with the 2012 survey in which only 35% of resident anglers and 17% of nonresidents reported that they had fished at a State Park. It appears that greater awareness and participation by resident anglers at State Parks has occurred since the 2012 survey. The most commonly visited State Park among all respondents combined was Elevenmile State Park at 8% (n = 1,220). Lake Pueblo State Park was the second most commonly visited, at 7%. Interestingly, many of the respondents identified locations in response to this question that were not State Parks. This included State Wildlife Areas (5%), National Parks or National Forests (12%), and Other (14%). This suggests that much of the angling public believes they are recreating on a State Park, when in fact they are at a location under a different jurisdiction. The reported use for Larimer County (7.9%) and Park County (8.2%) was highest among all respondents combined (n = 2,682) as measured by number of anglers reporting visitation. When using average number of days fished as the metric among all individual respondents, Crowley and Delta counties had the most, with an average of 13 days each. Number of days anglers planned on fishing in 2020, compared to 2019, was reported to be "about the same" by 40% (n = 1,432) by all anglers combined. However, 34% of all anglers

reported that they planned to fish more days in 2020. This was much higher among residents (41%; n = 1,044) than among non-residents (17%; n = 388). Non-residents reported being unsure of their plans at a relatively high rate of 29%.

Respondents were further categorized into three different angling activity groups, based on the number of days they reported having fished in 2019. The average number of days anglers spent fishing in 2019 across all license types was 16 days. Individuals who fished more days than the average number of days fished in 2019 (>16), were categorized as frequent anglers. Individuals who fished equal to or greater than 5 days and equal to or less than 16 days $(16 \le x \ge 5)$ were categorized as moderate anglers. Individuals who fished less than 5 days (<5) were categorized as infrequent anglers. Of the 1,466 respondents who reported they fished in 2019, 22 individuals did not specify the number of days they fished in 2019, leaving us with a remaining 1,444 respondents categorized into the differing angling activity groups. A total of 408 (28%) individuals were classified as frequent anglers, 621 (43%) individuals were classified as moderate anglers, and 415 (29%) individuals were classified as infrequent anglers.

Table 2. Frequency of purchasing a Colorado fishing license in the last 5 years by angling activity group (*n*_{frequent}=408; *n*_{moderate}=619; *n*_{infrequent}=415).

	Freq ang (n=4		ang	erate lers 619)	ang	quent lers 415)
	n	%	n	%	n	%
In each of the last 5 years (n=840)	339	83%	386	62%	115	28%
In 4 of the last 5 years (<i>n</i> =117)	20	5%	60	10%	37	9%
In 2 or 3 of the last 5 years (n =288)	38	9%	144	23%	106	25%
Once in the last 5 years (<i>n</i> =197)	11	3%	29	5%	157	38%

Table 3. Colorado fishing license purchased by angling activity group (n_{frequent} =451; n_{moderate} =710; $n_{\text{infrequent}}$ =454).

	Frequent anglers (n=451)		ang	erate lers 710)	Infrequent anglers (n=454)	
	n	%	n	%	n	%
Annual, resident fishing license (<i>n</i> =656)	242	54%	308	43%	106	23%
One day, resident fishing license (<i>n</i> =72)	6	1%	21	3%	45	10%
Senior, annual resident fishing license (n=251)	81	18%	121	17%	49	11%
Resident, combination small game hunting and fishing license (<i>n</i> =191)	86	19%	87	12%	18	4%
Annual, non-resident fishing license (n=86)	25	6%	43	6%	18	4%
Five day, non-resident fishing license (n=210)	2	0%	88	12%	120	26%
Non-resident, free (by purchase of big game license) (<i>n</i> =4)	0	0%	1	0%	3	1%
One day, non-resident (n=109)	0	0%	26	4%	83	83%
Other (Please specify): (n=36) Additional days (n=19) 2nd rod stamp (n=16) Lifetime handicap (n=1)	0 8 1	0% 2% 0%	8 7 0	1% 1% 0%	11 1 0	2% 0% 0%

Table 4. Days spent fishing in Colorado in 2019 and miles traveled one way for each fishing trip by angling activity group.

	Frequent anglers			Mo	derate	anglers	Infrequent anglers			
	n	x	range	n	x	range	n	x	range	
Days fished	408	40	17-250	621	9	5-16	415	2	1-4	
Miles traveled	401	70	0-1,260	613	166	0-3,000	408	313	0-4,000	

Of the Colorado residents (n = 1.051), 36% were classified as frequent anglers, 46 were categorized as moderate anglers, and 17% were classified as infrequent anglers. Among nonresidents (n = 393), 6% were classified as frequent anglers, 22% were categorized as moderate anglers, and 56% were classified as infrequent anglers. The largest proportion of frequent anglers (83%) and moderate anglers (62%), reported having purchased a license in each of the last five years, while the largest proportion of infrequent anglers (38%), reported having purchased a license once in the last five years (Table 2). The majority of frequent anglers (54%) and moderate anglers (43%) reported having purchased an annual resident fishing license, while the majority of infrequent anglers (83%) reported having purchased a one-day non-resident fishing license in 2019 (Table 3). Frequent anglers fished an average of 40 days, moderate anglers fished an average of 9 days, and infrequent anglers fished an average of 2 days in 2019 (Table 4). On average, infrequent anglers traveled the furthest (313 miles) for each fishing trip, while frequent anglers traveled the shortest distance (70 miles) for each fishing trip (Table 4). The majority of frequent anglers reported they had fished in a Colorado State Park in 2019 (Table 5), with Chatfield being the most frequently reported park fished by individuals within the frequent angler group (Table 6). Moderate and infrequent anglers were more likely to report not having fished in a Colorado State Park in 2019 (Table 5), and Eleven Mile State Park was the most frequently reported park fished by individuals within both the moderate and infrequent angler groups (Table 6). The greatest number of individuals within the frequent angler group (n=85)reported having fished in Park County in 2019 (Table 7). However, on average, frequent anglers spent the most number of days fishing in Larimer County (Table 7). The majority of both frequent and moderate anglers reported that they expected to fish about the same number of days in 2020, whereas the majority of infrequent anglers reported they expected to fish more days in 2020 (Table 8).

Table 5. Reported fishing in Colorado State Parks in 2019 by angling activity group (nfrequent=406; nmoderate=615; ninfrequent=413).

	Frequent anglers (n=406)			e anglers 615)	Infrequent anglers (n=413)		
	n	%	n	%	n	%	
Yes (<i>n</i> =577)	242	60%	241	39%	94	23%	
No (<i>n</i> =697)	129	32%	308	50%	260	63%	
I am not sure (<i>n</i> =160)	35	9%	66	11%	59	14%	

Table 6. Top five reported Colorado State Parks fished in 2019 by angling activity group (n_{frequent} =242; n_{moderate} =241; $n_{\text{infrequent}}$ =94).

	Frequent anglers (n=242)		ang	erate lers 241)	Infrequent anglers (n=94)	
	n	%	n	%	n	%
Boyd Lake State Park (<i>n</i> =44)	28	12%	12	5%	4	4%
Chatfield State Park (<i>n</i> =93)	60	25%	28	12%	5	5%
Cherry Creek State Park (<i>n</i> =50)	30	12%	16	7%	4	4%
Eleven Mile State Park (<i>n</i> =110)	54	22%	46	19%	10	11%
Lake Pueblo State Park (n=90)	54	22%	29	12%	7	7%

Table 7. Top five reported counties fished in 2019 by angling activity group.

	Frequent anglers			Mod	erate	anglers	Infrequent anglers		
	n	x	range	n	x	range	n	x	range
Grand County (<i>n</i> =129)	61	11	1-50	54	4	1-12	14	3	1-4
Jefferson County (<i>n</i> =149)	66	14	1-60	67	4	1-10	16	2	1-3
Larimer County (<i>n</i> =212)	72	24	1-211	102	5	1-30	38	2	1-5
Park County (<i>n</i> =209)	85	12	1-60	86	5	1-15	38	2	1-4
Pueblo County (<i>n</i> =86)	44	18	1-75	34	4	1-15	8	2	1-4

Table 8. Expected change in the number of days spent fishing in 2020 compared to 2019 by angling activity group (*n*_{frequent}=405; *n*_{moderate}=615; *n*_{infrequent}=406).

	Frequent anglers (n=405)			e anglers 515)	Infrequent anglers (n=406)		
	n	%	n	%	n	%	
More days (n=491)	137	34%	221	36%	133	33%	
About the same (<i>n</i> =572)	196	48%	269	44%	107	26%	
Fewer days (<i>n</i> =149)	33	8%	69	11%	47	12%	
I am not sure (<i>n</i> =214)	39	10%	56	9%	119	29%	

Fishing Preferences

When asked about propensity for anglers to keep fish that are caught, only 10% of all respondents (n = 1,413) reported that they kept all or nearly all the fish they could legally keep. Sixty-three percent of respondents reported that they released all or nearly all the fish that they catch. Tendencies to keep fish were variable among the different angler use groups, with very few frequent anglers (5%; n = 404) tending to keep all the fish they caught, compared to infrequent anglers (13%; n = 393). At the same time, a higher proportion of infrequent anglers released all the fish they caught (69%) compared to frequent anglers (61%) (Table 9).

Table 9. Approximated percentage of fish released back into the water by angling activity group (nfrequent=404; nmoderate=610; ninfrequent=393).

	Frequent Moderate anglers (n=404) (n=610)		Infrequent anglers (n=393)			
	n	%	n	%	n	%
None (I kept all or nearly all of the fish that I legally could keep) (<i>n</i> =142)	21	5%	68	11%	53	13%
I released less than half of the fish I caught (less than 50%) (n=158)	49	12%	76	12%	33	8%
I released more than half of the fish I caught (more than 50%) (<i>n</i> =226)	87	22%	102	17	37	9%
I released all or nearly all of the fish I caught (about 100%) (n=881)	247	61%	364	60%	270	69%

Table 10. Species of fish targeted by angling activity group ($n_{\text{frequent}}=1,989$; $n_{\text{moderate}}=2,049$; $n_{\text{infrequent}}=960$).

	ang	uent lers ,989)	ang	erate lers ,049)	Infreang (n=9	
	n	%	n	%	n	%
Largemouth or smallmouth bass (<i>n</i> =285)	134	7%	112	5%	39	4%
Channel, flathead or blue catfish (<i>n</i> =94)	60	3%	25	1%	9	1%
Wiper, white or striped bass (<i>n</i> =107)	73	4%	29	1%	5	1%
Walleye or sauger (<i>n</i> =225)	124	6%	78	4%	23	2%
Bluegill or sunfish (<i>n</i> =128)	69	3%	42	2%	17	2%
Yellow perch (<i>n</i> =71)	42	2%	24	1%	5	1%
Crappie (<i>n</i> =139)	82	4%	43	2%	14	1%
Brown trout (<i>n</i> =792)	267	13%	351	17%	174	18%
Cutthroat trout (<i>n</i> =521)	196	10%	227	11%	98	10%
Lake trout (<i>n</i> =375)	152	8%	154	8%	69	7%
Rainbow trout (<i>n</i> =1164)	350	18%	519	25%	295	31%
Brook trout (<i>n</i> =584)	198	10%	255	12%	131	14%
Kokanee salmon (<i>n</i> =127)	63	3%	55	3%	9	1%
Northern pike or tiger musky (<i>n</i> =148)	91	5%	46	2%	11	1%
Carp (<i>n</i> =48)	33	2%	11	1%	4	0%
Any fish (I did not target a specific species/group) (<i>n</i> =173)	42	2%	74	4%	57	6%
Other (Please specify) (n=17): Grayling (n=6) Tiger trout (n=4) Whitefish (n=3) Cutbow Trout (n=1) Suckers (n=2) Black bullhead catfish (n=1)	4 4 2 1 2 0	0% 0% 0% 0% 0% 0%	2 0 1 0 0	0% 0% 0% 0% 0% 0%	0 0 0 0 0	0% 0% 0% 0% 0% 0%

When asked about target species (multiple choice), the highest proportion of all responses (n = 5,062) were rainbow trout (23%), followed by brown trout (16%), brook trout (12%), and cutthroat trout (10%). This pattern of targeting these four trout species was the same with both resident anglers and non-resident anglers, frequency of angling categories, and among the various age groups. However, more frequent anglers (18%; n = 1,989) were less likely to fish for rainbow trout than infrequent anglers (31%; n = 295). These frequent anglers were also more likely to fish for warmwater species such as large or smallmouth bass (7%) and walleye or sauger (6%), than infrequent anglers, who only targeted those species at a rate of 4% and 2%, respectively (Table 10). Non-resident anglers were not at all likely to target warmwater species, with only 2% of the responses for largemouth or smallmouth bass, and only 1% each for yellow perch, walleye or sauger, bluegill or sunfish, and northern pike or tiger muskie.

When asked about types of water that anglers fished in 2019 (multiple choice), lakes or reservoirs in the mountains were the most frequently reported type of water fished in 2019 (31%; n = 3,029) by all respondents. Urban small ponds were the least frequently reported type of water fished for individuals among all respondents (6%), and particularly so among non-residents (2%; n = 645. Non-residents were more likely than residents to fish in smaller rivers or streams in the mountains (33%), and less likely to fish in lakes or reservoirs at low elevations (10%). Residents (n = 2,384) reported fishing in smaller rivers or streams in the mountains at a rate of 19% and in lakes or reservoirs at a rate of 22%. The results suggest that infrequent anglers were more likely to fish in lakes and reservoirs in the mountains, and smaller rivers or streams in the mountains than frequent anglers (Table 11).

Fishing methods for the vast majority of anglers in Colorado (multiple choice) were spinning, spin casting, or bait casting (50%; n = 2,034), and fly fishing (38%). Ice fishing was identified as a method used for 8% of all respondents. Some of the least commonly reported methods were spearfishing, archery, slingbows, and minnow traps, which all were less than 1% of responses. Archery was reported to be used by seven respondents, spearfishing and minnow traps were only reported as used by one respondent each, and slingbows were not selected by any participants. Fly fishing was especially prevalent among non-residents, with 57% reporting (n = 475) using that method, compared to 32% (n = 1,561) among residents. When separated by angling activity groups, fly fishing was more common among infrequent anglers than among frequent anglers (Table 12). This is likely due to the high proportion of non-resident anglers that are categorized as infrequent anglers.

Table 11. Types of water fished in by angling activity groups ($n_{\text{frequent}}=1,127$; $n_{\text{moderate}}=1,309$; $n_{\text{infrequent}}=558$).

	Frequent anglers (n=1,127) Moderate anglers (n=1,309)		lers	Infrequent anglers (n=558)		
	n	%	n	%	n	%
Lakes or reservoirs at low elevations (<i>n</i> =585)	242	21%	260	20%	83	15%
Lakes or reservoirs in the mountains (<i>n</i> =929)	310	28%	421	32%	198	35%
Boatable and wadeable, large rivers (e.g. Arkansas River, South Platte River, Colorado River, etc.) (<i>n</i> =360)	157	14%	144	11%	59	11%
Smaller rivers or streams (non-boatable) at low elevations (<i>n</i> =277)	108	10%	114	9%	55	10%
Smaller rivers or streams in the mountains (<i>n</i> =657)	214	19%	300	23%	143	26%
Urban small ponds (e.g. City Park Lake) (n=186)	96	9%	70	5%	20	4%

When asked more specifically about the types of tackle used, flies were the most common among all responses (28%; n = 2,922), with lures being a close second (27%). Non-residents were more likely to use flies (47%; n = 556) than residents (24%; n = 2,366). Residents were also more likely to use live bait (19%) compared to non-residents (9%). Similar to fishing method, infrequent anglers were more likely to use flies (35%; n = 607) than the frequent angler group (Table 13). Among frequent anglers (n = 1,019), flies were reported by 25% of the respondents, the same as for lures. Moderate anglers reported using lures slightly more frequently than flies, whereas infrequent anglers reported using flies slightly more frequently than lures (Table 13).

Table 12. Methods of fishing used by angling activity groups

(nfrequent=675; nmoderate=851; ninfrequent=484).

	ang	luent lers 675)	Moderate anglers (n=851)		Infree ang (n=4		
	n	%	n	%	n	%	
Spinning, spin casting, or bait casting (<i>n</i> =1,013)	310	46%	452	53%	251	52%	
Fly fishing (<i>n</i> =761)	232	34%	321	38%	208	43%	
Ice Fishing (<i>n</i> =165)	100	15%	54	6%	11	2%	
Snagging (n=17)	10	1%	4	0%	3	1%	
Trot lines (<i>n</i> =23)	7	1%	9	1%	7	1%	
Jugs (n=10)	4	1%	5	1%	1	0%	
Spearfishing (<i>n</i> =1)	1	0%	0	0%	0	0%	
Archery (n=7)	4	1%	1	0%	2	0%	
Slingbows (n=0)	0	0%	0	0%	0	0%	
Other (Please specify) (n=13): Trolling (n=12) Minnow trap (n=1)	6 1	1% 0%	5 0	1% 0%	1 0	0% 0%	

Table 13. Types of tackle used while fishing by angling activity groups ($n_{\text{frequent}}=1,019$; $n_{\text{moderate}}=1,265$; $n_{\text{infrequent}}=607$).

	ang	uent lers ,019)	Mode ang	lers	Infree ang (n=6	lers
	n	%	n	%	n	%
Lures (<i>n</i> =770)	257	25%	370	29%	143	24%
Flies (<i>n</i> =812)	251	25%	350	28%	211	35%
Live bait (<i>n</i> =491)	183	18%	213	17%	95	16%
Artificial bait (<i>n</i> =506)	200	20%	207	16%	99	16%
Combination lures/flies and bait (n=309)	127	12%	124	10%	58	10%
Other (Please specify) (<i>n</i> =2): Human food (<i>n</i> =2)	1	0%	1	0%	0	0%

Fishing Experiences

Overall, anglers (n = 1,435) were satisfied with their fishing experiences in 2019, with 36% reporting they were very satisfied, 36% reporting they were somewhat satisfied, 15% reporting they were neither satisfied nor dissatisfied, 10% reporting they were somewhat dissatisfied, and only 4% reporting they were very dissatisfied. This satisfaction rate is very similar to the previous survey, in which 39% (n = 1,299) of respondents reported they were very satisfied, and 33% reporting they were somewhat satisfied (Lischka 2012). In this survey, non-residents were much more likely to report being very satisfied with their fishing experience (49%; n = 389) than resident anglers (31%; n = 1,046). When resident anglers were asked specific questions about satisfaction, they reported being very satisfied with number of fish caught (20%; n = 1,041), size of fish caught (15%; n = 1,022), variety of fish anglers could fish for (26%; n = 1,020), and availability of stocked fish (15%; n = 1,002). Among non-resident anglers, these rates were much higher for number of fish caught (37%; n = 390), size of fish caught (24%; n = 381), variety of fish anglers could fish for (34%; n = 379), and availability of stocked fish (23%; n = 363). Resident anglers were more likely to report being somewhat dissatisfied or very dissatisfied in response to these specific questions than were non-residents.

When broken down by angling frequency groups, the majority of individuals within all three angling groups reported being somewhat satisfied or very satisfied with the number of fish they caught, the size of fish they caught, and the variety of fish they could fish for (Table 14a; 14b; 14c). The largest proportion of individuals within all three angling groups reported being neither dissatisfied nor satisfied with the availability of stocked fish (Table 14a; 14b; 14c). There are also tendencies for infrequent anglers to be less satisfied with number of fish caught and variety fish.

Table 14. Satisfaction with various aspects of fishing experiences in Colorado.

Table 14a. Frequent anglers.

1 8										
		ery cisfied	Somewhat dissatisfied		Neither dissatisfied nor satisfied		Somewhat satisfied		Very satisfied	
	n	%	n	%	n	%	n	%	n	%
The number of fish you caught (n=401)	22	5%	59	15%	61	15%	144	36%	115	29%
The size of fish you caught (n=400)	19	5%	59	15%	101	25%	141	35%	80	20%
The variety of fish you could fish for (<i>n</i> =401)	14	3%	38	9%	91	23%	127	32%	131	33%
The availability of stocked fish (n=394)	24	6%	47	12%	156	40%	92	23%	75	19%

Table 14b. Moderate anglers.

	Ve dissat	ery cisfied		ewhat tisfied	dissat	ther tisfied tisfied		ewhat sfied	Very satisfied	
	n	%	n	%	n	%	n	%	n	%
The number of fish you caught (n=611)	50	8%	106	17%	113	18%	203	33%	139	23%
The size of fish you caught (n=600)	32	5%	102	17%	148	25%	217	36%	101	17%
The variety of fish you could fish for (<i>n</i> =596)	21	4%	53	9%	168	28%	184	31%	170	29%
The availability of stocked fish (n=581)	28	5%	67	12%	248	43%	140	24%	98	17%

Table 14c. Infrequent anglers.

		ery tisfied	Somewhat dissatisfied		Neither dissatisfied nor satisfied			ewhat sfied	Very satisfied	
	n	%	n	%	n	%	n	%	n	%
The number of fish you caught (n=403)	46	11%	72	18%	85	21%	107	27%	93	23%
The size of fish you caught (n=388)	31	8%	58	15%	116	30%	121	31%	62	16%
The variety of fish you could fish for (<i>n</i> =388)	18	5%	30	8%	124	32%	130	34%	86	22%
The availability of stocked fish (n=376)	23	6%	39	10%	177	47%	79	21%	58	15%

When asked about crowding, responses among residents and non-residents were quite different. A total of 29% (n = 989) of resident anglers reported feeling somewhat to very crowded by fishing guides, while this was reported by only 16% (n = 72) of non-resident anglers. Resident anglers were also more likely to report feeling crowded by other anglers (68%; n = 1,029) than were non-resident anglers (42%; n = 386). A total of 58% (n = 1,016) of resident anglers reported being somewhat to very crowded by boaters, kayakers, or other non-angling recreationists, while this rate was 25% (n = 368) among non-residents. When reported by angling frequency group, differences in responses were also observed, with more frequent anglers reporting feeling more crowded than infrequent anglers (Table 15). Moderate and infrequent anglers more frequently reported they felt the waters were not at all crowded with fishing guides, other anglers, or non-angling recreationists (Table 15b; 15c). These rates of reported crowding were consistent with a large number of angler comments reflecting frustration about crowding issues when angling.

Table 15. Reported level of crowding with various people/groups of people while fishing in Colorado.

Table	15a.	Frequent	anglers.
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	Not at all crowded		Somewhat crowded		Moderately crowded		Very crowded	
	n	%	n	%	n	%	n	%
Fishing guides (<i>n</i> =386)	253	66%	70	18%	41	11%	22	6%
Other anglers (<i>n</i> =396)	88	22%	144	36%	118	30%	46	12%
Boaters, kayakers or other non-angling recreationists (<i>n</i> =396)	113	29%	113	29%	94	24%	76	19%

Table 15b. Moderate anglers.

	Not at all crowded		Somewhat crowded		Mode crov	·	Very crowded		
	n	%	n	%	n	%	n	%	
Fishing guides (<i>n</i> =582)	442	76%	84	14%	48	8%	8	1%	
Other anglers (n=604)	237	39%	218	36%	118	20%	31	5%	
Boaters, kayakers or other non-angling recreationists (<i>n</i> =594)	318	54%	127	21%	107	18%	42	7%	

Table 15c. Infrequent anglers.

	Not at all crowded			Somewhat crowded		rately vded	Very crowded		
	n	%	n	%	n	%	n	%	
Fishing guides (<i>n</i> =379)	317	84%	40	11%	17	4%	5	1%	
Other anglers (<i>n</i> =399)	233	58%	106	27%	44	11%	16	4%	
Boaters, kayakers or other non-angling recreationists (<i>n</i> =380)	271	71%	63	17%	36	9%	10	3%	

Angling Preferences and Colorado's Fish Hatcheries

Hatchery preferences are an important part of this survey, as CPW intends to continue to improve and direct hatchery production based on angler preferences. Prioritization was broken down into coldwater and warmwater fish categories. For coldwater species of fish, anglers prioritized rainbow trout (28%), brown trout (23%), brook trout (15%) and native cutthroat trout (15%) over other species. When broken down by angler frequency type, similar patterns occurred, with the largest proportion of frequent and moderate anglers reporting they would prefer CPW prioritize production and stocking of rainbow trout, followed by brown trout, and native cutthroat trout (Table 17). The largest proportion of infrequent anglers reported they would prefer CPW prioritize the production and stocking of rainbow trout, followed by brown trout, and brook trout (Table 17). For warm/cool water species of fish, walleye/sauger tied with largemouth/smallmouth bass; both species groups were preferred by 23% of anglers overall. When broken down by angling frequency, all three groups of anglers most frequently reported that among warm and coolwater fish, they would prefer CPW prioritize the production and stocking of walleye/sauger, largemouth/smallmouth bass, and wiper/white/striped bass (Table 18). The result for warmwater preferences is interesting, as some vocal anglers have expressed strong opinions in favor of more walleye stocking. These results suggest that large and smallmouth bass are just as important to anglers in Colorado as walleye and sauger. One minor trend is that resident and more frequent anglers appear to give preference to walleye and sauger over largemouth as smallmouth bass, whereas the opposite is true for less frequent and nonresident anglers.

CPW strives to provide a variety of quality angling experiences, and fish production is a large part of that effort. These results show that while the most preferred species in both coldwater and warmwater categories are consistent with current CPW production goals, additional production capacity for these species, as well as the less-referred species, may be necessary in the long-term.

When asked about the priority CPW should place in its hatchery program related to size or number of fish, a plurality of respondents reported CPW should place moderate priority on striking a balance between the size and number of fish they could catch, with 39% (n = 1,021) of residents and 34% of nonresidents (n = 362) responding in this manner. When broken down by angler frequency group, the results were similar (Table 19). Anglers overall also felt neutral about placing a priority on maximizing the average size of the fish they could catch, even if it decreases the number of fish they might catch. They also appeared neutral about maximizing the number of fish they could catch, even if this decreased the average size of the fish they might catch. However, the tendency of the responses seem to favor increasing size of fish as opposed to numbers among more frequent anglers (Table 19a; 19b; 19c).

Table 17. Coldwater species of fish individuals would prefer CPW prioritize in terms of stocking and production in Colorado by angling activity groups ($n_{\text{frequent}}=1,050$; $n_{\text{moderate}}=1,609$; $n_{\text{infrequent}}=985$).

	ang	luent lers ,050)	ang	erate lers ,609)	Infrequent anglers (n=985)	
	n %		n	%	n	%
Rainbow trout (<i>n</i> =1,020)	265	25%	466	29%	289	29%
Brook trout (<i>n</i> =555)	142	14%	232	14%	181	18%
Brown trout (<i>n</i> =820)	226	22%	366	23%	228	23%
Tiger trout (<i>n</i> =125)	52	5%	50	3%	23	2%
Arctic char (<i>n</i> =49)	23	2%	16	1%	10	1%
Native cutthroat trout (<i>n</i> =541)	161	15%	247	15%	133	14%
Lake trout (<i>n</i> =277)	90	9%	125	8%	62	6%
Kokanee salmon (<i>n</i> =231)	80	8%	96	6%	55	6%
Splake (n=26)	11	1%	11	1%	4	0%

Table 18. Warm/cool water species of fish individuals would prefer CPW prioritize in terms of stocking and production in Colorado by angling activity groups (n_{frequent} =823; n_{moderate} =1,034; $n_{\text{infrequent}}$ =610).

	ang	luent lers 823)	ang	erate lers ,034)	Infrequent anglers (n=610)	
	n %		n	%	n	%
Walleye/Sauger (n=558)	199	24%	226	22%	133	22%
Wiper, white or striped bass (n=339)	108	13%	151	15%	80	13%
Yellow perch (<i>n</i> =155)	53	6%	61	6%	41	7%
Largemouth, smallmouth bass (n=556)	172	21%	242	23%	142	23%
Northern pike, Tiger musky (<i>n</i> =259)	86	10%	121	12%	52	9%
Bluegill (<i>n</i> =147)	41	5%	62	6%	44	7%
Crappie (<i>n</i> =268)	102	12%	98	9%	68	11%
Catfish (channel, flathead, blue) (n=172)	55	7%	71	7%	46	8%
Carp (<i>n</i> =13)	7	1%	2	0%	4	1%

Table 19. Level of priority respondents reported CPW's hatchery program should place on various production and stocking decisions.

Table 19a. Frequent anglers.

	Not a priority			Low priority Neut		ıtral 📗 🗀				ential iority	
	n	%	n	%	n	%	n	%	n	%	
Striking a balance between the size of fish I could catch and the number of fish I could catch (<i>n</i> =396)	22	6%	21	5%	124	31%	145	37%	84	21%	
Maximizing the average size of the fish I could catch, regardless if it decreases the number of fish I might catch (<i>n</i> =395)	54	14%	55	14%	136	34%	107	27%	43	11%	
Maximizing the number of fish I could catch, regardless if this decreases the average size of the fish I might catch (n=394)	61	15%	92	23%	153	39%	64	16%	24	6%	

Table 19b. Moderate anglers.

	Not a priority			Low priority No		Neutral		Moderate priority		Essential priority	
	n	%	n	%	n	%	n	%	n	%	
Striking a balance between the size of fish I could catch and the number of fish I could catch (<i>n</i> =591)	20	3%	26	4%	180	30%	228	39%	137	23%	
Maximizing the average size of the fish I could catch, regardless if it decreases the number of fish I might catch (<i>n</i> =592)	47	8%	117	20%	244	41%	142	24%	42	7%	
Maximizing the number of fish I could catch, regardless if this decreases the average size of the fish I might catch (<i>n</i> =588)	66	11%	126	21%	242	41%	116	20%	38	6%	

Table 19c. Infrequent anglers.

	Not a priority			Low priority		Neutral		Moderate priority		Essential priority	
	n	%	n	%	n	%	n	%	n	%	
Striking a balance between the size of fish I could catch and the number of fish I could catch (<i>n</i> =381)	22	6%	15	4%	120	31%	146	38%	78	20%	
Maximizing the average size of the fish I could catch, regardless if it decreases the number of fish I might catch (<i>n</i> =380)	45	12%	77	20%	148	39%	91	24%	19	5%	
Maximizing the number of fish I could catch, regardless if this decreases the average size of the fish I might catch (<i>n</i> =380)	47	12%	73	19%	155	41%	87	23%	18	5%	

Staying Informed About Fishing in Colorado

When asked how they currently receive information about fishing or fishing management in Colorado, anglers most commonly reported word of mouth as the mechanism (22%; n = 3,032) followed by the Colorado Parks and Wildlife website (17%). When broken down by angling frequency category, individuals within all three angling groups also most frequently reported receiving information or staying informed about fishing/fishing management in Colorado through word of mouth from a friend/family member (Table 20). For frequent and moderate anglers, the CPW website and fishing regulations brochures were the next most frequently reported methods for staying informed about fishing in Colorado (Table 20). The most common response to the question about how anglers would like to communicate with Colorado Parks and Wildlife about fishery management issues of opportunities was e-mail (39%; n = 1,116).

Table 20. How individuals currently receive information or stay informed about fishing or fishery management in Colorado by angling activity groups ($n_{\text{frequent}}=1,036$; $n_{\text{moderate}}=1,285$; $n_{\text{infrequent}}=679$).

	a	requent nglers =1,036)	a	oderate inglers =1,285)	a	frequent inglers n=679)
	n	%	n	%	n	%
Social media (e.g. Facebook, Twitter, Instagram) (<i>n</i> =225)	98	9%	85	7%	42	6%
Colorado Parks and Wildlife website (https://cpw.state.co.us/) (n=522)	193	19%	234	18%	95	14%
Online searches (e.g., Google, Explorer, Safari, etc.) (<i>n</i> =378)	124	12%	169	13%	85	13%
TV/Radio (n=61)	26	3%	24	2%	11	2%
Outdoor magazines (e.g., Field & Stream, Outdoor Life, Colorado Outdoors) (<i>n</i> =175)	58	6%	78	6%	39	6%
Local newspapers (n=95)	38	4%	38	3%	19	3%
Word of mouth (from a friend/family member) (<i>n</i> =671)	214	21%	287	22%	170	25%
Fishing regulations brochures (<i>n</i> =323)	111	11%	153	12%	59	9%
Colorado Parks and Wildlife E- newsletter (<i>n</i> =66)	24	2%	26	2%	16	2%
Colorado Parks and Wildlife public meetings (<i>n</i> =11)	6	1%	4	0%	1	0%
Fishing App (<i>n</i> =112)	54	5%	49	4%	9	1%
Online Fishing Atlas (<i>n</i> =38)	18	2%	17	1%	3	0%
I do not stay informed about fishing opportunities in Colorado (<i>n</i> =246)	46	4%	91	7%	109	16%
Other (<i>n</i> =77):	26	3%	30	2%	21	3%

Demographics of Anglers

This angler survey also collected demographic information to help further inform CPW about the client base of anglers we currently serve, and to help project future preferences and trends. Average age of survey respondents was 55 years (n = 1,423), and ranged from 18-90 years. This was similar among residents and non-residents. Gender reported was 80% male and 20% female (n = 1,430). This ratio of males to females was relatively consistent across license types, with the exception of combo resident licenses and annual non-resident licenses, which were purchased overwhelmingly by male anglers (Table 21).

Table 21. Gender by purchased license type ($n_{\text{annual resident}} = 650$; $n_{\text{senior resident}} = 253$; n_{combo} resident = 190; $n_{\text{annual non-resident}} = 87$; $n_{\text{five-day non-resident}} = 209$; $n_{\text{one-day non-resident}} = 112$).

	Ann resid (n=65	ent	Senior resident (n=253)		Combo resident (n=190)		Annual non- resident (n=87)		Five-day non- resident (n=209)		One-day non- resident (n=112)	
	n	%	n	%	n	%	n	%	n	%	n	%
Male (n=1,215)	499	77%	199	79%	180	95%	79	91%	168	80%	90	80%
Female (n=286)	151	23%	54	21%	10	5%	8	9%	41	20%	22	20%

Colorado's population is projected to grow and change over the next 30 years, likely leading to an increase in angling pressure throughout the state and a shift in angling preference and behavior. Understanding how Colorado's population will change over the next few years and the influence it may have on angling demands, will help CPW determine and develop appropriate long-term fishery and aquatic management plans.

Using projections from the Colorado State Demographer's Office, Colorado's population will continue to grow to roughly eight million people through the year 2050 (Figure 1). It is predicted that the majority of Colorado's population will remain along the Front Range (84%) and the Western Slope (11%) (Figure 2). We are expected to see a shift towards an older population in Colorado, with nearly double the proportion of Coloradans aged 65 years and older, and a slight decrease in the proportion of Coloradans in the 18-44, and 45-64 age ranges (Figure 3).

Figure 1. Projected change in Colorado's population and growth rate (1970-2050). Colorado is projected to reach over eight million people by the year 2050. Growth rate is predicted to slightly decline over the next few decades.

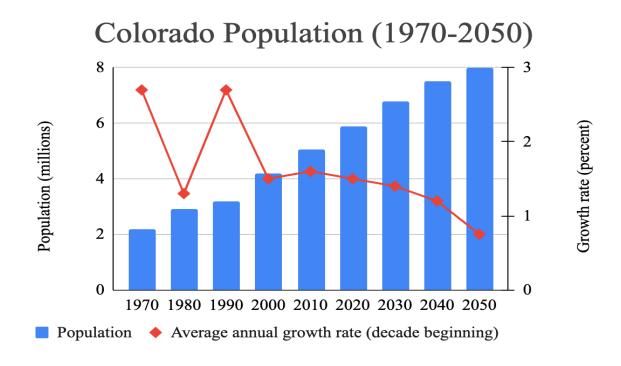


Figure 2. Population distribution throughout the state of Colorado in 2010 compared to the projected population distribution in 2050. The majority of Coloradans currently reside along the Front Range and Western Slope and are predicted to remain in a similar distribution by the year 2050.

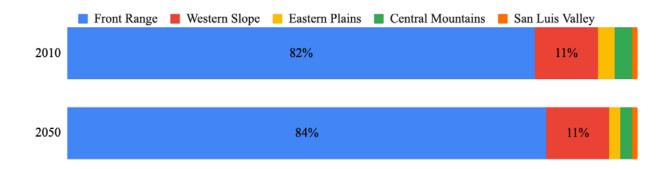
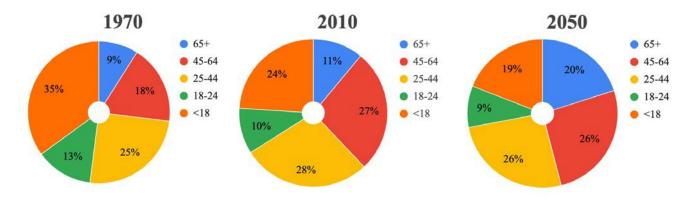


Figure 3. Age structure for the state of Colorado in 1970, 2010, and projected age structure in 2050. Colorado is projected to continue to shift towards a population composed of an increasingly larger proportion of older individuals and a smaller proportion of youth and young adults.



Age Group Preferences

Responses to questionnaires were stratified into three age groups; ages 18-44, 45-64, and 65 or older, and reported where pertinent differences occurred between groups. This breakdown was used to mirror categories listed in the state demographer's data above. We are expected to see a shift towards an older population in Colorado, with nearly double the proportion of Coloradans aged 65 years and older, and a slight decrease in the proportion of Coloradans in the 18-44, and 45-64 age ranges (Figure 3). Individuals within all three age groups most frequently reported having purchased a license within each of the last five years (Table 22). However, a smaller proportion of individuals within the 18-44 age group reported having purchased a license within each of the last 5 years compared to individuals within the 45-64 and 65-90 age groups. On

average, individuals in the 18-44 age group fished the most number of days (18 days) in 2019, compared to individuals in the 45-64 (15 days) and 65-90 age groups (15 days) (Table 23). Larimer and Park County were the most frequently listed counties fished in 2019 for individuals in all three age groups (Table 24). On average, individuals in the 18-44 age group spent the largest number of days fishing in Pueblo County (14 days), and individuals in the 45-64 and 65-90 age group spent the largest number of days fishing in Larimer County (11 days; 13 days) (Table 24). This may indicate an increase in angling pressure in Larimer County by older generations, as Colorado's population continues to change. Individuals in the 18-44 age group were more likely to report they expected an increase in the number of days they would fish in 2020 (Table 25). Whereas, individuals in the 45-64 and 65-90 age groups were more likely to report they expected to fish the same number of days in 2020.

Table 22. Frequency of purchasing a Colorado fishing license in the last 5 years by age group ($n_{18-44}=364$; $n_{45-64}=588$; $n_{65-90}=468$).

	gro	4 age oup 364)	gro	4 age oup 588)	gro	0 age oup 468)
	n	%	n	%	n	%
In each of the last 5 years (n=836)	152	42%	360	61%	324	69%
In 4 of the last 5 years (n=114)	41	11%	39	7%	34	7%
In 2 or 3 of the last 5 years (n=279)	108	30%	106	18%	65	14%
Once in the last 5 years (<i>n</i> =191)	63	17%	83	14%	45	10%

Table 23. Days fished in Colorado by age group $(n_{18-44}=364; n_{45-64}=585; n_{65-90}=457)$.

	18-4	14 age gr (n=364)	oup	45-0	64 age gr (n=585)	oup	65-9	00 age gr (n=457)	oup
	n	x	range	n	x	range	n	x	range
Days fished (n=1,406)	364	18	1-250	585	15	1-200	457	15	1-216

Table 24. Top five reported counties fished in 2019 by age group (n_{18-44} =310; n_{45-64} =342; n_{65-90} =226).

	18-44 age group (n=310)			45-0	64 age (n=34	group 2)	65-90 age group (n=226)		
	n	X	range	n	X	range	n	X	range
Grand County (<i>n</i> =128)	32	6	1-15	62	8	1-50	34	8	1-30
Jefferson County (<i>n</i> =148)	44	10	1-60	68	7	1-50	36	7	1-45
Larimer County (<i>n</i> =210)	55	10	1-175	95	11	1-125	60	13	1-211
Park County (n=206)	51	4	1-25	86	9	1-60	69	7	1-50
Pueblo County (<i>n</i> =84)	26	14	1-75	31	10	1-71	27	10	1-70

Table 25. Expected change in the number of days spent fishing in 2020 compared to 2019 by age group ($n_{18-44}=364$; $n_{45-64}=584$; $n_{65-90}=458$).

		ge group 364)		ge group 584)	65-90 age group (n=458)		
	n	%	n	%	n	%	
More days (n=487)	149	41%	209	36%	129	28%	
About the same (<i>n</i> =561)	129	35%	242	41%	190	41%	
Fewer days (n=149)	43	12%	50	9%	56	12%	
I am not sure (n=209)	43	12%	83	14%	83	18%	

Individuals within the 18-44, 45-64, and 65-90 age groups generally seem to have similar fishing preferences. An interesting pattern was observed in the response to the question regarding keeping fish. Among all three age groups, the greatest proportion of individuals reported having released all or nearly all of the fish they caught, but this tendency was much more common among the younger age groups, who also reported keeping fish less often in general than the older age groups (Table 26).

Table 26. Approximated percentage of fish released back into the water by age group $(n_{18-44}=357; n_{45-64}=577; n_{65-90}=454)$.

	18-44 age group group (n=357) (n=577)			oup	65-90 age group (n=454)		
	n	%	n	%	n	%	
None (I kept all or nearly all of the fish that I legally could keep) (<i>n</i> =140)	26	7%	45	8%	69	15%	
I released less than half of the fish I caught (less than 50%) (n=159)	31	9%	61	11%	67	15%	
I released more than half of the fish I caught (more than 50%) (<i>n</i> =218)	49	14%	94	16%	75	17%	
I released all or nearly all of the fish I caught (about 100%) (n=871)	251	70%	377	65%	243	54%	

The largest proportion of individuals within all three age groups reported having targeted rainbow trout, followed by brown trout and brook trout, which was very similar to these results as broken down by residency or angling frequency (Table 27). Similarly, for all three age groups, lakes or reservoirs in the mountains were the most frequently reported body of water fished, followed by smaller rivers or streams in the mountains (Table 28). Roughly half of the individuals within all three age groups reported they used spinning, spin casting, or bait casting for fishing, which was also consistent with the other categorizations evaluated (Table 29). Individuals within all three age groups most frequently reported using flies, followed by lures, as the type of tackle they used while angling (Table 30). Again, these results were consistent with angler classifications based on residency and angling frequency.

Table 27. Species of fish targeted by age group $(n_{18-44}=1,459; n_{45-64}=2,079; n_{65-90}=1,445).$

	18-44 age group group (n=1,459) (n=2,079)			oup	65-90 age group (n=1,445)		
	n	%	n	%	n	%	
Largemouth or smallmouth bass (<i>n</i> =282)	105	7%	109	5%	68	5%	
Channel, flathead or blue catfish (<i>n</i> =93)	36	2%	36	2%	21	1%	
Wiper, white or striped bass (<i>n</i> =105)	31	2%	52	3%	22	2%	
Walleye or sauger (<i>n</i> =223)	65	4%	104	5%	54	4%	
Bluegill or sunfish (<i>n</i> =124)	48	3%	44	2%	32	2%	
Yellow perch (<i>n</i> =67)	23	2%	28	1%	16	1%	
Crappie (<i>n</i> =137)	42	3%	55	3%	40	3%	
Brown trout (<i>n</i> =794)	211	14%	337	16%	246	17%	
Cutthroat trout (<i>n</i> =524)	161	11%	219	11%	144	10%	
Lake trout (<i>n</i> =373)	115	8%	153	7%	105	7%	
Rainbow trout (<i>n</i> =1,160)	288	20%	489	24%	383	27%	
Brook trout (<i>n</i> =587)	162	11%	245	12%	180	12%	
Kokanee salmon (<i>n</i> =128)	25	2%	61	3%	42	3%	
Northern pike or tiger musky (<i>n</i> =148)	45	3%	63	3%	40	3%	
Carp (<i>n</i> =49)	24	2%	18	1%	7	0%	
Any fish (I did not target a specific species/group) (<i>n</i> =169)	72	5%	58	3%	39	3%	
Other (Please specify) (<i>n</i> =20)	6	0%	8	0%	6	0%	

Table 28. Types of water fished in by age group (n_{18-44} =869; n_{45-64} =1,228; n_{65-90} =876).

	gro	4 age oup 869)	45-64 gro (n=1		65-90 age group (n=876)	
	n	%	n	%	n	%
Lakes or reservoirs at low elevations (<i>n</i> =582)	169	19%	238	19%	175	20%
Lakes or reservoirs in the mountains (<i>n</i> =922)	240	28%	385	31%	297	34%
Boatable and wadeable, large rivers (e.g. Arkansas River, South Platte River, Colorado River, etc.) (<i>n</i> =358)	103	12%	140	11%	115	13%
Smaller rivers or streams (non-boatable) at low elevations (<i>n</i> =271)	92	11%	103	8%	76	9%
Smaller rivers or streams in the mountains $(n=655)$	182	21%	291	24%	182	21%
Urban small ponds (e.g. City Park Lake) (n=185)	83	10%	71	6%	31	4%

Table 29. Methods of fishing used by age group ($n_{18-44}=542$; $n_{45-64}=818$; $n_{65-90}=639$).

	18-44 ag	, ,		ge group 818)		ge group 639)
	n	%	n	%	n	%
Spinning, spin casting, or bait casting (<i>n</i> =1,004)	268	49%	408	50%	328	51%
Fly fishing (<i>n</i> =758)	207	38%	302	37%	249	39%
Ice Fishing (<i>n</i> =164)	48	9%	79	10%	37	6%
Snagging (n=17)	4	1%	7	1%	6	1%
Trot lines (<i>n</i> =24)	9	2%	8	1%	7	1%
Jugs (<i>n</i> =11)	2	0%	5	1%	4	1%
Spearfishing (<i>n</i> =1)	0	0%	1	0%	0	0%
Archery (n=7)	4	1%	2	0%	1	0%
Slingbows (<i>n</i> =0)	0	0%	0	0%	0	0%
Other (Please specify) (<i>n</i> =13)	0	0%	6	1%	7	1%

Table 30. Types of tackle used while fishing by age group ($n_{18-44}=794$; $n_{45-64}=1,208$; $n_{65-90}=875$).

		ge group 794)	45-64 as	ge group ,208)	65-90 age group (n=875)	
	n	%	n	%	n	%
Lures (<i>n</i> =771)	206	26%	324	27%	241	28%
Flies (<i>n</i> =810)	219	28%	331	27%	260	30%
Live bait (<i>n</i> =489)	142	18%	202	17%	145	17%
Artificial bait (<i>n</i> =503)	145	18%	217	18%	141	16%
Combination lures/flies and bait (<i>n</i> =302)	81	10%	133	11%	88	10%
Other (<i>n</i> =2)	1	0%	1	0%	0	0%

Overall, individuals within the 18-44 age group seem to be more satisfied with their angling experiences in Colorado compared to individuals in the 45-64 and 65-90 age groups (Table 31). Of all the various aspects of fishing experiences in Colorado, individuals within all three age groups seem to be least satisfied with the availability of stocked fish (Table 32). Individuals within all three age groups were more likely to report waters being not at all or somewhat crowded with fishing guides, other anglers, and boaters and other non-angling recreationists, although the 18-44 age group was less likely to report being not at all crowded than the other two age groups (Table 33). For individuals in the 18-44 and 45-64 age groups, rainbow, brown, and native cutthroat trout were the most frequently reported coldwater species of fish individuals would prefer CPW prioritize in terms of stocking and production in Colorado (Table 34). Native cutthroat trout were notably reported more often among the 18-44 age group. Rainbow, brown, and brook trout were the most frequently reported species for the 65-90 age group. For warm/cool water species of fish, individuals within the 18-44 and 45-64 age group most frequently reported prioritizing stocking and production of largemouth/smallmouth bass, walleye/sauger, and wiper/white/striped bass (Table 35). Walleye/sauger, largemouth/smallmouth bass, and crappie were the most frequently reported species for the 65-90 age group. With a forecasted increase in the number and proportion of individuals aged 65 and older, we can expect to see an increase in the demand for rainbow trout, brown trout, brook trout, walleye/sauger, largemouth/smallmouth bass, and crappie over the next few years. However, if CPW wants to focus on appealing to the preferences of the younger anglers to increase recruitment, it appears that a shift to native cutthroat trout may also be desirable.

Table 31. Overall satisfaction with angling experiences in Colorado by age group ($n_{18-44=363}$; $n_{45-64=585}$; $n_{65-90=464}$).

		ge group 363)	_	ge group 585)	65-90 age group (n=464)	
	n	%	n	%	n	%
Very dissatisfied (<i>n</i> =55)	5	1%	24	4%	26	6%
Somewhat dissatisfied (<i>n</i> =136)	27	7%	65	11%	44	9%
Neither dissatisfied nor satisfied (n=206)	51	14%	78	13%	77	17%
Somewhat satisfied (<i>n</i> =502)	130	36%	213	36%	159	34%
Very satisfied (<i>n</i> =513)	150	41%	205	35%	158	34%

Table 32. Satisfaction with various aspects of fishing experiences in Colorado.

Table 32a. 18-44 age group.

		ery cisfied	Somewhat dissatisfied		Neither dissatisfied nor satisfied		Somewhat satisfied		Very satisfied	
	n	%	n	%	n	%	n	%	n	%
The number of fish you caught (n=363)	22	6%	59	16%	67	18%	114	31%	101	28%
The size of fish you caught (n=358)	18	5%	46	13%	106	30%	123	34%	65	18%
The variety of fish you could fish for (<i>n</i> =360)	8	2%	42	12%	103	29%	105	29%	102	28%
The availability of stocked fish (n=356)	14	4%	46	13%	148	42%	84	24%	64	18%

Table 32b. 45-64 age group.

		ery tisfied		Somewhat lissatisfied		Neither dissatisfied nor satisfied		ewhat sfied	Very satisfied	
	n	%	n	%	n	%	n	%	n	%
The number of fish you caught (n=585)	46	8%	103	18%	100	17%	199	34%	137	23%
The size of fish you caught (n=579)	30	5%	102	18%	154	27%	185	32%	108	19%
The variety of fish you could fish for (<i>n</i> =577)	24	4%	37	6%	163	28%	194	34%	159	28%
The availability of stocked fish (n=567)	29	5%	56	10%	267	47%	126	22%	89	16%

Table 32c. 65-90 age group.

		ery tisfied	Somewhat dissatisfied		Neither dissatisfied nor satisfied		Somewhat satisfied		Very satisfied	
	n	%	n	%	n	%	n	%	n	%
The number of fish you caught (n=460)	46	10%	71	15%	93	20%	140	30%	110	24%
The size of fish you caught (n=443)	31	7%	71	16%	103	23%	169	38%	69	16%
The variety of fish you could fish for (<i>n</i> =440)	19	4%	41	9%	117	27%	137	31%	126	29%
The availability of stocked fish (n=421)	33	8%	48	11%	164	39%	100	24%	76	18%

Table 33. Reported level of crowding with various people/groups of people while fishing in Colorado.

Table 33a. 18-44 age group.

	Not at all crowded		Somewhat crowded		Mode crov	rately vded	Very crowded		
	n	%	n	%	n	%	n	%	
Fishing guides (<i>n</i> =355)	253	71%	59	17%	33	9%	10	3%	
Other anglers (<i>n</i> =362)	124	34%	124	34%	83	23%	31	9%	
Boaters, kayakers or other non-angling recreationists (<i>n</i> =361)	158	44%	88	24%	67	19%	48	13%	

Table 33b. 45-64 age group.

	Not at all crowded			Somewhat crowded		rately vded	Very crowded	
	n	%	n	%	n	%	n	%
Fishing guides (<i>n</i> =561)	418	75%	82	15%	43	8%	18	3%
Other anglers (<i>n</i> =577)	218	38%	197	34%	120	21%	42	7%
Boaters, kayakers or other non-angling recreationists (<i>n</i> =570)	279	49%	121	21%	113	20%	57	10%

Table 33c. 65-90 age group.

	Not at all crowded			Somewhat crowded		rately vded	Very crowded		
	n	%	n	%	n	%	n	%	
Fishing guides (<i>n</i> =428)	334	78%	53	12%	31	7%	10	2%	
Other anglers (<i>n</i> =455)	209	46%	145	32%	78	17%	23	5%	
Boaters, kayakers or other non-angling recreationists (<i>n</i> =434)	257	59%	93	21%	59	14%	25	6%	

Table 34. Coldwater species of fish individuals would prefer CPW prioritize in terms of stocking and production in Colorado by age groups (n_{18-44} =928; n_{45-64} =1,509; n_{65-90} =1,201).

	gro	4 age oup 928)	45-64 age group (<i>n</i> =1,509)		gro	0 age oup ,201)
	n	%	n	%	n	%
Rainbow trout (<i>n</i> =1,019)	226	24%	417	28%	376	31%
Brook trout (<i>n</i> =559)	132	14%	229	15%	198	16%
Brown trout (<i>n</i> =822)	184	20%	346	23%	292	24%
Tiger trout (<i>n</i> =121)	62	7%	43	3%	16	1%
Arctic char (n=50)	24	3%	16	1%	10	1%
Native Cutthroat trout (<i>n</i> =539)	164	18%	239	16%	136	11%
Lake trout (<i>n</i> =275)	65	7%	114	8%	96	8%
Kokanee salmon (<i>n</i> =229)	64	7%	97	6%	68	6%
Splake (n=24)	7	1%	8	1%	9	1%

Table 35. Warm/cool water species of fish individuals would prefer CPW prioritize in terms of stocking and production in Colorado by age groups ($n_{18-44}=733$; $n_{45-64}=985$; $n_{65-90}=743$).

	gro	4 age oup 733)	45-64 age group (n=985)		gro	0 age oup 743)
	n	%	n	%	n	%
Walleye/Sauger (n=561)	156	21%	235	24%	170	23%
Wiper, white or striped bass (<i>n</i> =338)	105	14%	135	14%	98	13%
Yellow Perch (<i>n</i> =153)	44	6%	67	7%	42	6%
Largemouth, smallmouth bass (n=554)	169	23%	222	23%	163	22%
Northern pike, Tiger musky (<i>n</i> =256)	97	13%	104	11%	55	7%
Bluegill (<i>n</i> =145)	35	5%	58	6%	52	7%
Crappie (<i>n</i> =269)	53	7%	105	11%	111	15%
Catfish (channel, flathead, blue) (n=171)	65	9%	57	6%	49	7%
Carp (<i>n</i> =14)	9	1%	2	0%	3	0%

Of the various production and stocking decisions managed by CPW's hatchery program, individuals within all three age groups were more likely to report CPW should place a higher priority on striking a balance between the size of fish individuals could catch and the number of fish they could catch (Table 36). This was also consistent with responses as delineated by residency and angler frequency groups.

Summary

Many of the responses to survey questions were consistent between residency, angler frequency type, and age categories. In general, angler participation continues to be high in Colorado, with a dedicated customer base, consisting of both residents and non-residents. Angler satisfaction also remains very high. Fishery management goals in Colorado align well with angler responses to questions related to angler preferences. The information obtained from this survey will help guide future hatchery and management goals.

Table 36. Level of priority respondents reported CPW's hatchery program should place on various production and stocking decisions.

Table 36a. 18-44 age group.

	Not a priority		Low priority N		Neu	Neutral		Moderate priority		Essential priority	
	n	%	n	%	n	%	n	%	n	%	
Striking a balance between the size of fish I could catch and the number of fish I could catch (<i>n</i> =359)	14	4%	19	5%	105	29%	136	38%	85	24%	
Maximizing the average size of the fish I could catch, regardless if it decreases the number of fish I might catch (<i>n</i> =358)	39	11%	89	25%	122	34%	83	23%	25	7%	
Maximizing the number of fish I could catch, regardless if this decreases the average size of the fish I might catch (n=357)	34	10%	79	22%	145	41%	69	19%	30	8%	

Table 36b. 45-64 age group.

	Not a priority			ow ority	Neur		Moderate priority		Essential priority	
	n	%	n	%	n	%	n	%	n	%
Striking a balance between the size of fish I could catch and the number of fish I could catch (<i>n</i> =566)	18	3%	19	3%	176	31%	219	39%	134	24%
Maximizing the average size of the fish I could catch, regardless if it decreases the number of fish I might catch (<i>n</i> =563)	50	9%	90	16%	223	40%	154	27%	46	8%
Maximizing the number of fish I could catch, regardless if this decreases the average size of the fish I might catch (<i>n</i> =561)	69	12%	117	21%	222	40%	118	21%	35	6%

Table 36c. 65-90 age group.

	Not a priority			ow ority	Neutral		Moderate priority		Essential priority	
	n	%	n	%	n	%	n	%	n	%
Striking a balance between the size of fish I could catch and the number of fish I could catch (<i>n</i> =440)	31	7%	23	5%	142	32%	163	37%	81	18%
Maximizing the average size of the fish I could catch, regardless if it decreases the number of fish I might catch (<i>n</i> =443)	54	12%	71	16%	181	41%	105	24%	32	7%
Maximizing the number of fish I could catch, regardless if this decreases the average size of the fish I might catch (<i>n</i> =441)	69	16%	92	21%	184	42%	79	18%	17	4%

References

Kowalski, D. 2021. Trends in Fishing License Sales in Colorado 2018-2020. Colorado Parks and Wildlife, Aquatic Research Section, Fort Collins, CO. 1pp.

Lischka, S. A. 2013. 2012 Angler Survey Technical Report. Colorado Parks and Wildlife, Research, Policy and Planning Branch. Denver, CO. 64 pp.

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APPENDIX A.

STATEWIDE SURVEY QUESTIONNAIRE WITH SUMMARY RESULTS BY RESIDENCY

Statewide Survey Exploring Angler's Perspectives About Fishing in Colorado







About This Questionnaire

Colorado Parks and Wildlife is conducting a study about anglers' experiences while fishing in Colorado. You are among a group of randomly selected anglers chosen to participate in this important questionnaire. Your opinion is important! Specifically, we want to hear **your perspectives** and **concerns** about fisheries management in Colorado.

Results from this study will be used by Colorado Parks and Wildlife to help make decisions about how to manage your fisheries in the future and they will also help us improve anglers' experiences.

Please complete this questionnaire as soon as you can, place it in the envelope (*return postage has been pre-paid*) and drop it in any mailbox. Just a few minutes of your time will truly help guide how CPW approaches fisheries management across the state. Participation in this survey is voluntary and your identity will be kept confidential. The information you give us will never be associated with your name.

THANK YOU FOR YOUR HELP!

Your Fishing Participation

- 1. Did you go fishing in Colorado in 2019? (Please check one.)
 - ☐ Yes (*Please CONTINUE to question 2*)
 - ☐ No (Please CONTINUE to question 1a)

	Resident (n=1,202)		Non-re	e sident 419)	Total (n=1,645)		
	n	%	n	%	n	%	
Yes	1,065	89%	399	95%	1,466	89%	
No	137	11%	20	5%	179	11%	

1a. Please select any of the following if they were reasons why you did not go fishing in 2019. (<i>Please check all that apply</i> .)
☐ I didn't know where to go ☐ I always purchase a license but don't always fish each year
☐ It was too crowded when I arrived☐ I have limited time due to work and family obligations
☐ I didn't have anyone to go with
The water was too high/low

	Resident (n=172)		Non-resident (n=22)		Total (n=221)	
	n	%	n	%	n	%
I didn't know where to go	4	2%	0	0%	4	2%
I always purchase a license but don't always fish each year	83	48%	3	14%	99	45%
It was too crowded when I arrived	2	1%	1	5%	4	2%
I have limited time due to work and family obligations	46	27%	7	32%	58	26%
I didn't have anyone to go with	8	5%	2	9%	11	5%
The water was too high/low	3	2%	1	5%	4	2%
Other (Please specify): Medical/personal reasons Not interested Access limited/too far Cost	11 10 3 2	6% 6% 2% 1%	5 0 1 2	23% 0% 4% 9%	17 14 5 5	8% 6% 2% 2%



Thank you so much for your time! Please place the survey in the postage-paid envelope and place it in any mailbox.

2. Please indicate how often you purchased a fishing license in Colorado during the last 5 years. (*Please check one.*)

I purchased a fishing license
in each of the last 5 years
in 4 of the last 5 years
in 2 or 3 of the last 5 years
once in the last 5 years

	Resident (<i>n</i> =1,061)			esident 397)	Total (n=1,458)		
	n	%	n	%	n	%	
In each of the last 5 years	733	69%	116	29%	849	58%	
In 4 of the last 5 years	97	9%	21	5%	118	8%	
In 2 or 3 of the last 5 years	180	17%	112	28%	292	20%	
Once in the last 5 years	51	5%	148	37%	199	14%	

3	. Which of the following types of fishing licenses did you purchase in Colorado in 2019? (<i>Please check all that apply</i> .)
	Annual, resident fishing license
	One day, resident fishing license
	☐ Senior, annual resident fishing license
	Resident, combination small game hunting and fishing license
	☐ Annual, non-resident fishing license
	☐ Five day, non-resident fishing license
	☐ Non-resident, free (by purchase of big game license)
	☐ One day, non-resident
	Other (<i>Please specify</i>):

		dent ,177)		esident 468)		otal 1,645)
	n	%	n	%	n	%
Annual, resident fishing license	651	55%	11	2%	662	40%
One day, resident fishing license	50	4%	24	5%	74	4%
Senior, annual resident fishing license	253	21%	3	1%	256	16%
Resident, combination small game hunting and fishing license	193	16%	0	0%	193	12%
Annual, non-resident fishing license	4	0%	84	18%	88	5%
Five day, non-resident fishing license	3	0%	213	46%	216	13%
Non-resident, free (by purchase of big game license)	1	0%	3	1%	4	0%
One day, non-resident	2	0%	114	24%	116	7%
Other (Please specify): Additional days 2nd rod stamp Lifetime handicap	4 15 1	0% 1% 0%	15 1 0	3% 0% 0%	19 16 1	1% 1% 0%

4. Approximately how many **days in total** did you fish in Colorado in 2019? (*Please write in the number of days below.*)

DAYS FISHED

Resident			N	Non-resident				Total		
	(n=1,051)			(n=393)			(n=1,444)			
n	x	range	n	x	range	n	x	range		
1,051	20	1-250	393	5	1-48	1,444	16	1-250		

5. Approximately how many fishing trips did you take in Colorado in 2019? (*Please count each fishing trip*, no matter how long it was [one day or several days] as one trip.)

TRIPS

	Resident (<i>n</i> =1,024)		N	Non-residen (n=390)	ıt	Total (n=1,414)			
n	x	range	n	х	range	n	х	range	
1,024	14	0-225	390	3	1-130	1,414	11	0-225	

6. On average, approximately how many miles did you travel for each trip (<u>one way</u>) to go fishing in Colorado in 2019?

____MILES

Resident			N	lon-reside	ıt	Total			
	(n=1,044)		(n=383) (n=1,427)						
n	x	range	n	x	range	n	x	range	
1,043	62	0-900	383	503	1-4,000	1,427	182	0-4,000	

- 7. Did you fish in a Colorado State Park during 2019? (*Please checkone*.)
 - ☐ Yes (CONTINUE to question 7a)

 \bigcap No

☐ I am not sure (SKIP to question 8)

		dent ,048)		esident 392)	Total (n=1,440)		
	n	%	n	%	n	%	
Yes	510	49%	68	17%	578	40%	
No	441	42%	259	66%	700	49%	
I am not sure	97	9%	65	17%	162	11%	

7a. Please list the Colorado State Parks you fished at in 2019.

		dent		esident	Total (n=1,220)		
	(<i>n</i> =1	,116)	`	104)		,220)	
	n	%	n	%	n	%	
Arkansas Headwaters	10	1%	0	0%	10	1%	
Barr Lake	19	2%	0	0%	19	2%	
Boyd Lake	42	4%	2	2%	44	4%	
Castlewood Canyon	0	0%	0	0%	0	0%	
Chatfield	91	8%	2	2%	93	8%	
Cherry Creek	50	4%	0	0%	50	4%	
Cheyenne Mountain	1	0%	0	0%	1	0%	
Crawford	8	1%	0	0%	8	1%	
Eldorado Canyon	2	0%	0	0%	2	0%	
Eleven Mile	106	9%	4	4%	110	9%	
Elkhead	4	0%	0	0%	4	0%	
Fishers Peak	0	0%	0	0%	0	0%	
Golden Gate Canyon	17	2%	2	2%	19	2%	
Harvey Gap	3	0%	1	1%	4	0%	
Highline Lake	7	1%	0	0%	7	1%	
Jackson Lake	24	2%	1	1%	25	2%	
James M. Robb	17	2%	0	0%	17	1%	
John Martin Reservoir	17	2%	0	0%	17	1%	
Lake Pueblo	89	8%	1	1%	90	7%	
Lathrop	19	2%	2	2%	21	2%	

T 34	Δ.	00/		00/	0	00/
Lone Mesa	0	0%	0	0%	0	0%
Lory	4	0%	0	0%	4	0%
Mancos	5	0%	2	2%	7	1%
Mueller	2	0%	0	0%	2	0%
Navajo	4	0%	0	0%	4	0%
North Sterling	7	1%	1	1%	8	1%
Paonia	0	0%	0	0%	0	0%
Pearl Lake	8	1%	1	1%	9	1%
Ridgway	23	2%	5	5%	28	2%
Rifle Falls	2	0%	1	1%	3	0%
Rifle Gap	12	1%	2	2%	14	1%
Roxborough	1	0%	0	0%	1	0%
Spinney Mountain	40	4%	2	2%	42	3%
St. Vrain	26	2%	1	1%	27	2%
Stagecoach	32	3%	1	1%	33	3%
State Forest	14	1%	2	2%	16	1%
Staunton	9	1%	0	0%	9	1%
Steamboat Lake	22	2%	4	4%	26	2%
Sweitzer Lake	1	0%	0	0%	1	0%
Sylvan Lake	7	1%	0	0%	7	1%
Trinidad Lake	12	1%	2	2%	14	1%
Vega	18	2%	0	0%	18	1%
Yampa River	3	0%	0	0%	3	0%
State Wildlife Areas	54	5%	6	6%	60	5%
National Parks/Forests	115	10%	33	32%	148	12%
Other	153	14%	18	17%	171	14%
Illegible/unknown	16	1%	8	8%	24	2%

8. Please <u>write in the name of the Colorado county</u> (or counties) where you fished during 2019 **AND** also indicate the <u>number of days</u> you fished in each.

	County	Total number of days fished there in 2019
1.		
2.		-
3.		→
4.		
5.		
6.		-
7.		-

		Residen n=2,227			on-resid (n=443)		(Total n=2,682	2)
	n	x	range	n	x	range	n	x	range
Adams	38	8	1-70	0	NA	NA	38	8	1-70
Alamosa	2	2	2-2	0	NA	NA	3	2	2-2
Arapahoe	60	10	1-70	1	1	1-1	62	10	1-70
Aruchelata	12	8	1-45	11	4	1-11	23	6	1-45
Baca	2	5	5-5	0	NA	NA	2	5	5-5
Bent	20	12	1-40	3	1	1-1	23	11	1-40
Boulder	71	9	1-100	9	3	1-10	81	8	1-100
Broomfield	3	9	3-15	0	NA	NA	4	1	1-1
Chaffee	83	6	1-45	26	5	1-30	109	6	1-45
Cheyenne	1	2	2-2	0	NA	NA	1	2	2-2
Clear Creek	43	5	1-15	2	6	5-7	45	5	1-15
Conejos	7	10	1-20	17	5	1-20	24	6	1-20

Costilla									
Costilla	7	9	2-30	2	2	1-2	10	7	1-30
Crowley	8	13	4-40	0	NA	NA	8	13	4-40
Custer	28	12	1-60	5	2	1-4	33	10	1-60
Delta	22	13	1-90	2	2	2-2	24	13	1-90
Denver	23	10	1-70	4	2	1-3	28	8	1-70
Dolores	7	5	1-10	2	3	2-3	9	5	1-10
Douglas	69	11	1-125	6	2	1-2	76	10	1-125
Eagle	64	5	1-30	21	4	1-10	85	5	1-30
El Paso	63	8	1-50	6	2	1-4	69	8	1-50
Elbert	0	NA	NA	0	NA	NA	0	NA	NA
Fremont	30	5	1-20	5	1	1-2	35	4	1-20
Garfield	42	7	1-72	12	4	1-20	54	6	1-72
Gilpin	14	4	1-10	2	2	1-2	16	4	1-10
Grand	121	7	1-50	13	4	1-20	134	7	1-50
Gunnison	84	8	1-55	38	5	1-20	122	7	1-55
Hinsdale	7	3	1-7	25	7	1-35	32	6	1-35
Huerfano	20	7	1-30	2	3	3-3	22	7	1-30
Jackson	47	5	1-20	6	2	1-5	53	5	1-20
Jefferson	145	8	1-60	8	1	1-2	154	8	1-60
Kiowa	2	8	3-13	0	NA	NA	2	8	3-13
Kit Carson	0	NA	NA	0	NA	NA	0	NA	NA
La Plata	26	11	1-75	18	5	1-26	44	9	1-75
Lake	37	7	1-55	12	3	1-5	49	6	1-55
Larimer	187	12	1-211	27	4	1-20	214	11	1-211
Las Animas	9	5	1-15	1	2	2-2	10	5	1-15
Lincoln	6	3	1-6	0	NA	NA	6	3	1-6
Logan	17	7	1-18	0	NA	NA	17	7	1-18
Mesa	52	6	1-22	5	7	1-10	57	6	1-22
Mineral	32	7	1-40	6	5	1-10	38	6	1-40

Moffat	8	4	1-10	0	NA	NA	8	4	1-10
Montezuma	17	7	1-15	5	5	3-10	22	6	1-15
Montrose	15	11	1-100	3	2	1-3	18	9	1-100
Morgan	19	8	1-40	0	NA	NA	19	8	1-40
Otero	9	8	2-18	1	5	5-5	10	7	2-18
Ouray	17	13	1-100	6	2	1-4	23	10	1-100
Park	189	8	1-60	30	3	1-9	219	7	1-60
Phillips	0	NA	0	0	NA	NA	0	NA	NA
Pitkin	27	4	1-15	18	4	1-20	45	4	1-20
Prowers	1	4	4-4	0	NA	NA	1	4	4-4
Pueblo	90	11	1-75	2	3	1-4	92	11	1-75
Rio Blanco	12	6	1-20	3	3	1-5	16	5	1-20
Rio Grande	10	18	1-90	20	5	1-25	31	9	1-90
Routt	73	6	1-50	15	5	1-20	89	6	1-50
Saguache	5	5	2-8	2	5	4-5	7	5	2-8
San Juan	9	3	1-5	3	3	1-4	12	3	1-5
San Miguel	8	8	1-30	2	2	2-2	10	7	1-30
Sedgwick	8	4	2-8	0	NA	NA	8	4	2-8
Summit	79	4	1-28	22	3	1-10	101	4	1-28
Teller	58	7	1-60	4	3	1-4	62	6	1-60
Washington	3	3	2-4	0	NA	NA	3	3	2-4
Weld	40	11	1-90	2	5	5-5	42	11	1-90
Yuma	2	1	1-1	0	NA	NA	2	1	1-1
Unknown/illegible	17	6	1-20	8	4	1-11	26	5	1-20

9. Compared to the number of days you fished in Colorado	in 2019, how many days do
youexpect to fish in 2020 in Colorado? (<i>Please check one</i> .)	

____More days ____About the same ____Fewer days ____I am not sure

	Resident (n=1044)			esident 388)	Total (n=1432)		
	n	%	n	%	n	%	
More days	425	41%	67	17%	492	34%	
About the same	430	41%	144	37%	574	40%	
Fewer days	89	9%	63	16%	152	11%	
I am not sure	100	10%	114	29%	214	15%	

Your Fishing Preferences

10.	Approximately what p	percent of fish	n did you	release back	in the	water in	ı Colorado	in
2019	9?(Please check one.)							

\bigcap	None (I kept all or nearly all of the fish that I legally could keep)
\Box	I released less than half of the fish I caught (less than 50%)
\sim	I released more than helf of the fish I cought (quarter than 50%)

I released more than half of the fish I caught (greater than 50%)

I released all or nearly all of the fish I caught (about 100%)

	Resident (n=1,036)		Non-resident (n=377)		Total (<i>n</i> =1,413)	
	n	%	n	%	n	%
None (I kept all or nearly all of the fish that I legally could keep)	109	11%	33	9%	142	10%
I released less than half of the fish I caught (less than 50%)	125	12%	35	9%	160	11%
I released more than half of the fish I caught (more than 50%)	183	18%	43	11%	226	16%
I released all or nearly all of the fish I caught (about 100%)	619	60%	266	71%	885	63%

11. Which of the following species or groups of species did you target in Colorado in 2019?(<i>Please check all that apply</i> .)
☐ Largemouth or smallmouth bass
Channel, flathead or blue catfish
☐ Wiper, white or striped bass
☐ Walleye or sauger
☐ Bluegill or sunfish
☐ Yellow perch
☐ Crappie
☐ Brown trout
Cutthroat trout
☐ Lake trout
☐ Rainbow trout
☐ Brook trout
☐ Kokanee salmon
☐ Northern pike or tiger musky
☐ Carp
\square Any fish (<i>I did not target a specific species/group</i>)
Other (<i>Please specify</i>):

	Resident (n=3,987)				Total (n=,5062)	
	n	%	n	%	n	%
Largemouth or smallmouth bass	266	7%	21	2%	287	6%
Channel, flathead or blue catfish	93	2%	2	0%	95	2%
Wiper, white or striped bass	105	3%	2	0%	107	2%
Walleye or sauger	218	5%	8	1%	226	4%
Bluegill or sunfish	118	3%	10	1%	128	3%
Yellow perch	65	2%	6	1%	71	1%
Crappie	132	3%	8	1%	140	3%
Brown trout	573	14%	230	21%	803	16%
Cutthroat trout	388	10%	143	13%	531	10%
Lake trout	300	8%	78	7%	378	7%
Rainbow trout	852	21%	326	30%	1,178	23%
Brook trout	416	10%	176	16%	592	12%
Kokanee salmon	113	3%	17	2%	130	3%
Northern pike or tiger musky	140	4%	9	1%	149	3%
Carp	45	1%	4	0%	49	1%

Any fish (I did not target a specific species/group)	142	4%	31	3%	173	3%
Other (Please specify): Grayling Tiger trout Whitefish Cutbow Trout Suckers Black bullhead catfish	5 4 3 1 1	0% 0% 0% 0% 0% 0%	1 0 0 0 0	0% 0% 0% 0% 0% 0%	6 4 3 1 1	0% 0% 0% 0% 0% 0%

12. On which of the following types of water did you fish in Colorado in 2019?(*Please check all that apply*.)

Lakes or reservoirs at low elevations
☐ Lakes or reservoirs in the mountains
☐ Boatable and wadeable, large rivers (e.g., Arkansas River, South Platte River,
Colorado River, etc.)
☐ Smaller rivers or streams (non-boatable) at low elevations
☐ Smaller rivers or streams in the mountains
Urban small ponds (e.g., City Park Lake)

	Resident (n=2,384)		Non-resident (n=645)		Total (n=3.029)	
	n	%	n	%	n	%
Lakes or reservoirs at low elevations	528	22%	63	10%	591	20%
Lakes or reservoirs in the mountains		32%	186	29%	939	31%
Boatable and wadeable, large rivers (e.g. Arkansas River, South Platte River, Colorado River, etc.)	274	11%	91	14%	365	12%
Smaller rivers or streams (non-boatable) at low elevations		8%	81	13%	278	9%
Smaller rivers or streams in the mountains		19%	212	33%	668	22%
Urban small ponds (e.g. City Park Lake)	176	7%	12	2%	188	6%

13.	Which of the following me	ethods did you	use to	fish in C	Coloradoin
201	9?(Please check all that ap	ply.)			

☐ Spinning, spin casting, or	☐ Jugs
bait casting	Spearfishing
☐ Fly fishing	☐ Archery
☐ Ice fishing	☐ Slingbows
□ Snagging	Other (<i>Please specify</i>):
☐ Trot lines	

	Resident (<i>n</i> =1,561)		Non-resident (n=475)		Total (n=2,034)	
	n %		n	%	n	%
Spinning, spin casting, or bait casting	833	53%	190	40%	1,023	50%
Fly fishing	502	32%	269	57%	771	38%
Ice Fishing	160	10%	7	1%	167	8%
Snagging	15	1%	2	0%	17	1%
Trot lines	18	1%	6	1%	24	1%
Jugs	11	1%	0	0%	11	1%
Spearfishing	1	0%	0	0%	1	0%
Archery	7	0%	0	0%	7	0%
Slingbows	0	0%	0	0%	0	0%
Other (Please specify): Trolling Minnow trap	11 1	1% 0%	1 0	0% 0%	12 1	1% 0%

14. Which of the following types of tackle did you use while fishing in Colorado in
2019?(Please check all that apply.)
Lures
☐ Flies
☐ Live bait
☐ Artificial bait
Combination lures/flies and bait
Other (<i>Please specify</i>):

	Resident (n=2,366)		Non-resident (n=556)		Total (n=2,922)	
	n %		n	%	n	%
Lures	649	27%	131	24%	780	27%
Flies	558	24%	264	47%	822	28%
Live bait	446	19%	51	9%	497	17%
Artificial bait	443	19%	67	12%	510	17%
Combination lures/flies and bait	269	11%	42	8%	311	11%
Other (Please specify): Human food	1	0%	1	0%	2	0%

Your Fishing Experiences in Colorado

15. How dissatisfied or satisfied were you with the following aspects of your fishing experience in 2019? (*Please check one response for each aspect*.)

	Very dissatisfied	Somewhat dissatisfied	Neither dissatisfied nor satisfied	Somewhat satisfied	Very satisfied
The number of fish you caught	D	D	D	D	D
The size of fish you caught	D	D	D	D	D
The variety of fish you could fish for	D	D	D	D	D
The availability of stocked fish	D	D	D	D	D

Resident

	Very dissatisfied		Somewhat dissatisfied		Neither dissatisfied nor satisfied		Somewhat satisfied		Very satisfied	
	n	%	n	%	n	%	n	%	n	%
The number of fish you caught (n=1,041)	88	8%	182	17%	199	19%	364	35%	208	20%
The size of fish you c aught (n=1,022)	62	6%	168	16%	286	28%	352	34%	154	15%
The variety of fish you could fish for (n=1,020)	40	4%	98	10%	291	29%	327	32%	264	26%
The availability of stocked fish (n=1,002)	59	6%	128	13%	421	42%	243	24%	151	15%

Non-resident

	Very dissatisfied		Somewhat dissatisfied		Neither dissatisfied nor satisfied		Somewhat satisfied		Very satisfied	
	n	%	n	%	n	%	n	%	n	%
The number of fish you caught (n=390)	31	8%	55	14%	64	16%	97	25%	143	37%
The size of fish you caught (n=381)	20	5%	54	14%	83	22%	133	35%	91	24%
The variety of fish you could fish for (n=379)	13	3%	25	7%	97	26%	116	31%	128	34%
The availability of stocked fish (n=363)	18	5%	25	7%	166	46%	72	20%	82	23%

16. While fishing in Colorado in 2019, how crowded did you feel by the following people/groupsof people? (*Please check one response for each group*.)

	Not at all crowded	Somewhat crowded	Moderately crowded	Very crowded
Fishing guides	D	D	D	D
Other anglers	D	D	D	D
Boaters, kayakers or other non-angling recreationists	D	D	D	D

Resident

	Not at all crowded		Somewhat crowded		Moderately crowded		Very crowded	
	n	%	n	%	n	%	n	%
Fishing guides (<i>n</i> =989)	709	72%	154	16%	89	9%	37	4%
Other anglers (<i>n</i> =1,029)	338	33%	370	36%	233	23%	88	9%
Boaters, kayakers or other non-angling recreationists (<i>n</i> =1,016)	430	42%	253	25%	209	21%	124	12%

Non-resident

	Not at all crowded		Somewhat crowded		Moderately crowded		Very crowded	
	n	%	n	%	n	%	n	%
Fishing guides (<i>n</i> =372)	312	84%	41	11%	18	5%	1	0%
Other anglers (n=386)	224	58%	103	27%	51	13%	8	2%
Boaters, kayakers or other non-angling recreationists (<i>n</i> =368)	278	76%	52	14%	32	9%	6	2%

17. Overall, how dissatisfied or satisfied were you with your fishing experiences in Colorado in 2019? (*Please check one.*)

Very	Somewhat	Neither dissatisfied	Somewhat	Very
dissatisfied	dissatisfied	nor satisfied	satisfied	satisfied

	Resident (n=1,046)			esident 389)	Total (n=1,435)	
	n	%	n	%	n	%
Very dissatisfied	41	4%	14	4%	55	4%
Somewhat dissatisfied	114	11%	23	6%	137	10%
Neither dissatisfied nor satisfied	168	16%	43	11%	211	15%
Somewhat satisfied	394	38%	119	31%	513	36%
Very satisfied	329	31%	190	49%	519	36%

Colorado's Fish Hatcheries

Throughout the state, Colorado Parks and Wildlife operates 19 hatcheries that breed, hatch, rear, and stock over 90 million fish in Colorado's waters every year. In fact, as many as 80% of fish caught annually in Colorado are hatchery produced.

18. Which of the following species would you prefer CPW prioritize in terms of production and stocking of fish in Colorado? (*Please check your top three highest priority species oneach side of the table below.*)

	Coldwater species		Warm/coolwater species
	(select your top 3)		(select your top 3)
D	Rainbow trout	D	Walleye/Sauger
D	Brook trout	D	Wiper, White bass, Striped bass
D	Brown trout	D	Yellow perch
D	Tiger trout	D	Largemouth, smallmouth bass
D	Arctic char	D	Northern pike, Tiger musky
D	Native Cutthroat trout	D	Bluegill
D	Lake trout	D	Crappie
D	Kokanee salmon	D	Catfish (channel, flathead, blue)
D	Splake	D	Carp

Coldwater Species

	Resident (<i>n</i> =2,690)			esident 996)	Total (n=3,686)	
	n	%	n	%	n	%
Rainbow trout	740	28%	293	29%	1,033	28%
Brook trout	374	14%	189	19%	563	15%
Brown trout	593	22%	240	24%	833	23%
Tiger trout	93	3%	32	3%	125	3%
Arctic char	41	2%	9	1%	50	1%
Native Cutthroat trout	405	15%	141	14%	546	15%
Lake trout	223	8%	55	6%	278	8%
Kokanee salmon	197	7%	35	4%	232	6%
Splake	24	1%	2	0%	26	1%

Warm/coolwater species

	Resident (<i>n</i> =1,992)			esident 501)	Total (n=2,493)	
	n	%	n	%	n	%
Walleye/Sauger	472	24%	93	19%	565	23%
Wiper, White bass, Striped bass	278	14%	65	13%	343	14%
Yellow perch	122	6%	33	7%	155	6%
Largemouth, smallmouth bass	438	22%	124	25%	562	23%
Northern pike, Tiger musky	198	10%	62	12%	260	10%
Bluegill	113	6%	35	7%	148	6%
Crappie	208	10%	64	13%	272	11%
Catfish (channel, flathead, blue)	152	8%	22	4%	174	7%
Carp	11	1%	3	1%	14	1%

19. How much of a priority should Colorado Parks and Wildlife's hatchery program place on the following production and stocking decisions (*Please check one response for each statement*.)

	Not a priority	Low priority	Neutral	Moderate priority	Essential priority
Striking a balance between the size of fish I could catch and the number of fish I could catch					
Maximizing the average size of the fish I could catch, regardless if it decreases the number of fish I might catch					
Maximizing the number of fish I could catch, regardless if this decreases the average size of the fish I might catch					
Other (Please specify and also indicate priority level):					

Resident

Within the "Other" category, 49 individuals commented on issues pertaining to population/stocking concerns, 17 individuals concerned with maintaining a sustainable/healthy ecosystem, 13 individuals on regulation/enforcement issues, 1 individual suggested adding fish cleaning facilities, and 1 individual commented on having more access to fishable water.

	Not a priority		Low priority		Neutral		Moderate priority		Essential priority	
	n	%	n	%	n	%	n	%	n	%
Striking a balance between the size of fish I could catch and the number of fish I could catch (<i>n</i> =1,021)	48	5%	48	5%	308	30%	403	39%	214	21%
Maximizing the average size of the fish I could catch, regardless if it decreases the number of fish I might catch (<i>n</i> =1,018)	108	11%	171	17%	383	38%	267	26%	89	9%
Maximizing the number of fish I could catch, regardless if this decreases the average size of the fish I might catch (<i>n</i> =1,015)	127	13%	212	21%	407	40%	202	20%	67	7%
Other (Please specify and also indicate priority level) (<i>n</i> =65)):	1	2%	0	0%	2	3%	5	8%	57	88%

Non-resident

Within the "Other" category, 13 individuals commented on issues pertaining to population/stocking concerns, 4 individuals concerned with maintaining a sustainable/healthy ecosystem, 5 individuals on regulation/enforcement issues, and 3 individuals commented on having more access to fishable water.

	Not a priority		Low priority		Neutral		Moderate priority		Essential priority	
	n	%	n	%	n	%	n	%	n	%
Striking a balance between the size of fish I could catch and the number of fish I could catch (<i>n</i> =362)	16	4%	14	4%	120	33%	123	34%	89	25%
Maximizing the average size of the fish I could catch, regardless if it decreases the number of fish I might catch (<i>n</i> =364)	38	10%	80	22%	152	42%	78	21%	16	4%
Maximizing the number of fish I could catch, regardless if this decreases the average size of the fish I might catch (n=362)	48	13%	80	22%	152	42%	67	19%	15	4%
Other (Please specify and also indicate priority level) (<i>n</i> =15)	1	7%	0	0%	1	7%	6	40%	7	47%

Learning About Fishing Opportunities in Colorado

20. How do you currently receive information or stay informed about fishing or fishery

nanagement in Colorado? (Please check all that apply.)	
 ☐ Social media (e.g., Facebook, Twitter, Instagram) ☐ Colorado Parks and Wildlife website (https://cpw.state.co.us/) ☐ Online searches (e.g., Google, Explorer, Safari, etc.) ☐ TV/Radio 	
☐ Outdoor magazines (e.g., Field & Stream, Outdoor Life, Colorado Outdoors)	
☐ Local newspapers	
☐ Word of mouth (from a friend/family member)	
☐ Fishing regulations brochures	
Colorado Parks and Wildlife E-newsletter	
Colorado Parks and Wildlife public meetings	
☐ Fishing App	
Online Fishing Atlas	
☐ I do not stay informed about fishing opportunities in Colorado	
Other (Please specify)	

		Resident (n=2,344) Non-resident (n=688)		dent		otal ,032)
	n	%	n	%	n	%
Social media (e.g. Facebook, Twitter, Instagram)	174	7%	54	8%	228	8%
Colorado Parks and Wildlife website (https://cpw.state.co.us/)	428	18%	102	15%	530	17%
Online searches (e.g., Google, Explorer, Safari, etc.)	280	12%	102	15%	382	13%
TV/Radio	55	2%	7	1%	62	2%
Outdoor magazines (e.g., Field & Stream, Outdoor Life, Colorado Outdoors)	133	6%	45	7%	178	6%
Local newspapers	85	4%	11	2%	96	3%
Word of mouth (from a friend/family member)	517	22%	160	23%	677	22%
Fishing regulations brochures	266	11%	57	8%	323	11%
Colorado Parks and Wildlife E-newsletter	53	2%	14	2%	67	2%
Colorado Parks and Wildlife public meetings	8	0%	3	0%	11	0%
Fishing App	105	4%	8	1%	113	4%
Online Fishing Atlas	31	1%	7	1%	38	1%
I do not stay informed about fishing opportunities in Colorado	157	7%	93	14%	250	8%
Other (Please specify): Fly shops/guides Personal experience Sporting goods stores Trout Unlimited CPW staff	17 14 9 4 4	1% 1% 0% 0% 0%	15 3 2 1 0 3	2% 0% 0% 0% 0% 0%	32 17 11 5 4 4	1% 1% 0% 0% 0%
Books	3	0%	1	0%	4	0%

21. How would you prefer to communicate with Colorado Parks and Wildlife about fishery management issues or opportunities? (*Please write in your response below*.)

Resident Non-resident **Total** (n=1,116)(n=854)(n=258)% n % % n n 4% 5% 5% Social media 35 12 51 CPW website 105 21 8% 12% 126 11% Online searches 88 10% 37 14% 125 11% 4 0% 0 0% TV/Radio 4 0% Outdoor magazines, local 13 2% 4 2% 17 2% newspapers, articles/books Fishing regulations brochures 10 1% 2 1% 12 1% 32 4% 8 CPW newsletter/ E-newsletter 3% 40 4% CPW public meetings 3 0% 0 0% 3 0% Fishing App 16 2% 4 2% 20 2% Email 331 39% 105 41% 436 39% Mail 7% 63 28 11% 91 8% Phone 61 7% 9 3% 70 6% In person 28 3% 2 1% 30 3% 21 2% 6 2% 2% Survey 27 4 0% 1 0% 5 0% As is Misc. 13 2% 5 2% 18 2% 27 3% Prefer no contact 14 5% 41 4%

About You

22. How old are you? (Please write in your response.)____YEARS

	Resident (n= 1,038) Non-resident (n= 385) Total (n=1,423)							
n	x	range	n	x	range	n	x	range
1,038	55	18-90	385	55	18-87	1,423	55	18-90

	23.	With what	gender	do you	identify?	(Please ch	ieck one.)
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☐ Male	
☐ Female	
☐ Other (<i>Please specify</i>): _	
☐ Prefer not to say	

	Resident (n=1,043)			esident 387)	Total (n=1,430)		
	n %		n	%	n	%	
Male	826	79%	318	82%	1,144	80%	
Female	216	21%	68	18%	284	20%	
Other (Please specify):	0	0%	0	0%	0	0%	
Prefer not to say	1	0%	1	0%	2	0%	

24. What is the zip code at your current, primary residence? (*Please writein the five-digit number*.)

Resident (<i>n</i> =1,041)	Non-resident (n=384)	Total (n=1,425)
1,041	384	1,425

25. Approximately how many years have you lived in Colorado? (*Please write in your response.If currently not a resident*, *please write "not applicable" or "N/A."*)

____YEARS

Resident (<i>n</i> =1,059)							
n	x	range					
1,059	37	1-88					

Please use the space provided to share any additional thoughts you have about your 2019 fishing
experience or fishery management in Colorado.

Thank you for your help!

(Placeholder for unique ID)

	Resident (n=544)		racidant		Total (<i>n</i> =741)	
	n	%	n	%	n	%
Positive comments: Enjoyable experience (<i>n</i> =97) CPW appreciation (<i>n</i> =115)	32 91	6% 17%	65 24	33% 12%	97 115	13% 16%
Costs (<i>n</i> =62)	49	9%	13	7%	62	8%
Regulations/enforcement: Unclear regulations (<i>n</i> =7) Change catch/release, size limits (<i>n</i> =28) Change misc. regulations (<i>n</i> =25) Enforcement (<i>n</i> =25)	2 24 20 22	0% 4% 4% 4%	5 4 5 1	3% 2% 3% 1%	7 28 25 23	1% 4% 3% 3%
Access (n=35)	24	4%	11	6%	35	5%
Crowding (<i>n</i> =39)	36	7%	3	2%	39	5%
Conservation: Population and stocking concerns (<i>n</i> =94) Disease/parasites, habitat, water quality/flow (<i>n</i> =21)	80 17	15% 3%	14 4	7% 2%	94 21	13% 3%
New infrastructure/maintenance (<i>n</i> =16)	15	3%	1	1%	16	2%
Communication (<i>n</i> =18)	14	3%	4	2%	18	2%
Ethics, etiquette, littering (<i>n</i> =21)	20	4%	1	1%	21	3%
Education and youth outreach (<i>n</i> =10)	7	1%	3	2%	10	1%
Misc. comments: Suggestions/concerns (<i>n</i> =23) Survey comments (<i>n</i> =13)	20 10	4% 2%	3 3	2% 2%	23 13	3% 2%
No suggestions or supportive comments (<i>n</i> =94)	61	11%	33	17%	94	13%

