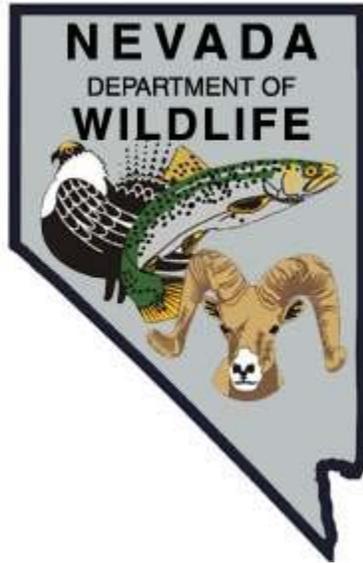


NEVADA DEPARTMENT OF WILDLIFE
STATEWIDE SPORT FISHERIES MANAGEMENT



FEDERAL AID JOB PROGRESS REPORT

F-20-52
2016

SOUTH FORK RESERVOIR
EASTERN REGION



**NEVADA DEPARTMENT OF WILDLIFE, FISHERIES DIVISION
ANNUAL JOB PROGRESS REPORT**

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ANNUAL JOB PROGRESS REPORT**

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**NEVADA DEPARTMENT OF WILDLIFE, FISHERIES DIVISION
ANNUAL JOB PROGRESS REPORT**

State: *Nevada*
Project Title: *Statewide Fisheries Program*
Job Title: *South Fork Reservoir*
Period Covered: *January 1, 2016 through December 31, 2016*

SUMMARY

The fishery of South Fork Reservoir received moderate angler use in 2016 due in part to comparatively good reservoir capacity, healthy fish stocks, and close proximity to urban areas in Elko County. With recovery from regional drought conditions experienced during 2012 to 2015, South Fork Reservoir finished 2016 at approximately 70% of capacity, with the main boat ramp still in service and no major angler inconveniences observed.

Twenty days of random angler surveys contacted 252 anglers from January through December. Anglers reported fishing 738 hrs to catch 507 fish for annual average catch rates of 0.69 fish per hour and 2.01 fish per angler. The average harvest size for rainbow trout was 16.2 in total length (TL). A total of 79,022 trout (63,602 of catchable size, >8.0 in) were stocked during 2016.

Three spring gill nets caught 114 rainbow trout, 15 wipers, one channel catfish, three Tahoe suckers, and one Lahontan tui chub for a record survey total of 134 fish. Rainbow trout ranged from 9.7 to 20.4 in and averaged 13.4 in TL, wipers averaged 20.6 in TL, and the one channel catfish measured 20.9 in TL. The one Lahontan tui chub measured 13.6 in TL and Tahoe suckers averaged 16.5 in TL.

A total of 159 smallmouth and 257 largemouth bass were electroshocked during two reservoir population surveys and one spillway salvage, with good representation of older age classes present for both species. The average size of smallmouth bass was 8.9 in TL and largemouth bass were 11.4 in TL.

A digital recording thermograph was installed in South Fork Reservoir in late April to monitor water temperature for forecasting black bass spawning behavior during 2016. Preferred temperature for black bass nesting and subsequent spawning should have been initiated on or around May 24, with no deleterious temperature disturbances occurring throughout late spring to ensure optimum spawning and rearing conditions for largemouth and smallmouth bass.

A total of three days were spent collecting vertical plankton tows to survey for quagga mussel presence. Fifteen individual samples were evaluated for the presence of quagga mussel veligers. Visual surveys of exposed shoreline and the removed boat ramp resulted in no adult quagga mussels being observed.

BACKGROUND

Unusual in concept for Nevada, the South Fork Dam was constructed in 1988 exclusively to create a recreational-based reservoir. The 40,000 acre-ft impoundment inundates approximately 1,650 acres and is a year-around multi-recreational attraction. The reservoir filled for the first time in 1995 and angler visits alone exceeded 25,000 days. A multi-storied fishery of stocked trout, black bass, catfish, and recently wipers has been established since water was first stored. Currently managed under a Coldwater, Quality Fishery Management Concept, and, despite heavy angling pressure, the fishery continues to produce quality and occasional trophy-sized game fish on a constant basis. Careful attention is required in administration of management initiatives and monitoring of angler harvest and fish body condition as both recreational sport fish interest and the regional angler population increase.

OBJECTIVES and APPROACHES

Objective: General Sport Fisheries Management.

Approaches:

- Conduct a general fisheries assessment through scheduled surveys to monitor for marked fish returns, body condition of game fish during post drought conditions and impacts of adjusted stocking allocations.
- Salvage fish below South Fork Reservoir spillway after spring runoff as needed.
- Purchase and stock 10,000 channel catfish
- Delineate black bass preferred nesting areas (GPS location, depth, distance from shore, substrate type) during 4 days in spring.
- Sample for occurrence of quagga mussel veligers through plankton net tows conducted two to four times between June and September at up to three sites. Conduct visual and tactile surveys of artificial and natural solid substrates in conjunction with veliger sampling.

PROCEDURES

General fisheries assessments consisted of a minimum of two days of creel surveys scheduled per month that documented and analyzed trends exhibited within the primary trout fishery. Data collection included number of anglers, location, target species, and harvest. Harvest data included species, size to total length, and representative weights, as well as fin clips, marks, and an assessment of body condition. Data was compiled and analyzed.

On May 2, 2016 at 1850 hrs in the evening, the first of three gill nets was set in South Fork Reservoir. A 150 ft x 6 ft net was set along the east shoreline mid to south end of the reservoir near the North Shore Campground. The second net measured 150 ft x 6 ft and was a buoy set at the southeast side, north of the no-wake zone in 10 ft of water. The third net measured 150 ft x 6 ft and was set at 1930 hrs off the northwest

shoreline below the last road turnout/Fisherman's Point. The three nets were fished overnight for a total of 42.0 hrs, or 14.0 hrs each. Surface water temperature was recorded at 60°F on May 2 and 53°F on the morning of May 3.

The black bass population inventory and capture occurred on May 18, September 15, and September 19, with good results collected using the Coffelt electroshocking barge. The two fixed probe anodes were utilized with the barge serving as the cathode. Electroshocker efficiency was fair to good in drawing and holding fish despite the cloudy water conditions. All fish were netted and held in the live well until completion of the transect. Selected fish were measured, weighed, and then released. Selected specimens of largemouth bass were collected and transported to White Pine and Elko Counties for use as a largemouth bass augmentation for fishery rebuilding. Electroshocker settings and other relevant information during this inventory are listed in the following:

2016 Electroshocking Surveys – (May and September)

Pulse - DC	Pulse Width (millisec) – 5	Time – 1845 – 2145 hrs
Volts – 680	Pulse Freq. (per sec) – 120	Water Condition – cloudy, weeds moderate
Output (amps) – 4-5	Shocking Time – 2,359 secs (39 min = 0.66 hr)	Water Temp (°F) – 65° Sept. 19

A HOBO Water Temp Pro data logger, recording thermograph was installed near the perimeter of the reservoir by the main boat landing from April through October to examine timing and possible success of bass spawning. Preferred smallmouth bass nesting areas were delineated through visual surveys from a boat during April through June when conditions were favorable (i.e., no wind).

Quagga mussel surveys were conducted on June 29, July 26, and October 12, 2016 with three sites being sample each day. Two samples were taken at each of the sample sites for the June and October samples that allowed for PCR and microscopy sampling, with one sample per site occurring in July for microscopy analysis. A total of 15 individual samples were sent to two separate labs for analysis and resulted in all negative findings.

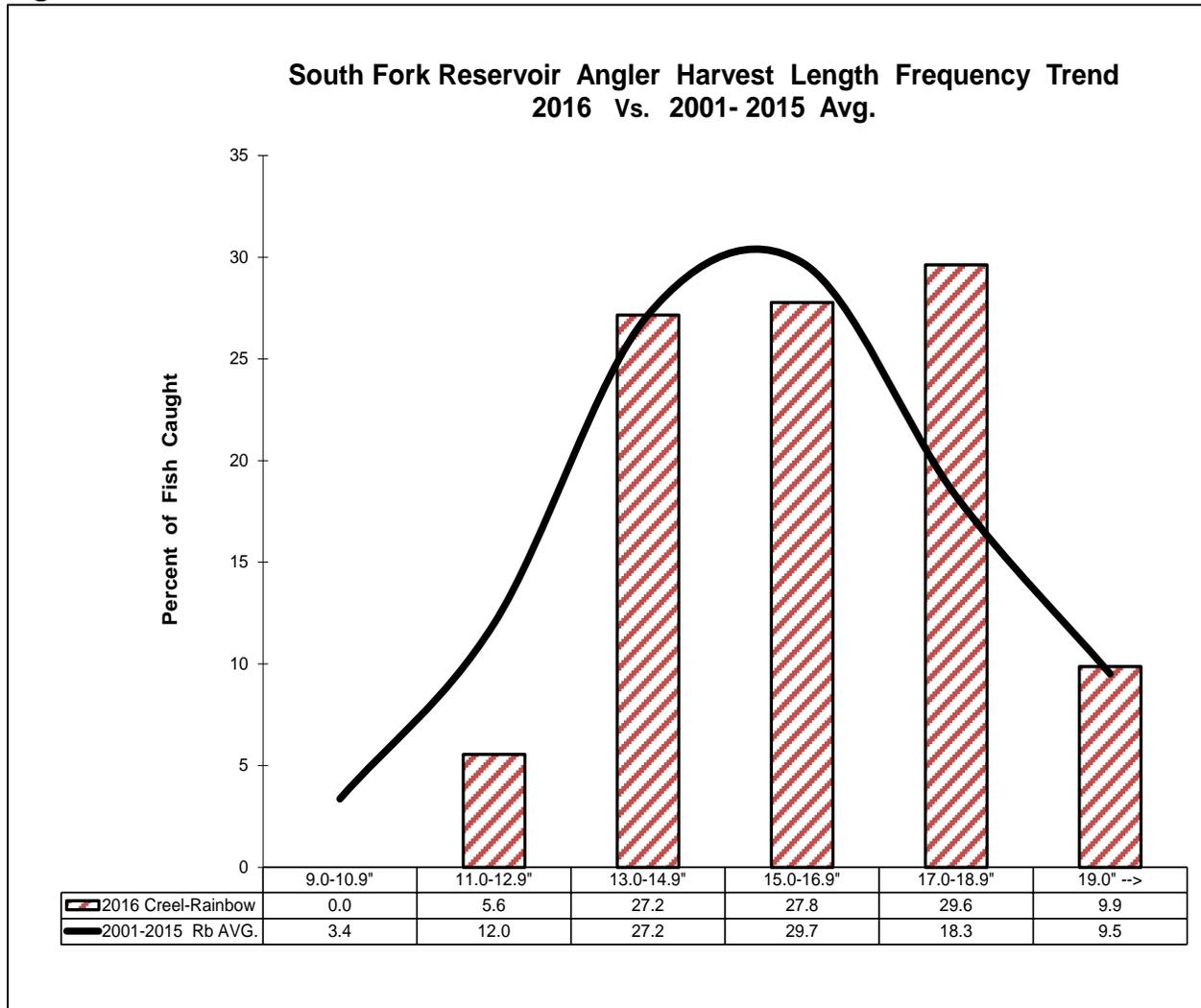
FINDINGS

Opportunistic Angler Contacts and Surveys

During 2016, 252 anglers were contacted at South Fork Reservoir during 20 days of roving angler surveys (Table 1). A total of 738 hrs of fishing effort were expended to catch 507 fish, of which 293 were released (58% of total catch). Overall angler success was 0.69 fish per hour and 2.01 fish per angler, trending upward from past years. The

average harvest size for 158 rainbow trout measured was 16.2 in TL. Figure 1 illustrates angler harvest and rainbow trout length frequency and compares it with the 15-year average. Approximately 40% of the rainbow trout sampled in 2016 were greater than 17.0 in FL, significantly higher compared to the long-term average of 28% during the period of 2001 to 2015.

Figure 1.



Of the 158 rainbow trout measured, 151 fish were also weighed for body condition analysis, resulting in 5.3% in poor condition, 33.1% in fair condition, 49% in good condition, and 12.6% in excellent condition. These fish averaged 16.1 in TL and 1.76 lbs, and had an overall body condition rating of good.

No bowcutt or cuttbow trout were checked in angler surveys during 2016. Approximately 8,000 catchable size cuttbow trout were stocked in October 2016. This hybrid trout species continues to assist in biological control of non-desirable fish species and increases recreational angling opportunities for larger trout.

Also in 2016, South Fork Reservoir was stocked with 63,602 catchable trout and 15,420 sub-catchable trout (Table 2). This allocation of stocked trout represents near average allocations for South Fork Reservoir, which was the beneficiary of increased allotments during 2012 through 2015, due to regional drought conditions at other waters.

No warmwater fish species (channel catfish or wipers) were stocked in 2016 due to budget constraints and improvements realized in the control of nongame fish species (chub and sucker) within the reservoir. Augmentation of catfish and wipers will be evaluated on a yearly basis to determine the need and efficacy in their continued management role of the fishery.

South Fork Reservoir began the year at approximately 75% capacity and finished near 70%, or approximately 27,810 acre-ft, similar to the 2015 elevations. Water discharge through the dam was monitored by State of Nevada, Division of Water Resources, which is managed as a flow in – flow out regime, with the only loss of water occurring primarily through seasonal evaporation.

Spillway Channel Fish Salvage

The September 15 spillway salvage produced 76 largemouth bass at an average size of 10.4 in TL and 29 smallmouth bass at an average size of 12.6 in TL. A total of 35 largemouth bass were transplanted into Jiggs Reservoir and the remaining 41 largemouth and 29 smallmouth bass were transplanted into Willow Creek Reservoir for broodstock augmentation. The South Fork Reservoir spillway salvage contacted numerous yellow perch below the dam, of which seven were measured that had an average size of 6.7 in TL, with the largest being 8.7 in TL. This detection documents the first time that yellow perch have been encountered during surveys of or below South Fork Reservoir.

Quagga mussel surveys

Surveys were conducted on June 29, July 26, and October 12, with three sites being sampled each day. Two samples were taken at each of the sample sites for the June and October samples that allowed for PCR and microscopy sampling, with one sample per site occurring in July for microscopy analysis. A total of 15 individual samples were sent to two separate labs for analysis and resulted in all negative findings.

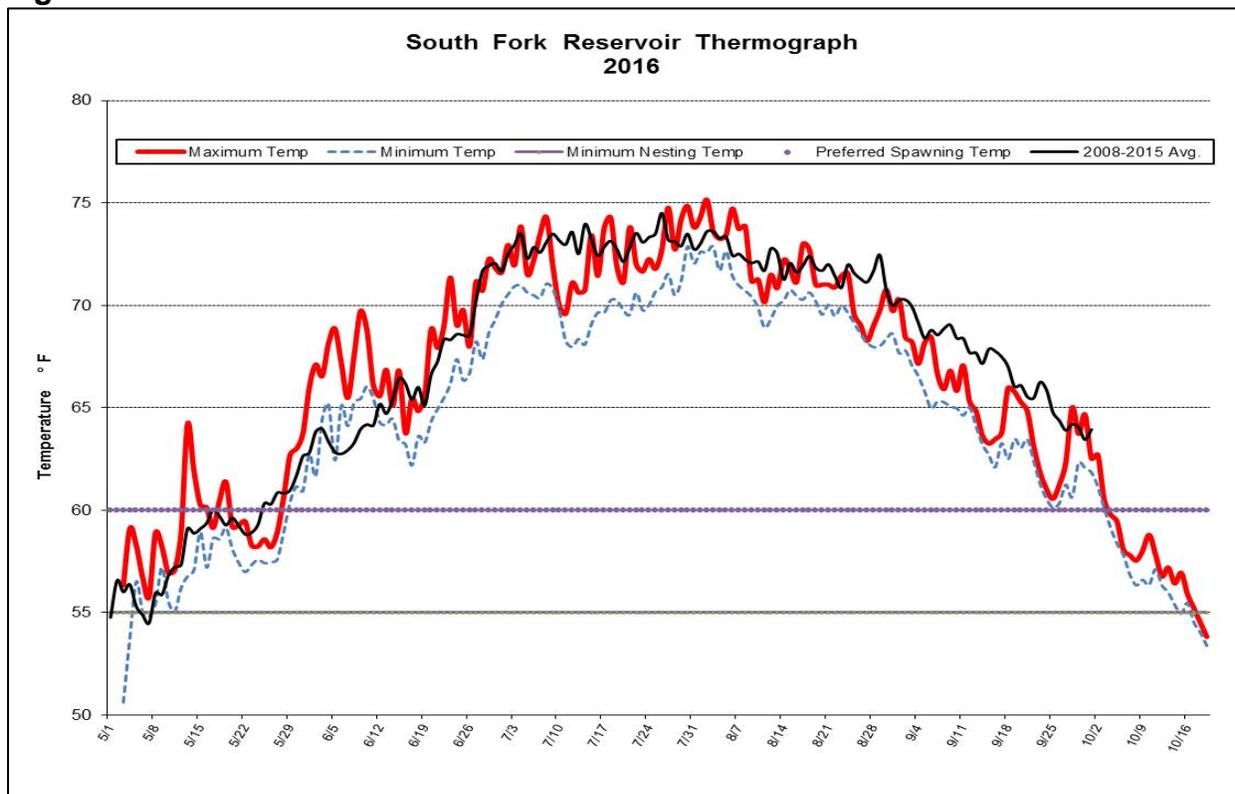
Visual surveys of the artificial samplers, exposed shoreline, and the removed boat ramp resulted in no quagga mussels being observed. South Fork Reservoir should be treated as a Watch List Water and should continue to be monitored at an elevated level due to the reservoirs recreational popularity and positive zebra mussel qPCR results that were observed in the past.

Water Temperature Monitoring

A digital recording thermograph was installed in South Fork Reservoir to monitor water temperature and predict black bass spawning behavior and spawning success during the spring and early summer. The thermograph was placed approximately 36 in below the surface off an anchored buoy chain near the main boat landing to allow for monitoring at a consistent depth throughout the season.

Based on daily recorded temperatures, preferred black bass nesting and subsequent spawning should have been initiated during the third week of May (see Figure 2). With no deleterious temperature disturbances occurring through late spring, optimum spawning temperatures were ensured for largemouth and smallmouth bass. The maximum water temperature was 75.2°F on August 2 and minimum temperature recorded was 50.6°F on May 3. June exhibited above average maximum temperatures in comparison to the cumulative eight-year average, assuring further success for black bass spawning activities in 2016.

Figure 2.



Mapping of Spawning Bass

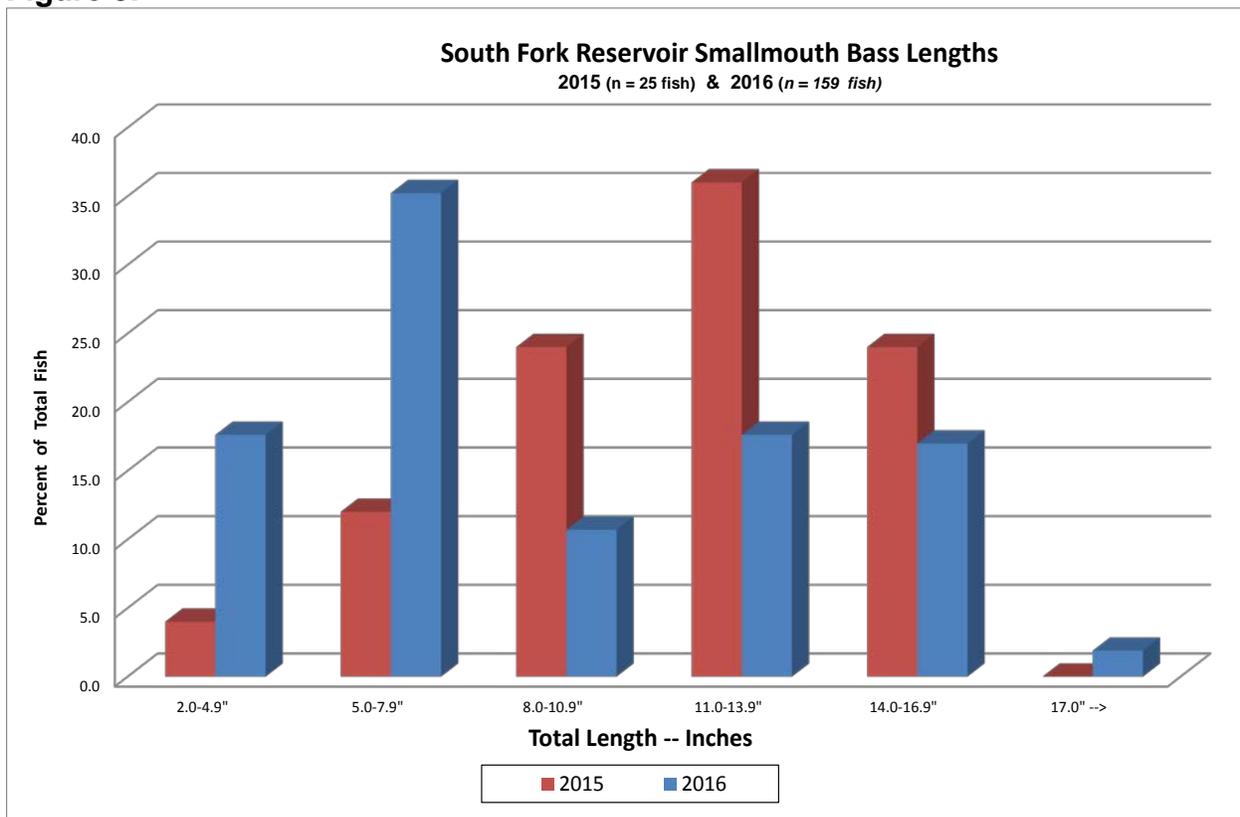
No mapping of black bass nests occurred in 2016 due to weather and time constraints, but will proceed in spring of 2017. Observations of bass spawning behavior corresponded closely with predicted, associated spawning temperatures while surveying for largemouth bass in spring 2016.

Sport Fish Population Surveys

The Black bass evaluation and electroshocking surveys occurred on May 18 (largemouth capture), September 15 (spillway salvage and smallmouth/largemouth bass capture) and September 19, 2016 at Tomera Cove, Coyote Cove Boat Ramp South, Jet Ski Beach, Fisherman's Point, main boat landing, and spillway inlet/dam face. These areas were all sampled from 1845 to 2145 hrs under warm and calm conditions. Water temperature was recorded at 65°F at a six inch depth on September 19. Water clarity was cloudy, with algae throughout most transects and shocking efficiency was fair.

A total of 159 smallmouth and 257 largemouth bass were sampled during all three electrofishing surveys, with good representation of the older age classes present for both species. The average size of all smallmouth bass sampled in 2016 was 8.9 in TL (size range 2.4 to 19.9 in TL). The Relative Stocking Density 10 (RSD-10) factor equated to 83, indicating the sampled population was dominated by larger adult fish (36.5% >11+ inches TL) (Table 3, Figure 3).

Figure 3.



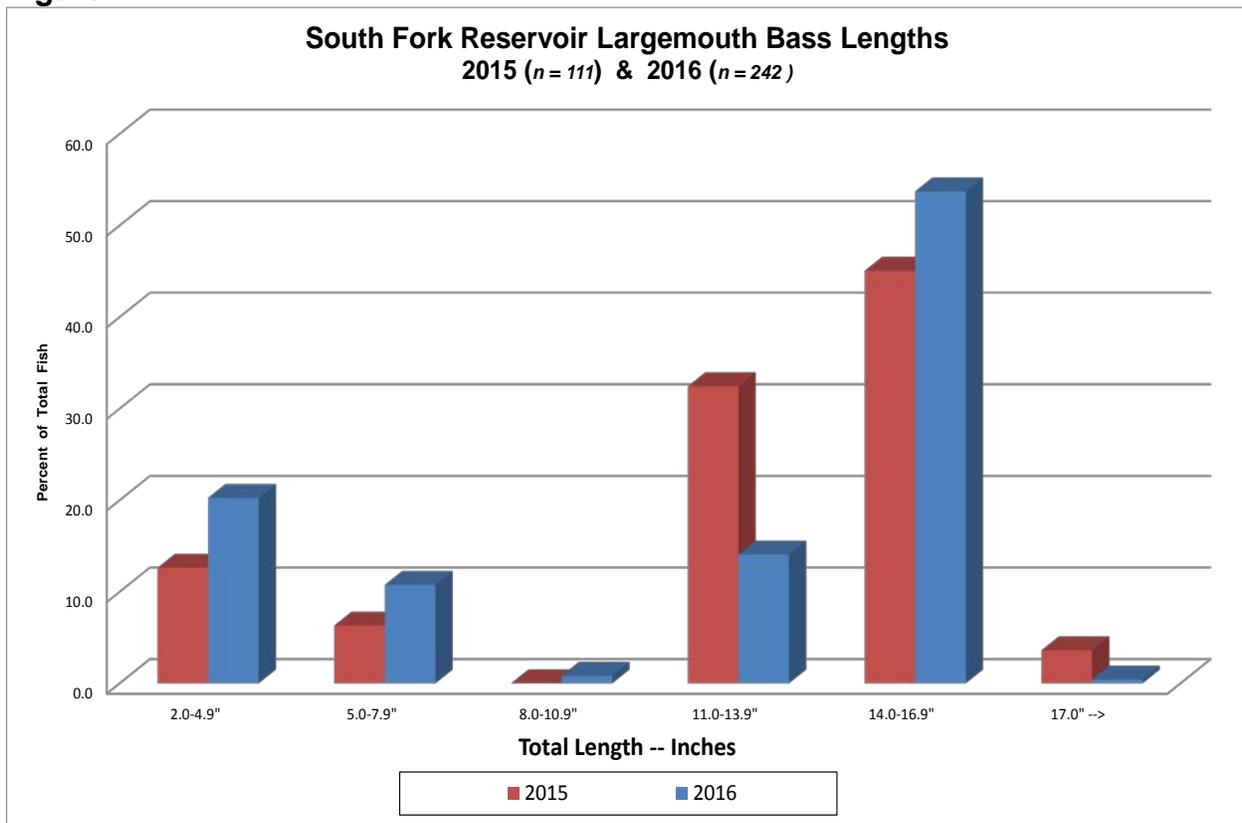
All largemouth bass sampled in 2016 were in good condition, with the largest measuring in at 19.1 in and weighing 4 lbs. A total of 242 largemouth bass were measured and averaged 11.5 in TL, while 30 were weighed for body condition analysis on September 19 (Table 4). The 30 largemouth bass averaged 15.3 in TL, had an average sample weight of 2.03 lbs, and an average body condition value of 5.64 and

rating of excellent. Approximately 54% of all largemouth surveyed were 14 in TL or greater for 2016.

The South Fork Reservoir largemouth bass population continues to expand every year, with the dominant cohort of largemouth bass (Class VII+; 2006 year class) leading the way and carrying forward in annual population surveys (Figure 4). A total of 61 South Fork Reservoir largemouth bass with an average length of 14.3 in TL were transported to White Pine County. Approximately 36 largemouth bass with an average length of 14.6 in TL were transported to Jiggs Reservoir to be utilized as an augmentation of the largemouth bass population for this recovering fishery on May 18, 2016.

Seven wipers were contacted during the electrofishing surveys and salvage and they had an average TL of 23.2 in. Two channel catfish were also sampled that had an average TL of 23.1 in.

Figure 4.

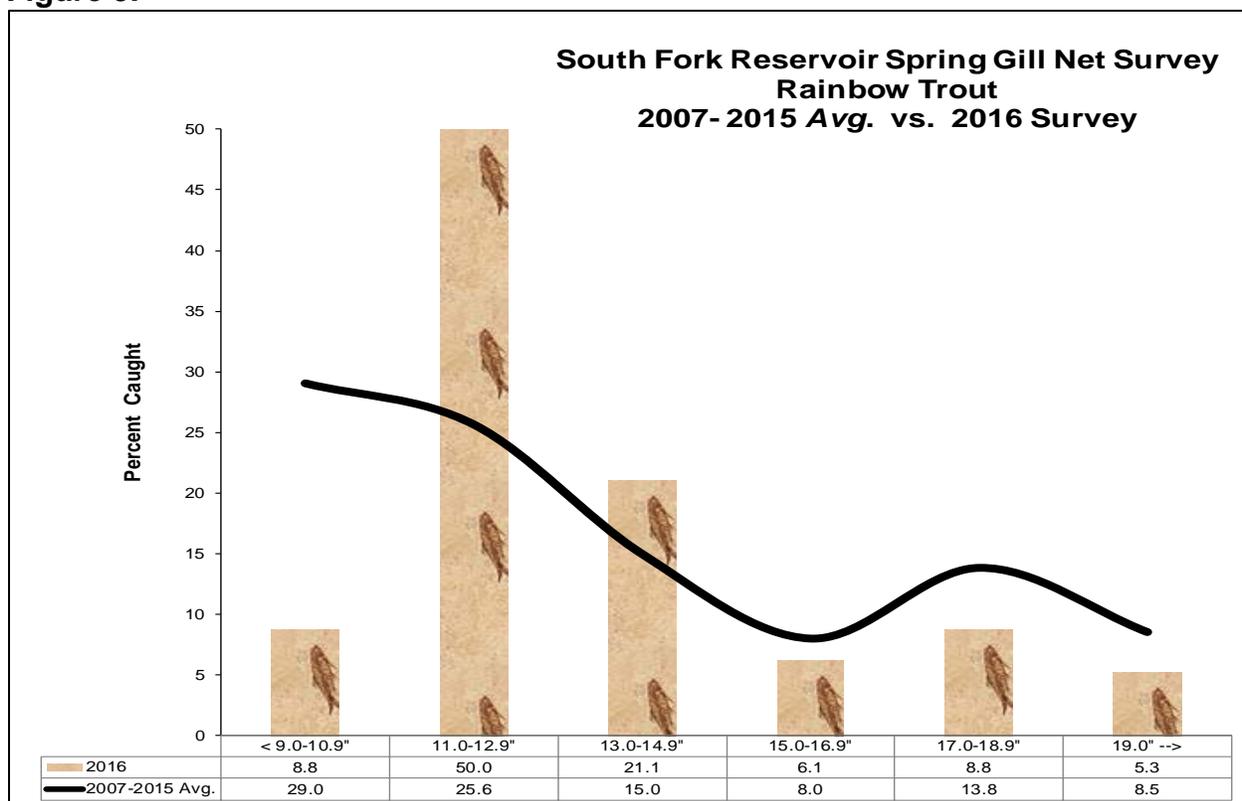


The three spring gill nets caught a record total of 114 rainbow trout, 15 wipers, one channel catfish, three Tahoe sucker, and one Lahontan tui chub, for a survey total of 134 fish (Table 5). The rainbow trout ranged from 9.7 to 20.4 in and averaged 13.4 in TL, the 15 wipers averaged 20.6 in TL, and the lone channel catfish measured 20.9 in TL. The Lahontan tui chub measured 13.6 in TL and the three Tahoe sucker averaged 16.5 in TL.

Of the 114 trout captured in 2016, only 10 were from the recent spring 2016 stocking efforts (< 11 in TL). K-factor analysis and body condition rating was performed on 94 of the 114 captured rainbow trout. All rainbow trout measured and weighed had an average total length of 13.9 in, an average weight of 19.4 oz, and a K-factor value of 4.09 for a rating of good. Three fish had a rating of poor, 29% fair (27 fish), 58% good (55 fish), and 10% received a rating of excellent (nine fish).

Figure 5 illustrates the length frequency of the rainbow trout captured in the gill net population survey for 2016 and compares it to the 2007 to 2015 survey average, with good size class representations of smaller fish (11.0 to 12.9 in) caught in 2016 compared to the cumulative nine-year average. The higher percentage of the smaller age classes is representative of the excess rainbow trout stocked in 2015 to accommodate regional drought conditions at other fisheries (Figure 6).

Figure 5.



The overall fish composition of the three nets combined was rainbow trout 85%, wiper 11%, channel catfish 1%, Tahoe sucker 2%, and Lahontan tui chub 1%. The nongame fish to game fish ratio was 0.03:1.0, or a percent ratio of 3% to 97% (Figure 7). This trend is well below the 21-year average of 1.1:1.0 nongame to game fish ratio observed in the reservoir and shows promise for the health of the popular rainbow trout fishery.

Figure 6.

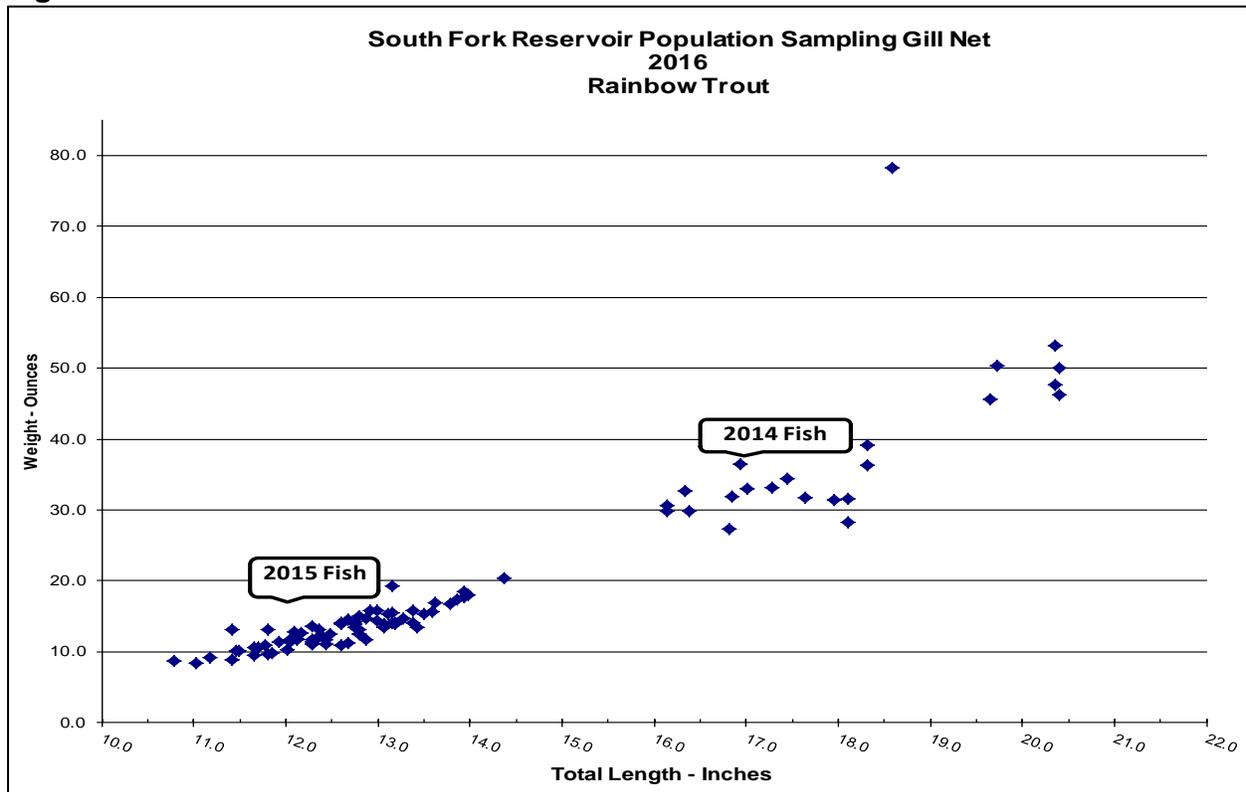
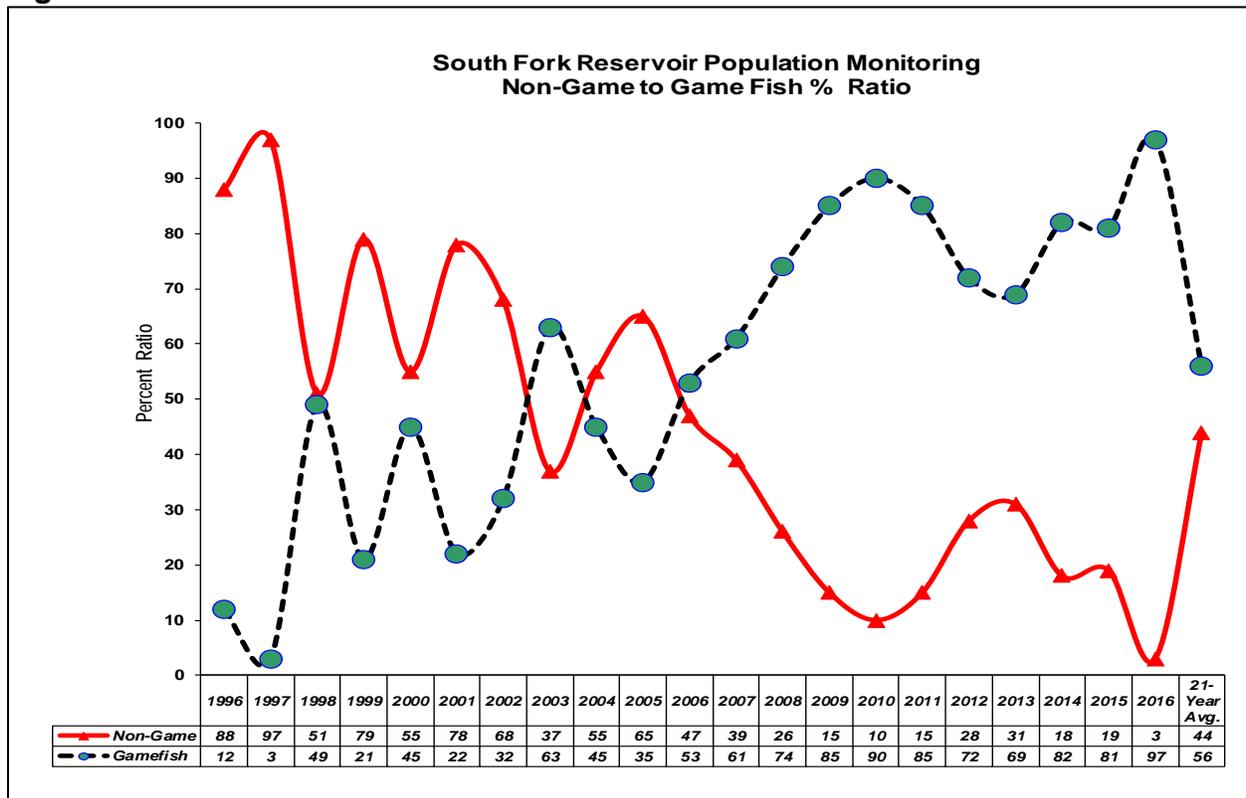


Figure 7.



The success of the wiper in South Fork Reservoir has been documented, and an evaluation of this species has been ongoing and will be documented over the next several years. Fifteen wipers were caught in the 2016 gill netting survey, with the specimens measuring an average of 20.9 in TL (size range of 18.0 to 25.0 in TL). Trophy sized wipers are still available to anglers, as documented by a 25 in, 10.6 lb specimen caught in the southeast net set. No tagged wipers from previous sampling efforts were encountered in 2016 and no wipers have been stocked since 2013 due to drought conditions within the region.

The capture of the chub and suckers is fairly common in the springtime at South Fork Reservoir. The size of the adult nongame fish (>10 in TL) and the diminishing survey results of smaller and younger age classes of chub and sucker illustrates that the use of biological control agents (wiper, black bass, channel catfish, and piscivorous species of trout) are having positive effects in controlling those populations within the reservoir.

MANAGEMENT REVIEW

- Angler surveys were conducted throughout most of the 2015 fishing season with good fishing and angler satisfaction reported.
- The spillway fish salvage was completed and allowed for the capture and transport of black bass for augmentation into other regional fisheries.
- The objective to install, retrieve, and analyze data from the thermograph was completed.
- The black bass electroshocking surveys were completed in the spring and fall.
- The approaches for quagga mussel monitoring were completed.
- Population surveys revealed continued success in preserving nongame fish to game fish ratios and showing good carryover of planted trout.
- Wipers and channel catfish were not stocked due to budget constraints.
- Delineation of black bass nesting areas will occur in the spring of 2017.

RECOMMENDATIONS

- Continue angler surveys to develop an accurate assessment of angler use and harvest of all fish species.
- Conduct an electroshocking survey to examine age class distribution, body condition, and Relative Stock Density to assess black bass and expansion of their populations.
- Continue to monitor reservoir water levels and temperatures in spring to evaluate and predict black bass spawning timing and possible success.
- Continue population sampling to monitor game fish/nongame fish ratios.
- Continue wiper and channel catfish augmentation and monitoring/evaluation to provide added control of nongame fish and provide diversified angling opportunities with trophy fish potential when needed.

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Eastern Region

Date: February 2017

Table 1

SOUTH FORK RESERVOIR
2016 Creel Census Angler Use and Harvest Summary

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Totals
No. Days Checked	1	2	1	0	2	4	4	0	0	2	2	2	20
Avg. Water Temp.	Ice=9"	Ice=11"	46		62	68	72			57	53	Ice=4"	59.7
No. Anglers Checked	17	6	3		40	108	60			9	2	7	252
No. of Hours Fished	40	23.5	5.0		143.5	287.5	186			34.5	8	10	738.0
Total Fish Caught	2	6	15		130	223	97			27	2	5	507
Total Fish Harvested:	2	2	0		31	75	81			17	1	5	214
<i>Rainbow Trout</i>	2	4	15		31	75	80			17	1	5	230
<i>Brown Trout</i>	0	0	0		0	0	0			0	0	0	0
<i>Bow-cutt Trout</i>	0	0	0		0	0	0			0	0	0	0
<i>Black Bass</i>	0	0	0		0	0	1			0	0	0	1
<i>Wiper</i>	0	0	0		0	0	0			0	0	0	0
<i>Channel Catfish</i>	0	0	0		0	0	0			0	0	0	0

Average Measured Fish Harvest Size

<i>Rainbow Trout No.</i>	2	2	0		24	62	49			13	1	5	158
<i>Avg. Size (FL-in.)</i>	18	16.1			17.4	15.7	15.7			17.1	18.9	16.7	16.2
<i>Brown Trout No.</i>	0	0	0		0	0	0			0	0	0	0
<i>Avg. Size (FL-in.)</i>													
<i>Bow-cutt Trout No.</i>	0	0	0		0	0	0			0	0	0	0
<i>Avg. Size (FL-in.)</i>													
<i>Black Bass No.</i>	0	0	0		0	0	1			0	0	0	1
<i>Avg. Size (TL-in.)</i>							12.5						12.5
<i>Wiper Bass No.</i>	0	0	0		0	0	0			0	0	0	0
<i>Avg. Size (TL-in.)</i>													
<i>Channel Catfish No.</i>	0	0	0		0	0	0			0	0	0	0
<i>Avg. Size (TL-in.)</i>													

Angler Catch Rate

<i>Fish / Hour</i>	0.05	0.26	3.00		0.91	0.78	0.52			0.78	0.25	0.50	0.69
<i>Fish / Angler</i>	0.12	1.00	5.00		3.25	2.06	1.62			3.00	1.00	0.71	2.01

Table 2

South Fork Reservoir Fish Stocking

2016

Date	# of Fish Stocked	Pounds	Avg. Size (in.)	Species	# / Pound	Strain	Stocking Location	Water Temp.	Tank Temp.	
April 7, 2016	8,200	2,000	8.5	Rainbow Trout	4.1	Eagle Lake	Main Boat Ramp	47	51	
April 12, 2016	8,200	2,000	8.6	Rainbow Trout	4.1	Eagle Lake	Main Boat Ramp	54	52	
April 14, 2016	8,800	2,000	8.3	Rainbow Trout	4.4	Eagle Lake	Main Boat Ramp	51	52	
April 18, 2016	7,800	2,000	8.6	Rainbow Trout	3.9	Eagle Lake	Main Boat Ramp	53	52	
April 25, 2016	5,510	1,900	9.5	Rainbow Trout	2.9	Eagle Lake	Main Boat Ramp	54	52	
April 26, 2016	3,915	1,350	9.5	Rainbow Trout	2.9	Eagle Lake	Main Boat Ramp	49	51	
April 26, 2016	5,002	1,725	9.5	Rainbow Trout	2.9	Eagle Lake	Main Boat Ramp	49	52	
June 7, 2016	15,420	600	4.6	Brown Trout	25.7	Sheep Creek	Main Boat Ramp	71	54	
October 7, 2016	6,246	1,635	8.7	Rainbow Trout	3.8	Erwin-Arlee	Main Boat Ramp	60	52	
October 12, 2016	1,854	450	8.5	Rainbow Trout	4.1	Erwin-Arlee	Main Boat Ramp	58	54	
October 12, 2016	8,075	1,550	7.8	Cutt-Bow	5.2	Marlette	Main Boat Ramp	58	54	
Total Catchable Trout (>8.0 inches):	63,602	16,610	<i>(x = 3.8 fish/pound)</i>				Avg. Water Temp. =		54.9	52.4
Total Sub-catchables Trout (4.0-7.9 inches):	15,420	600	<i>(x = 25.7 fish/pound)</i>							
Total Fingerling Trout (< 4.0 inches):	0	0								
Total Warm Water Fish:	0	0								
TOTALS	79,022	17,210								

BC/CB Trout = 8,075 catchable in 2016

Table 3

SOUTH FORK RESERVOIR

Smallmouth Bass Population Status-Electrofishing Survey Trends

Year	Number of Bass Sampled	Number of Bass Measured	Avg. Size TL - Inch	Number of Bass / Hour	RSD-10 Factor	K-Factor	Rating
1989	84		< 2.0 inches	227	N/A - First year of survey - YOY survey		
1990	136	60	7.9	227	88	5.20	Good
1991	72	41	6.5	419	0	5.08	Good
1992	59	47	8.9	113	54	5.47	Good
1993	23	14	13.5	43	93	5.85	Excellent
1994	16	14	6.8	31	50	5.48	Good
1995	38	14	8.0	61	100	5.95	Excellent
1996	73	29	7.4	130	17	5.62	Good
1997	No Data						
1998	184	82	10.2	263	44	6.03	Excellent
1999	114	48	9.5	185	43	5.85	Excellent
2000	71	71	12.0	186	87	6.22	Excellent
2001	62	39	12.8	214	85	5.86	Excellent
2002	26	13	13.7	37	92	6.06	Excellent
2003	31	20	13.9	55	90	6.19	Excellent
2004	81	44	14.4	104	100	5.87	Excellent
2005	49	17	12.4	49	71	6.11	Excellent
2006	38	20	11.5	49	75	5.40	Good
2007	47	47	6.5	28	56	5.29	Good
2008	76	76	6.6	138	75	5.53	Good
2009	147	57	10.6	403	73	5.57	Good
2010	68	55	7.7	93	67	5.36	Good
2011	60	60	8.3	67	69	5.68	Good
2012	23	23	13.2	43	86	5.48	Good
2013	27	27	13.2	40	76	5.52	Good
2014	104	104	10.2		84		
2015	25	25	11.5	16	91	5.54	Good
2016	183	159	8.9	126	83	5.22	Fair
1998-2016 Avg.=	75	52	10.9	116	76	5.71	Excellent

RSD 10 = # of fish > 254mm (relative quality catch length) / Total # of fish > 203 mm (= minimal stock length 8.0 inches)

RSD 10 between 40 and 60 is desired, indicating a balanced population.

Special regulation in effect at South Fork Reservoir (15 inch minimum size, legal harvest from 7/1-2/29).

2016 Included 2 electrofishing surveys for smallmouth bass conducted during LMB capture & 1 spillways salvage

Table 4

SOUTH FORK RESERVOIR

Largemouth Bass Population Status-Electrofishing Survey Trends

Year	Number of Bass Sampled	Number of Bass Measured	Avg. Size TL - Inch	RSD-10 Factor	K-Factor	Rating
1989						
1990						
1991			Size Range 7 - 13.0 inches			
1992	377		11.20			
1993	14	7	14.20	86	6.27	Excellent
1994	2	1	15.90			
1995	8		~3.2			
1996						
1997	No Data					
1998	3					
1999	1		~2.0			
2000	0					
2001	11					
2002	11					
2003	16					
2004	75	37	5.38			
2005	36					
2006	0					
2007	8	8	14.7			
2008	35	35	10.7	80	6.54	Excellent
2009	67	39	10.7	69	6.60	Excellent
2010	89	85	7.6	46	6.23	Excellent
2011	68	68	10.4	64	6.41	Excellent
2012	56	56	11.8	69	5.57	Good
2013	89	89	10.6	69	5.49	Good
2014	190	190	11.7	92	5.43	Good
2015	111	111	12.5	100	5.41	Good
2016	257	242	11.4	99	5.64	Excellent
2007-2016 Avg.=	97	92	11.2	76	5.92	Excellent

RSD 10 = Relative Stock Density w 10 inch pref. catch length; = # of fish > 254mm (relative quality catch length) / Total # of fish > 203 mm (= minimal stock length 8.0 inches)

RSD 10 between 40 and 60 is desired, indicating a balanced population.

Special regulation in effect at South Fork Reservoir (15 inch minimum size, legal harvest from 7/1-2/29).

2016 2 reservoir electrofishing surveys & 1 spillway salvage/capture for largemouth bass, survey bias towards fish > 8 inches

Table 5

**SOUTH FORK RESERVOIR
Population Sampling Catch Record
2016**

SPECIES	Net/Sample #	#1-3	Electrofish	Electrofish-Spillway	Electrofish	TOTALS	% of Species Composition
	Date:	05/3/2016	5/18/2016	9/15/2016	9/19/2016		
<i>Rainbow Trout</i>	Number	114	0	0	0	114	19.9
	Avg. Size (Inches-FL)	13.4				13.4	
<i>Bow-Cutt Trout</i>	Number	0	0	0	0	0	0.0
	Avg. Size (Inches-FL)						
<i>Smallmouth Bass</i>	Number	0	71	29	59	159	27.7
	Avg. Size (Inches-FL)		9.8	12.6	5.9	8.9	
<i>Largemouth Bass</i>	Number	0	97	76	84	257	44.9
	Avg. Size (Inches-TL)		14.4	10.4	8.8	11.4	
<i>Wiper</i>	Number	15	2	5	0	22	3.8
	Avg. Size (Inches-TL)	20.6	24.2	22.9		21.5	
<i>Channel Catfish</i>	Number	1	0	1	1	3	0.5
	Avg. Size (Inches-TL)	20.9		21.0	25.1	22.3	
<i>Yellow Perch</i>	Number			7	0	7	1.2
	Avg. Size (Inches-TL)			6.7		6.7	
<i>Lahontan tui chub</i>	Number	1	5	0	0	6	1.0
	Avg. Size (Inches-TL)	13.6	14.0			13.9	
<i>Tahoe Sucker</i>	Number	3	2	0	0	5	0.9
	Avg. Size (Inches-TL)	16.5	17.5			16.9	
TOTAL FISH		134	177	118	144	573	
HOURS		43.0			0.66	43.7	
% Non-desirable Fish		3.0	4.0	0.0	0.0	1.9	
Fish / Net-Shocking Hour		3.1			218.2	13.1	
Avg. Res. Water Temp. (F°)		56.5	60.5		62.0	59.7	
Approx. Reservoir Capacity		70%	70%		68%		

Net/Sample Locations:

1. North Camp ground point. Experimental Mesh gill net, 150 feet long.
2. South end of the reservoir, East side in 10 feet water. Experimental Mesh gill net, 150 feet long.
3. North west Side near Fisherman's Pt. Experimental Mesh gill net, 150 feet long.
4. Two Electrofish surveys (May 18 & Sept. 19) included East Coves, South End, Coyote Cove, Jet Ski Beach, and Spillway/Dam face. 1 Spillway Electrofish salvage Sept. 15.