



**OTTER CREEK RESERVOIR
2021 TREND NET SURVEY**

**Report prepared by:
Michael J. Hadley
Regional Sport Fish Biologist**

BACKGROUND: Otter Creek Reservoir is one of southern Utah's most popular fishing destinations and has historically provided a high quality fishery able to sustain a large amount of harvest, as long as water levels remain high enough to maintain the fishery. For many years, the fishery has been maintained with an annual stocking quota of 200,000 sub-catchable rainbow trout (RBT) in the fall. Due to various stocking adjustments, that quota has been raised to 220,000, while an additional quota of 23,000 has been added in the spring (Table 1). An angler survey conducted at the reservoir in 2016 found that the Otter Creek RBT fishery provides a significant draw to anglers from across Utah, as well as southern Nevada (Hadley et al. 2017). The results of the survey prompted increases in stocking as well as the designation of Otter Creek Reservoir as one of Utah's Blue Ribbon Fisheries, based on the high quality of the fishery and its value to Utah anglers. In fact, Otter Creek Reservoir is considered Utah's best RBT sport fishery.

An annual quota of 25,000 Bear Lake cutthroat trout was stocked regularly in Otter Creek Reservoir from the early 1990s through 2017 in an effort to apply predation pressure to Utah chubs. Due to poor returns, this quota was cancelled after 2017 and converted to a quota of 20,000 brown trout (Table 1). Due to the significant level of angler interest, Otter Creek Reservoir is frequently used as a receptacle for excess trout produced by hatcheries.

Competition between stocked trout and Utah chubs has historically been a chronic problem and Otter Creek Reservoir has been treated periodically with rotenone to reduce chub densities, most recently in 1999. There is no conservation pool in the reservoir but at least a small pool is normally maintained through the year by the Sevier River Water Users in order to sustain a fishery. This effort has been instrumental in preserving the sport fishery during frequent drought conditions over the last 15+ years. The Bear Lake cutthroat trout quota was originally added with the intent that they would utilize chubs as forage and add diversity to the sport fishery. By the same reasoning, smallmouth bass were introduced in 2005 and a limited population has maintained through natural recruitment since that time.

Due to limited establishment and return, Bear Lake cutthroat trout and smallmouth bass were never able to exert an appreciable effect on the Utah chub population in Otter Creek Reservoir. Conversely, the introduction of hybrid wipers (white bass x striped bass) to Newcastle and Minersville reservoirs yielded significant reduction of rough fish density and positive responses in survival and condition among stocked trout. Based on these results, the addition of wipers to the Otter Creek Reservoir fishery commenced in 2011. Over the next ten years, return of wipers to netting surveys and anglers was limited and variable. Those wipers that were observed, however, exhibited exceptional growth and condition. Due to those low returns, stocking requests were increased, while netting surveys were adjusted to account for potential differences in wiper behavior that may have allowed them to avoid spring shoreline net sets. Wiper netting catches continued a pattern of variability through 2020, but a few anglers began to adjust fishing techniques to more effectively target wipers, resulting in catches of large, healthy fish. Despite the inability to consistently evaluate wiper survival through netting surveys, the growth and condition of those few fish observed, coupled with increasing angler success and experience gained from other similar fisheries, prompted managers to continue attempts to establish a wiper fishery in Otter Creek Reservoir. That included changing the stocking quota in 2020 from 20,000 fry to 9,000 8-inch fish in hopes that stocking larger fish would improve survival. Due to hatchery shortages, however, only half of that quota was stocked in 2020 (Table 2).

The fishery at Otter Creek Reservoir is monitored annually through trend net surveys. Since 2011, a new gill net design recommended by the American Fisheries Society (AFS) has been utilized. The random placement of differing mesh sizes is intended to avoid “leading” fish into the net and, thus, reduce bias in the net catch – as opposed to nets previously used for decades (“DWR” nets), which comprised of graduating mesh sizes. In most waters, catch rate trends observed since 2011 indicate that the AFS nets catch about 50% fewer trout and chubs than did the DWR nets, though the reduced catches are still sufficient to provide measures of population dynamics. The trout catch rate at Otter Creek Reservoir has followed this pattern, while the chub catch rate has been, on average, about 68% that of the old net style. That higher-than-expected mean in chub catch has been skewed, however, by just two years of extreme high catches. Attempts to more effectively sample wipers has included the recent addition of a DWR net to the pelagic zone. While that net has yet to consistently catch wipers, it has provided the benefit of a net that does not foul with algae, as many of the shoreline nets have been doing. Although the longer DWR nets tend to catch twice as many fish as the shorter AFS nets when set along the shore, the catch was more similar and comparable when the longer net has been set in the pelagic zone. The lack of a shoreline removed the impetus for the “leading” effect that theoretically skews catch for graduated nets.

METHODS: Eight experimental gill nets (five floating and three diving) were set in Otter Creek Reservoir on April 5, 2021, and were allowed to fish overnight. Four of the floating nets and two of the diving nets were of the AFS design, measuring 6 ft x 80 ft, with eight panels of randomly-arranged mesh size (1.5”, 2.25”, 1”, 0.75”, 2.5”, 1.25”, 2”) and were set at shoreline locations that have been generally consistent for more than 30 years of sampling (Figure 1). The additional nets were of the “DWR” design, measuring 6 ft x 125 ft, with five panels of increasing mesh size (0.75”, 1”, 1.25”, 1.5”, 2”) and were set in pelagic areas. The diving net (NPD) was set in 10 feet of water in the northern portion of the reservoir (Fig. 1), while the floating net (SPF) was set in the southern area, where bottom depth was 28 feet. Fish caught were removed from nets on the morning of April 6 and all sport fish were measured to the nearest millimeter (total length) and weighed to the nearest gram. Trout body condition was measured by the calculation of Fulton’s K_{TL} (generated from total length [TL]):

$$K_{TL} = (Weight/Length^3) \times 100,000$$

Wiper and smallmouth bass body condition was measured by relative weight (W_r), given by:

$$W_r = (W/W_s) \times 100$$

where W = the weight of an individual fish and W_s = the standard weight for a fish of similar length. W_s is computed by the equation:

$$\log_{10}(W_s) = a + b(\log_{10}TL)$$

where a and b are constants defined by species-specific length-weight relationships (Anderson and Neumann 1996). Total length was recorded for a subset of Utah chubs, while total batch weight and count was recorded for each net. Results of the 2021 survey were compared with those from historic trend net surveys.

RESULTS: Wind and algae have been common problems for shoreline nets at Otter Creek Reservoir in recent years, and 2021 was no exception. SWF and WMLD were fouled by algae, while SEF was dragged by the wind and piled up. The floating pelagic net (SPF) was set specifically to evaluate wiper use at the surface in open water. As a result, its catch was not

comparable to any other net, even that of the other pelagic net. (It caught no wipers.) RBT caught in these four nets were not included in calculations of catch rate, though they were used to calculate mean size and condition. A total of 199 trout was collected in the remaining four nets (three shoreline, one pelagic) on April 6, for a catch rate of 50 trout per net-night (Table 3). (RBT catch among the four effective nets was fairly consistent, ranging from 44 to 53 trout.) This was the highest trout catch rate observed since employment of AFS nets began in 2011 (Fig. 2) and was more than double the long-term mean for that net type (Table 4). Trout made up 65% of the total net catch and 71% of the total biomass collected (Fig. 3).

RBT stocked in fall 2020 made up 79% of the trout catch (Fig. 4) and averaged 275 mm (10.8 in) in total length (TL), 247 g (0.5 lb) in weight, with a mean condition (K_{TL}) of 1.17. Mean length and weight were almost equal to long-term means for RBT stocked the previous year, while condition was slightly higher (Table 4, Fig. 5). These fish grew an average of 0.36 mm/day since stocking, which was lower than the long-term mean. Older RBT (stocked prior to fall 2020) made up 20% of the trout catch and averaged 445 mm (17.5 in), 992 g (2.2 lbs), with a mean K_{TL} of 1.09. Length and weight were higher than long-term means, while condition was slightly lower (Table 4). RBT ranged in size up to 550 mm (21.7 in) and 1,904 g (4.2 lbs). The rest of the trout catch was made up by one large brown trout (Fig. 6; 662 mm, 26.1 in; 4,500 g, 9.9 lbs) and one large cutthroat trout (Fig. 7; 654 mm, 25.7 in; 3,632 g, 8.0 lbs).

Fourteen wipers were caught in the netting survey, for a catch rate of 3.5 fish per net-night (Table 3). This was the highest wiper catch rate observed since they were introduced to Otter Creek Reservoir (Fig. 8, Table 4). Wipers spanned at least four size classes (Fig. 9) and averaged 420 mm (16.5 in), 1,536 g (3.4 lbs), with a mean W_r of 109. All values were very similar to long-term means. “Smaller” wipers (300-380 mm, 12-15 in) were most abundant in the catch, while “middle” sizes (400-550 mm, 16-22 in) were almost absent. The four large wipers caught ranged in size up to 646 mm (25.4 in) and 4,210 g (9.3 lbs) (Fig. 10). These were the largest wipers ever collected in trend net surveys at Otter Creek Reservoir. One smallmouth bass was also collected by the nets (Table 3).

Ninety-four Utah chubs were collected in the 2021 survey, for a catch rate of 24 fish per net-night. Outside of the two outlier high catches observed in 2013 and 2019, this was among the highest chub catch rates observed since 2011 (Fig. 11). In 2021, the chub catch spanned at least four cohorts (140-285 mm) and was dominated by smaller fish (Fig. 12).

DISCUSSION: The Otter Creek Reservoir fishery experienced unique conditions, challenges, and benefits in recent years. Drought years in 2017 and 2018 coincided with overstocking of excess RBT that uncharacteristically slowed growth among trout. Koosharem Reservoir was drained at the end of 2018 to facilitate dam repairs, flushing a large density of Utah chubs downstream to Otter Creek Reservoir. The ensuing winter experienced a record snowpack, yielding a full reservoir and extended high water levels throughout 2019. These levels helped mitigate the effect of the increase in chubs – as well as a return to drought conditions in 2020 – on RBT survival, as evidenced by the high catch of RBT in the 2021 trend net survey (Fig. 2). Meanwhile the high density of Utah chubs observed in 2019 was apparently short-lived. It is not certain exactly how this population crashed by 2020, but mortality due to density-enhanced competition, as well as predation by wipers, may have contributed. Subpar growth observed among RBT from 2017 to 2018 demonstrated the risk in overstocking excess fish during drought years. Ultimately, the current RBT quotas totaling about 250,000 fish annually appear to be adequately supporting angling harvest and sustaining a high-quality trout fishery. Stocking of excess trout should be kept at a minimum so that these quotas can be fully evaluated.

Utah chub catch has historically varied in response to water level fluctuations and chemical treatments in Otter Creek Reservoir. During the last ten years, however, chub catch has experienced less variation, outside of two high catches in 2013 and 2019 (Fig. 11). When these two outliers are excluded, chub catch varied from 2 to 25 fish per net-night, and averaged 13 fish per net-night. This mean rate is just 30% of that observed during the 35-year sampling period when DWR nets were used (Table 4). Experience in multiple reservoirs over the last decade has found that the AFS nets typically catch around half the number of Utah chubs that the older nets did. A decline to 30% of historic catch would indicate that, outside of two years of high density, chubs in Otter Creek Reservoir have, overall, been less abundant in the reservoir over the last 10 years. Each of those outlier years can be specifically attributed to known events. A high snowpack and elevated water level in 2011 may have boosted chub spawning success, which was manifested in an increase in netting catch when those fish became susceptible to nets two years later in 2013. As mentioned previously, the elevated catch in 2019 was attributed to the draining of Koosharem Reservoir in fall 2018. Regardless of the reason for the increase in chub density, each high catch was directly followed by a precipitous drop the following year, suggesting that such high chub density was not only unsustainable, but may actually have been detrimental to the population in the short term. Following the crash in chub density in 2014, the population appeared to steadily increase over the next four years until being artificially enhanced in 2019. That year was unique in that the reservoir experienced high water level that could have boosted chub recruitment like what may have occurred in 2011, but the unnaturally high density also yielded a population crash. Following a very low catch in 2020, the chub catch rate in 2021 was as high as any of the “normal” years in the last decade. Monitoring in the coming years should reveal the effects of high water in 2019 on Utah chub abundance. Regardless of the pattern in chub density, however, RBT abundance has been favorable and relatively consistent over the last decade, so the trout fishery has maintained its high quality and provided anglers with exceptional fishing opportunities.

Each year, regional staff gain more insight into wiper behavior patterns through continued monitoring, as well as consultation with anglers. Such observations at Minersville and Newcastle reservoirs have demonstrated that, while wipers are active in the early spring when netting surveys are being conducted, they are still affected by water temperature and are apt to seek out the areas of warmest water in the reservoir, typically the shallows near inflows. During the first two years when the diving pelagic net was added to the Otter Creek Reservoir trend net survey, the net was set on the bottom in 20-25 feet on the north, or upper, end of the reservoir. While this set successfully caught RBT and Utah chubs, wiper catch was not appreciably different from shoreline nets. In 2021, the pelagic net was set in a depth of 10 feet where the water temperature was a few degrees (F) warmer than the rest of the reservoir. While all four of the shoreline nets that were not fouled caught wipers, the pelagic net caught more than twice as many as any other net and contributed more than 50% of the whole wiper catch (8 of 14). While shoreline nets are also set in depths often less than 10 feet, it appears that wind, wave action, and algae can have a significant effect on the ability of these nets to effectively catch wipers. The pelagic diving net should continue to be included in future surveys at Otter Creek Reservoir and target depth should be 10 feet. The pelagic floating net added little to the 2021 survey and should be omitted. Personnel in other regions have also found success in monitoring wipers with fall netting surveys. Fall netting should be attempted at Otter Creek Reservoir to assess its efficacy in collecting wipers, though low water and algae blooms may preclude fall sampling on any given year.

Continued experience with wiper behavior should help to improve the ability to monitor survival of stocked fish in the future. Despite the lack of consistent abundance data, observations of the limited wipers caught clearly demonstrate that wipers grow well in Otter Creek Reservoir. Wipers are already known to be effective predators of Utah chubs, so their inclusion in the Otter Creek fishery maintains the potential to benefit trout by reducing the stress of competition with chubs. Angler catch of wipers also continues to increase as anglers learn how to adjust their traditional trout fishing techniques to target wipers. These anglers are catching even larger fish than what has been observed in netting surveys (Fig. 13). Finding consistency in wiper stocking has been difficult in recent years due to inconsistency in hatchery production and high demand throughout the state. The quota of 8-inch wipers requested for Otter Creek Reservoir was abandoned in 2021 because drought projections for the year precluded stocking any fish in the spring when those fish would be available. Future requests have reverted to 20,000 fingerlings because this quota is typically the easiest to fill. The ability of production to meet requested quotas may still vary annually, however, so regional staff will do their best to maintain regular stocking of wipers in Otter Creek Reservoir with whatever fish may be available.

The Otter Creek Reservoir sport fishery was observed to be in exceptional condition in spring 2021, with abundant, healthy RBT and large wipers available to anglers. Unfortunately, drought conditions continued to worsen in Utah in 2021 and water users projected that irrigation demand would result in the reservoir being drained by midsummer. Fisheries managers prepared for the expected draining by cancelling all spring stocking and recommending emergency limit increases to allow anglers to utilize fish before they could be lost. Harvest limits at Otter Creek Reservoir doubled to eight trout, six wipers, and twelve smallmouth bass in May and again, to 16 trout, 12 wipers, and 24 bass, in August. Fortunately, late summer ushered in a substantial monsoon season and releases from Otter Creek Reservoir were cut significantly on August 1. Water users elected not to increase releases for the remainder of the irrigation season and the reservoir maintained at 14-15% of capacity. Large fish die-offs were not observed and anglers continued to catch trout throughout the remainder of the year and into the winter. Stocking quotas were filled when water conditions improved (i.e. cooling, algae dying) in fall 2021, including nearly 200,000 RBT, 20,000 brown trout, and 25,000 fingerling wipers. While the impact of the 2021 drought year on the Otter Creek fishery will not be fully quantified until netting in spring 2022, it appears that the fishery maintained as well as could be hoped through a dire water situation. Past years provide numerous examples of such low water levels having devastating effects on fish populations in the reservoir. As of January 2022, the snowpack of winter of 2021-22 is above average and Otter Creek Reservoir is steadily rising.

Sevier River Water Users Association has made efforts since 2005 to maintain sufficient water levels in Otter Creek Reservoir by increasing releases from Piute Reservoir to meet water demand during drought years. These conditions have allowed RBT to maintain accelerated growth in Otter Creek Reservoir and gain a competitive advantage over Utah chubs, regardless of performance of various potential chub predators (smallmouth bass, Bear Lake cutthroat trout, brown trout, wipers). Maintenance of minimum water levels will continue to provide the greatest potential in sustaining the state's most successful RBT fishery. Such conditions may be difficult to maintain, however, during extreme drought years. In those instances, continued efforts to establish populations of wipers and brown trout may aid in depressing increases in Utah chub density that often occur when water levels are drawn low. These species are also more apt to survive low water conditions and provide sport fish opportunity while RBT recover.

RECOMMENDATIONS:

1. Maintain current stocking quotas of rainbow trout, brown trout, and wipers at Otter Creek Reservoir. Continue stocking of excess RBT and wipers when available and when water levels are favorable to sustain extra fish.
2. Conduct trend net surveys annually in the spring to monitor trout, wipers, and Utah chubs. Set one diving net in the northern, shallow, pelagic zone to more effectively catch wipers, as well as to avoid fouling by algae. Evaluate fall netting in 2022 if environmental conditions allow. Conduct electrofishing when possible in order to more effectively monitor smallmouth bass.
3. Analyze scales or dorsal spines from both wipers and smallmouth bass for age and growth.
4. Develop outreach efforts to promote wiper fishing at Otter Creek Reservoir.

LITERATURE CITED

- Anderson, R. O., and R. M. Neumann. 1996. Length, weight, and associated structural indices. Pages 447-482 *in* B. R. Murphy and D. W. Willis, editors. Fisheries techniques: second edition. American Fisheries Society, Bethesda, Maryland.
- Hadley, M. J., N. R. Braithwaite, and R. D. Hepworth. 2017. 2016 angler survey at Otter Creek Reservoir, Utah. Publication Number 17-02. Utah Department of Natural Resources, Division of Wildlife Resources, Salt Lake City. 26 pp.

Otter Creek Reservoir

Sampling Locations

F=Floating Gill Net

D=Diving Gill Net

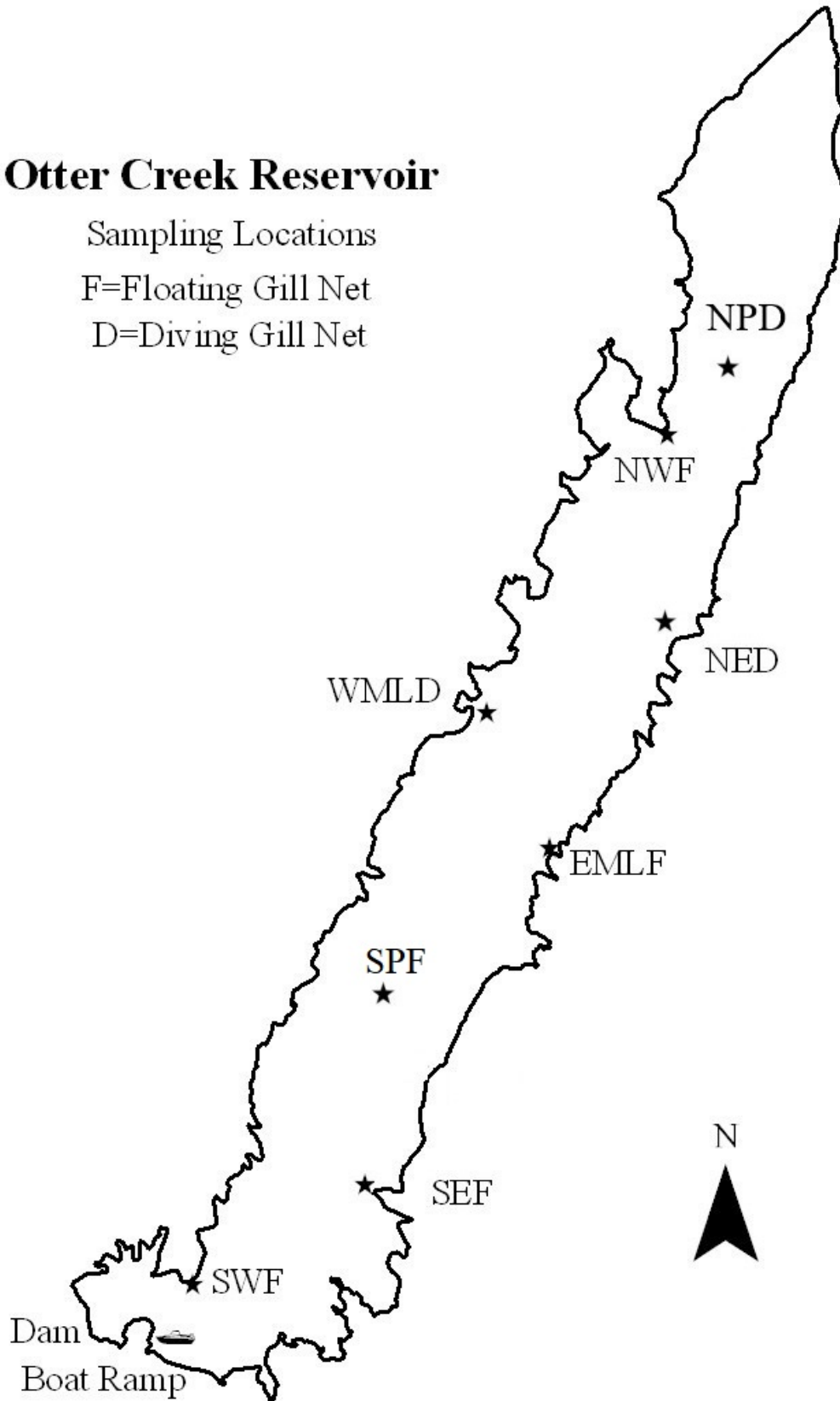


Figure 1. Locations of gill nets set at Otter Creek Reservoir during the 2021 trend net survey.

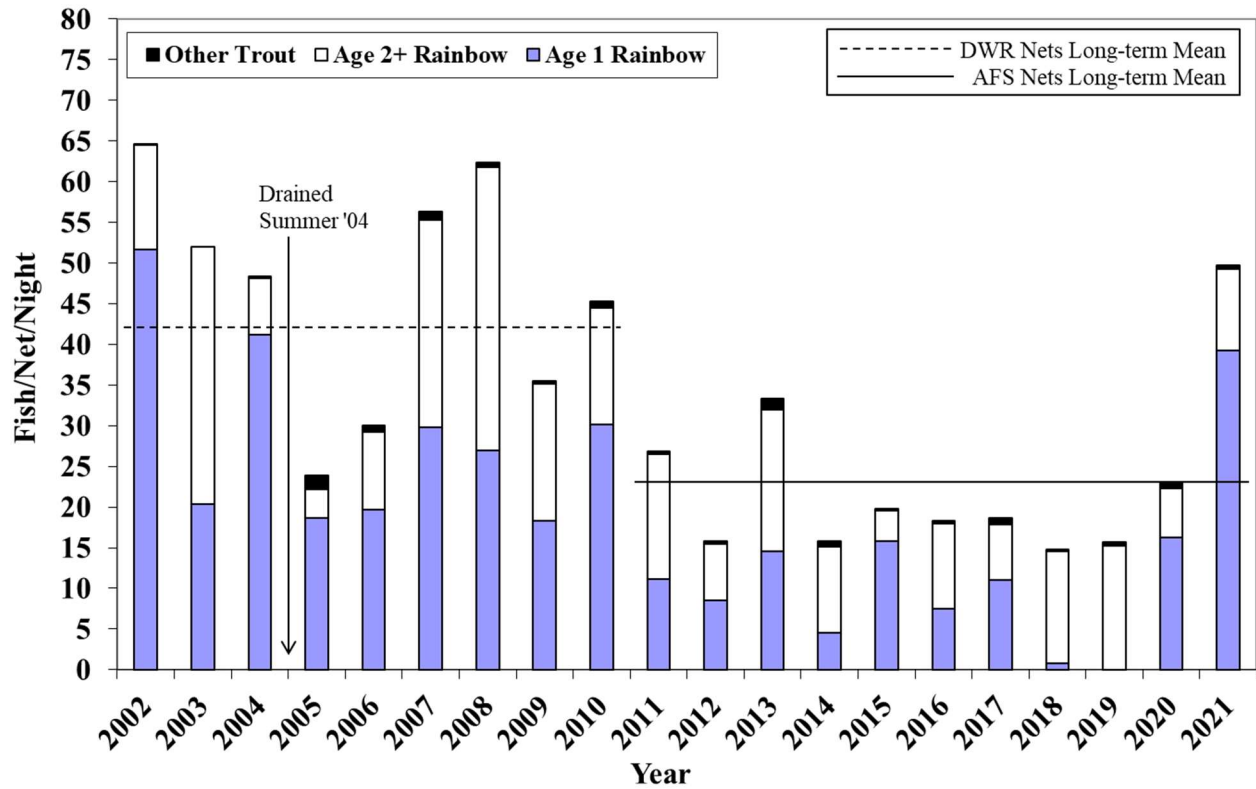


Figure 2. Trout catch rate during trend net surveys at Otter Creek Reservoir, 2002-2021.

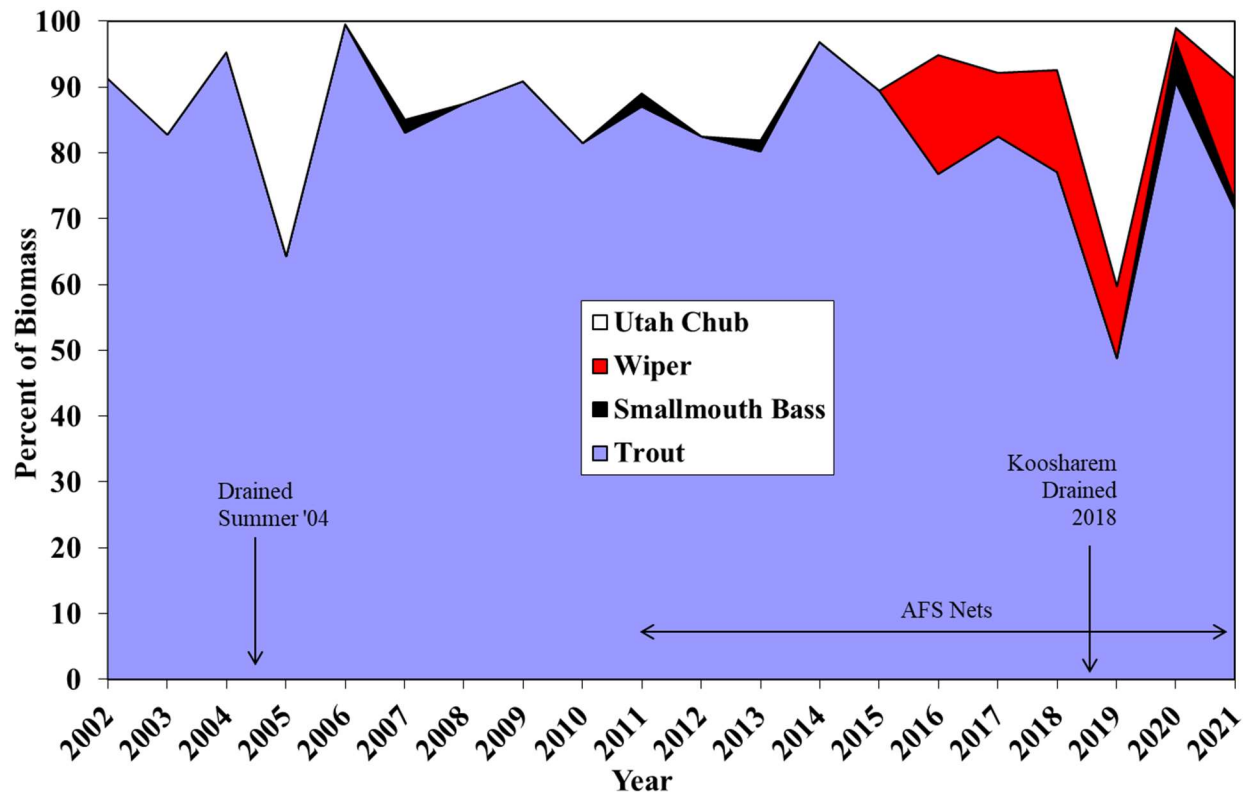


Figure 3. Relative biomass of fish species collected during trend net surveys at Otter Creek Reservoir, 2002-2021.

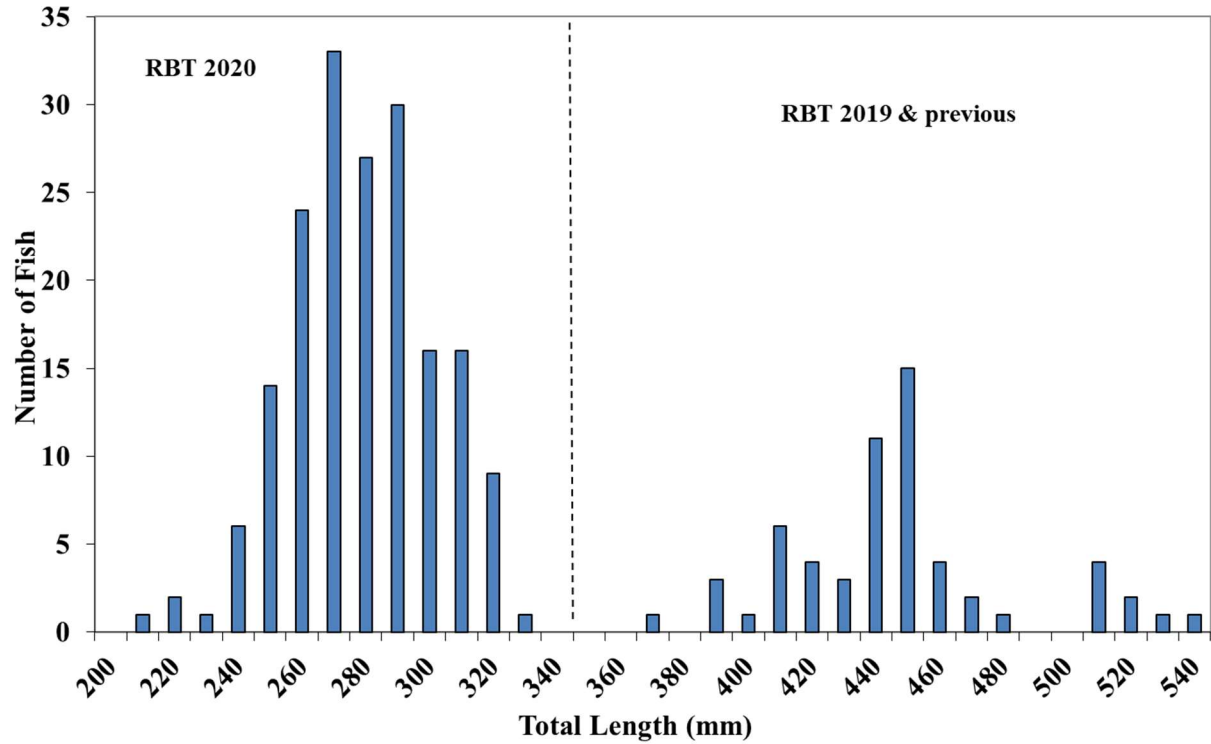


Figure 4. Length distribution of rainbow trout collected at Otter Creek Reservoir on April 6, 2021.

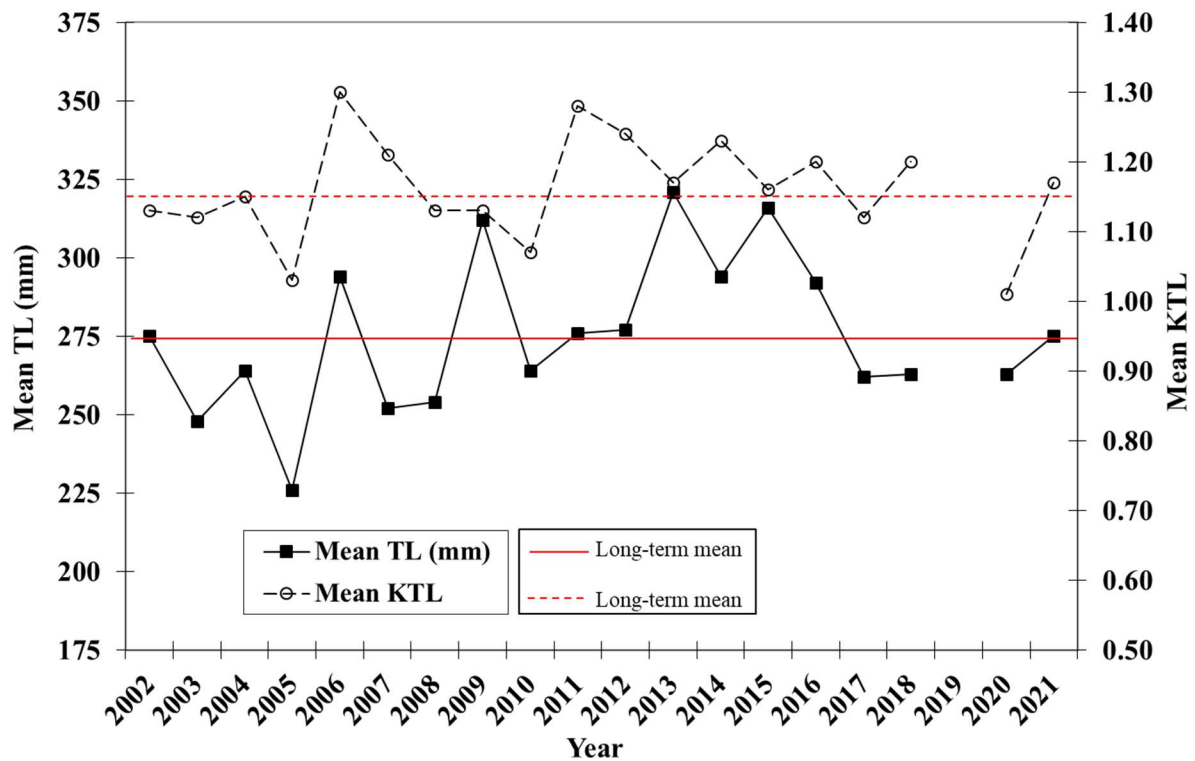


Figure 5. Mean total length (mm) and condition (K_{TL}) of rainbow trout stocked the previous year and collected during trend nets surveys at Otter Creek Reservoir, 2002-2021.



Figure 6. Large brown trout collected at Otter Creek Reservoir on April 6, 2021.



Figure 7. Large cutthroat trout collected at Otter Creek Reservoir on April 6, 2021.

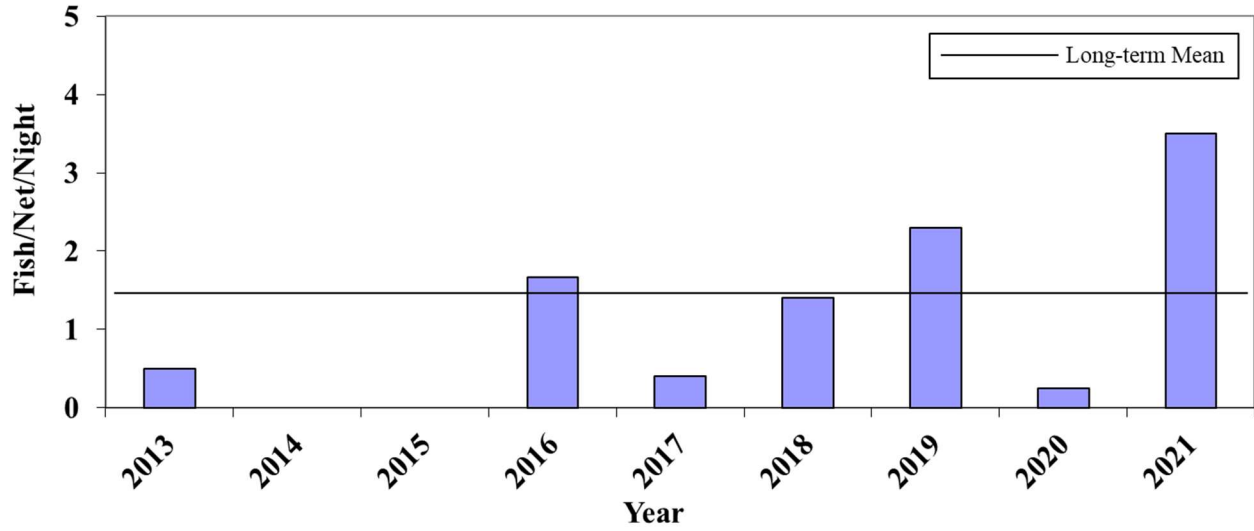


Figure 8. Wiper catch rate during trend net surveys at Otter Creek Reservoir, 2013-2021.

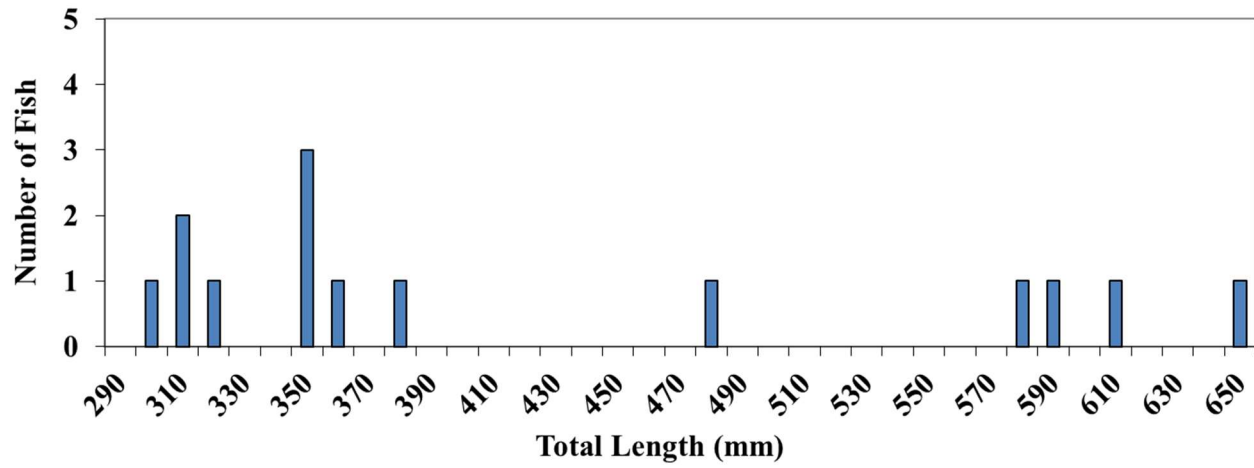


Figure 9. Length distribution of wipers collected at Otter Creek Reservoir on April 6, 2021.



Figure 10. Large wipers collected at Otter Creek Reservoir on April 6, 2021.

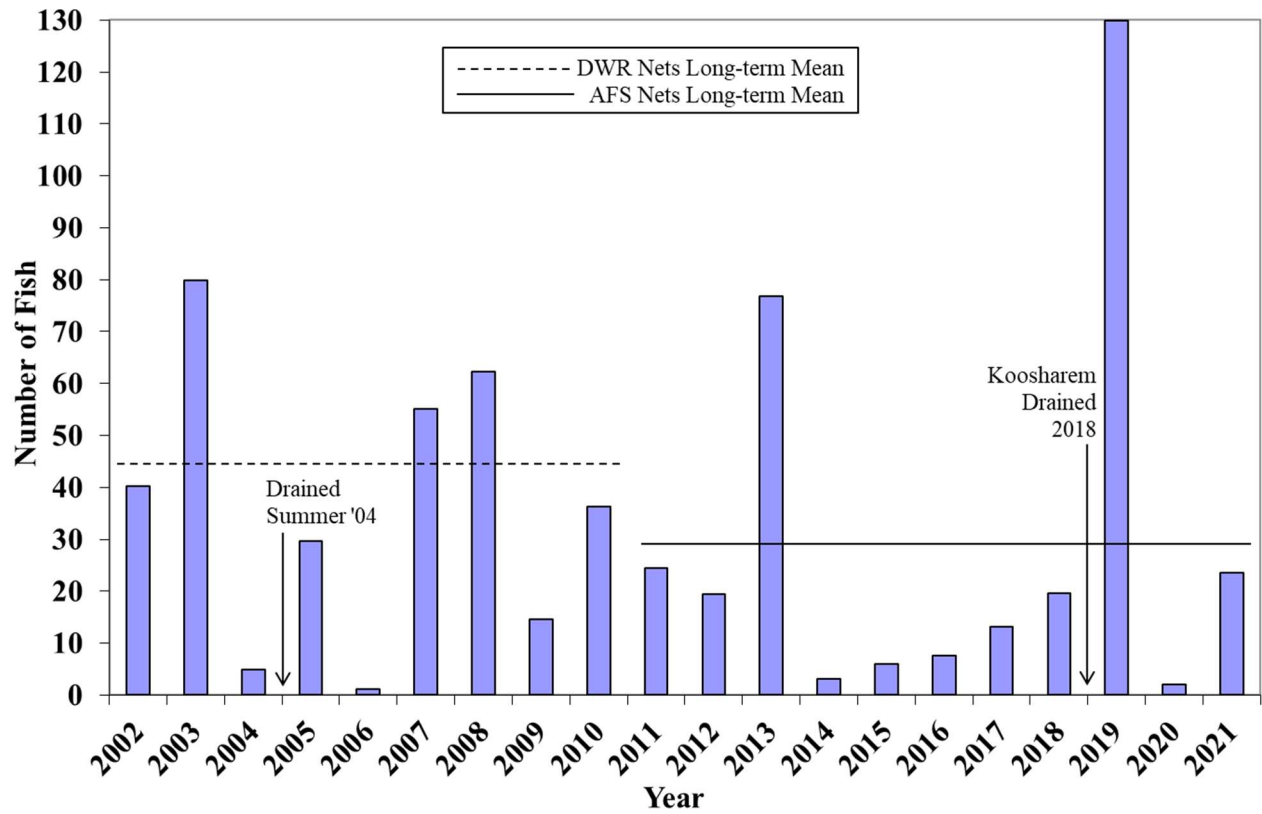


Figure 11. Utah chub catch rate during trend net surveys at Otter Creek Reservoir, 2002-2021.

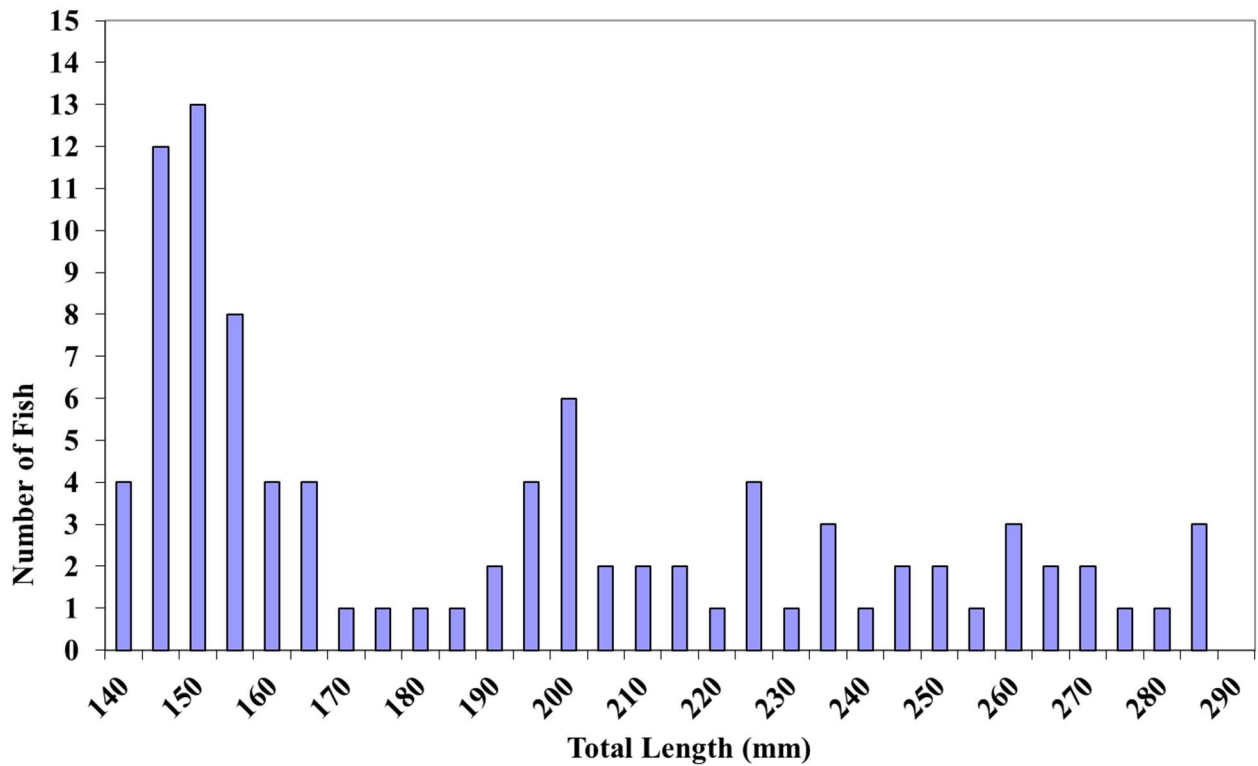


Figure 12. Length distribution of Utah chubs collected at Otter Creek Reservoir on April 6, 2021.



Figure 13. Twelve-pound wiper caught by an angler near the Otter Creek Reservoir dam in spring 2021.

Table 1. Record of trout stocking in Otter Creek Reservoir for the five years prior to the 2021 trend net survey. Bold text identifies the regularly scheduled annual quota.

Year	Rainbow Trout			Cutthroat Trout		Brown Trout		Total Excess			
	Number	Size (in)	Timing	Number	Size (in)	Number	Size (in)	Rainbow	Cutthroat	Brown	Tiger
2016	211,625	7.4	Fall	25,977	7.9						
	62,726	2.1	Spring	80,907 ^a	4.3	5,083	4.1	162,731	178,765	---	---
	100,005	7.8	Summer	97,858 ^b	1.7-2.4						
2017	891	15-21	Spring								
	59,709	7.5	Summer			133	15.3				
	9,100	9.6	Summer	25,090	7.6	5,288	3.3	891	---	5,668	---
	30,659	6.1	Fall			5,535	4.6				
	19,795	7.4	Fall								
2018	21,221	10.0	Fall								
	8,157	10.8	Spring			4,998	3.8				
	24,878	6.6	Spring			28,200	2.1				
	137,779	3-4	Summer	---	---	13,778	4.3	196,623	---	46,678	---
	50,667	7.0	Fall			5,000	6.0				
2019	198,275	6.8	Fall								
	15,035	9.0	Spring								
	19,415	7.2	Spring	31,021 ^a	2.8	20,808	3.1	15,035	31,021	---	23,040
2020	204,417	7.4	Fall								
	23,167	8.2	Spring	---	---	20,368	3.3	20,000	---	---	---
2021 Quota	240,861	7.3	Fall								
	23,000	7.0	Spring			20,000	3.0	---	---	---	---
	220,000	7.0	Fall								

^a – Excess Bear Lake cutthroat trout.

^b – Excess Bonneville cutthroat trout from Manning Meadow brood production.

Table 2. Record of wiper stocking in Otter Creek Reservoir for the five years prior to the 2021 trend net survey.

Year	Number Stocked	Size (in)	Fish/acre
2016	23,469	1.5	9
2017	26,999	2.1	11
2018	6,970	1.5	2.8
2019	21,549	1.1-2.2	18
	22,906	3.8	
2020	4,548	7.7	1.8
<i>2021 Quota</i>	<i>9,000</i>	<i>8.0</i>	<i>3.6</i>

Table 3. Summary of the results from the 2021 trend net survey at Otter Creek Reservoir.

Water:	Otter Creek Reservoir						Catalog #:	VI 403								
Date Set:	4/5/2021		Time:	14:00		Weather:										
Date Pulled:	4/6/2021		Time:	10:00		Water Temp:	upper 40s F									
# Nets:	AFS - 4 Floaters, 2 Divers						Collectors:	M. Hadley, N. Braithwaite, J. Hudson, G. Bezzant, A. Silva, Snow College								
	DWR - 1 Floater, 1 Diver															
Summary for Trout																
Species	N	Total	fish per net/night	Total Length (mm)			Weight (g)			Condition (Ktl)			% total catch	% total biomass	% total trout	% trout biomass
		Weight (kg)		Mean	SE	Range	Mean	SE	Range	Mean	SE	Range				
Rainbow Trout	197	74.79	49.25	318	5.09	207-550	434	23.4	114-1904	1.15	0.01	0.85-1.55	63.96	64.39	98.99	90.19
Brown Trout	1	4.50	0.25	---	---	662	---	---	4500	---	---	1.55	0.32	3.87	0.50	5.43
Cutthroat Trout	1	3.63	0.25	---	---	654	---	---	3632	---	---	1.30	0.32	3.13	0.50	4.38
RBT 2020	157	38.51	39.25	275	1.66	207-330	247	4.82	114-415	1.17	0.01	0.85-1.55	50.97	33.15	78.89	46.44
RBT 2019 & prev	40	36.29	10.00	445	5.05	365-550	992	40.0	502-1904	1.09	0.01	0.85-1.33	12.99	31.24	20.10	43.76
Trout	199	82.92	49.75	320	5.42	207-662	464	31.5	114-4500	1.15	0.01	0.85-1.55	64.61	71.40	---	---
Summary for Warmwater Sportfish																
Species	N	Total	fish per net/night	Total Length (mm)			Weight (g)			Relative wt. (Wr)			% total catch	% total biomass		
		Weight (kg)		Mean	SE	Range	Mean	SE	Range	Mean	SE	Range				
Wiper	14	21.50	3.50	420	34.4	300-646	1536	389	440-4210	109	2.99	91-129	4.55	18.51		
Smallmouth Bass	1	1.60	0.25	---	---	415	---	---	1603	---	---	143	0.32	1.38		
Summary for Non-Sport Fish																
Species	N	Total	fish per net/night	% total catch	% total biomass	TL (mm)										
		Weight (kg)				Range										
Utah Chub	94	10.12	23.50	30.52	8.71	136-285										
Comment:	SWF, WMLD fouled by algae. SEF dragged by wind. SEF, SWF, WMLD not used for RBT catch (fouling) SPF not used for RBT catch (non representative) NPD set at 10' depth, just N of Senior Citizen Point SPF set in 27-28' depth, near Fisherman's Beach															

Table 4. Trend net survey results at Otter Creek Reservoir, 1974-2010.

Date	Nets Set		Total Trout	Trout per net-night	Rainbow trout stocked 2 yrs. or more			Rainbow trout stocked previous year			Growth (mm/day)	Wiper per Net-Night	Wiper all ages			Total Nongame per net-night	Comments
	Flo	Div			Mean TL (mm)	Mean W (g)	Ktl	Mean TL (mm)	Mean W (g)	Ktl			Mean TL (mm)	Mean W (g)	Mean Wr		
8-May-74	0	1	124	124											0	TREATED 1971	
1-May-75	1	1	107	54											4.5		
21-Apr-76	1	1	35	18											6.5		
29-Apr-77	1	1	25	13											24	TREATED 1977	
10-Apr-79	1	2	80	27											0		
6-May-80	2	1	69	23											0		
24-Apr-81	2	1	46	15											1.33		
22-Apr-82	2	1	23	8											5		
12-May-83	6	1	175	25											65		
5-Apr-84	6	0	312	52	392	722	1.20	303	351						47		
10-Apr-85	6	0	299	50	424	966	1.26	245	183	1.20	0.48				93		
10-Apr-86	6	0	370	62	496	1300	1.06	322	463	1.30	0.69				115		
23-Apr-87	5	0	395	79	448	1010	1.13	302	348	1.22	0.77				244		
21-Apr-88	3	0	303	101	448	993	1.10	284	275	1.20	0.60				70		
19-Apr-89	4	0	57	14	471	1148	1.08	257	213	1.22	0.47				188	TREATED 1989	
12-Apr-90	4	0	32	8				272	221	1.07	0.61				0		
15-Apr-91	3	0	116	39	409	878	1.22	244	163	1.10	0.35				1.33		
16-Apr-92	4	0	50	13	423	880	1.15	260	221	1.25	0.60				0.5		
15-Apr-93	6	0	336	56	397	802	1.26	275	250	1.18					12		
18-Apr-94	6	0	211	35	468	1343	1.30	298	359	1.30	0.65				65		
3-Apr-95	5	0	319	64	410	725	1.04	241	140	0.98	0.34				195		
26-Mar-96	6	0	321	54	390	654	1.09	272	241	1.18	0.56				6.7		
3-Mar-97	6	0	345	58	347	380	0.89	207	86	0.95	0.23				31	Earlier netting	
26-Mar-98	4	0	51	13	406	766	1.13	271	184	0.90	0.52				45	4 nets instead of 6	
23-Mar-00	4	0	35	9				259	188	1.02	0.43				0	TREATED 1999	
27-Mar-01	6	0	280	47	408	848	1.24	252	202	1.24	0.46				6		
2-Apr-02	6	0	388	65	417	890	1.21	275	239	1.13	0.57				40		
8-Apr-03	6	0	312	52	388	652	1.12	248	175	1.12	0.34				80		
6-Apr-04	6	0	290	48	416	816	1.12	264	215	1.15	0.43				4.8	Drained Fall 04	
6-Apr-05	6	0	143	24				226	121	1.03	0.30				30		
13-Apr-06	6	0	180	30	390	775	1.26	294	337	1.30					1.2		
4-Apr-07	5	1	338	56	415	832	1.19	252	200	1.21	0.50				55		
11-Apr-08	5	1	374	62	386	609	1.08	254	190	1.13	0.47				62		
8-Apr-09	4	2	213	36	416	855	1.18	312	346	1.13	0.73				15		
7-Apr-10	4	2	272	45	449	977	1.07	264	204	1.07	0.47				36		

Table 4 (contd.). Trend net survey results at Otter Creek Reservoir, 2011-2021.

Date	Nets Set		Total Trout	Trout per net-night	Rainbow trout stocked 2 yrs. or more			Rainbow trout stocked previous year				Wiper per Net-Night	Wiper all ages			Total Nongame per net-night	Comments	
	Flo	Div			Mean TL (mm)	Mean W (g)	Mean Ktl	Mean TL (mm)	Mean W (g)	Mean Ktl	Growth (mm/day)		Mean TL (mm)	Mean W (g)	Mean Wr			
5-Apr-11	4	2	161	27	423	935	1.22	276	286	1.28	0.55					25	start AFS nets	
10-Apr-12	3	3	95	16	426	925	1.19	277	269	1.24	0.51					20		
11-Apr-13	4	2	200	33	416	823	1.13	321	391	1.17	0.62	0.50	190	91	73	77		
8-Apr-14	4	2	95	16	452	1077	1.15	294	325	1.23	0.48					3		
31-Mar-15	2	2	79	20	450	1131	1.21	316	371	1.16	0.61					6		
5-Apr-16	4	2	110	18	448	1058	1.17	292	308	1.20	0.53	1.67	483	1954	116	8		
5-Apr-17	4	2	93	19	463	1158	1.16	262	210	1.12	0.39	0.40	559	3208	120	13		
27-Mar-18	3	2	74	15	391	740	1.18	263	221	1.20	0.59	1.40	463	1573	105	20		
2-Apr-19	4	3	110	16	432	888	1.07					2.30	423	1376	105	130	Koosharem drained 2018	
8-Apr-20	2	2	92	23	445	1005	1.13	263	191	1.01	0.48	0.25				2		
6-Apr-21	2	2	199	50	445	992	1.09	275	247	1.17	0.36	3.50	420	1536	109	24		
Long-term mean				38	408	804	1.12	274	256	1.15	0.47	1.43	431	1542	107	41		
AFS nets (since 2011)				23												30		
DWR nets (pre-2011)				42												44		
																13		
																AFS nets (since 2011) w/out 2013, 2019		