NEVADA DEPARTMENT OF WILDLIFE
STATEWIDE FISHERIES MANAGEMENT

FEDERAL AID JOB PROGRESS REPORTS

F-20-50
2014

MARLETTE LAKE
WESTERN REGION

NEVADA DEPARTMENT OF WILDLIFE, FISHERIES DIVISION
ANNUAL PROGRESS REPORT

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ANNUAL PROGRESS REPORT

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NEVADA DEPARTMENT OF WILDLIFE, FISHERIES DIVISION
ANNUAL PROGRESS REPORT

State: *Nevada*
Project Title: *Statewide Fisheries Program*
Job Title: *Marlette Lake*
Period Covered: *January 1, 2014 through December 31, 2014*

SUMMARY

General Management Objective

A total of 20 volunteer angler surveys from the drop-box were received from Marlette Lake in 2014. During the months when surveys were received, 20 anglers fished for 95.5 hrs and caught 123 fish consisting of 101 rainbow trout, 5 brook trout, 10 LCT, and 7 tui chub. Resulting catch rates (all fish) were 6.15 fish per angler and 1.29 fish per hour.

The Mail-in Angler Questionnaire Survey estimated use at 89 anglers that fished for 443 angler days in 2013. Both of these figures are lower than the 8 year average established since the fishery was opened in 2006. However the days per angler (4.99) and fish per angler day (12.39) are all well above the 8 year average for the water.

Marlette Lake was stocked on two occasions in 2014. In June and July, the lake received totals of 7,280 catchable Tahoe strain rainbow trout and 1,944 catchable Pilot Peak strain LCT.

Beginning in late-May and concluding at the end of June, NDOW and federal biologists, NDOW hatchery personnel, and volunteers manned the fish spawning station. Spawning activities and egg takes occurred on five days resulting in takes of 605,035 rainbow trout eggs, 12,745 bowcutt trout eggs, 145,977 cuttbow trout eggs, and 14,186 Pilot Peak strain LCT eggs. Egg totals exceeded goals established for the spawn.

Marlette Lake Pilot Peak Strain Lahontan Cutthroat Trout Study Specific Objective

A total of 327 LCT, consisting of 134 males and 193 females, was captured during spawning operations at Marlette Lake in 2014. Of these, 98.2% (321 fish) were not previously Floy or PIT tagged. The average length of untagged fish was 11.5 in (292 mm) and ranged from 8.7 in (220 mm) to 20.9 in (530 mm). All untagged LCT were anesthetized, measured, weighed, and had a PIT tag surgically implanted. A fin clip was also taken from all untagged LCT for genetic analysis.

A large proportion (83.9%) of untagged LCT that were captured in the Marlette Lake spawning trap are thought to be Pilot Peak strain fish stocked in either 2009 or 2010 as all of those fish were adipose clipped prior to stocking but were not PIT tagged. The other 16.1 percent of untagged LCT can be explained by the stocking of Pyramid

and Independence strain fish in either 2007 or 2013. Several large untagged LCT were captured and are most likely holdovers from the 2007 stocking. Of the six recaptured LCT, five were pilot peak strain fish stocked in 2011 and had an average length of 12.4 in (316 mm) while the remaining fish was an Independence strain LCT stocked in 2007 and had a length of 17.1 in (450 mm).

Marlette Lake Rainbow Trout Study Specific Objective

A total of 83 Floy tagged Incline-strain rainbow trout, consisting of 20 males and 63 females, was captured during spawning operations at Marlette Lake in 2014. Tagged rainbow trout represented two lots of fish that were hand-spawned in Third and Incline creeks, hatched and reared at Mason Valley Hatchery, and stocked in Marlette Lake to augment the reservoir's broodstock population. Yellow Floy tagged rainbow trout captured were the progeny of fish spawned in 2008 and stocked in 2009, while blue Floy tagged rainbow trout represented fish spawned in 2009 and stocked at Marlette Lake in 2010.

A sufficient number of Floy tagged rainbow trout was captured during spawning activities to adequately assess growth of the species at Marlette Lake. As expected, rainbow trout stocked in 2009 were, on average, longer and heavier than those stocked in 2010. Although growth slowed considerably in the second year after stocking, the performance of Incline-strain rainbow trout still seems to outpace that of other strains stocked at Marlette Lake in the past.

BACKGROUND

Sitting at an elevation of 7,825 ft in the Carson Range, Marlette Lake is a 381 surface acre oligotrophic reservoir that has a maximum depth of approximately 44 ft. The land surrounding Marlette Lake is predominantly a high elevation conifer/aspen habitat type that transitions into subalpine habitat types near the top of many adjunct peaks. The reservoir is located on the east side of the Lake Tahoe Basin and is situated entirely within the Lake Tahoe State Park.

Marlette Lake was constructed in 1873, when a small earth-fill dam was erected at the outlet to a broad glaciated basin. Lake water was piped to Virginia City via a series of flumes and pipes (inverted siphon).

During the early 1880's, Marlette Lake was solely a brook trout fishery. From 1883 until 1930, the Nevada Fish Commission conducted an annual fall spawn-take. In 1963, the reservoir was purchased by the State of Nevada and the Nevada Department of Fish and Game assumed management responsibility for the fishery. Following a need for broodstock to support Lahontan cutthroat trout stocking in Pyramid and Walker lakes, LCT were introduced into the lake in 1964. Demand for large numbers of LCT eggs diminished in 1975 with the expiration of the Pyramid Lake Agreement.

Starting in 1984, rainbow trout (*Oncorhynchus mykiss*), hatched from eggs taken from adult spawners from Lake Tahoe, were stocked into Marlette Lake to establish

another much needed wild brood stock. To date, over 9 million rainbow trout eggs have been harvested from brood stock in Marlette Lake. When possible, the broodstock at Marlette Lake is enhanced with progeny from wild rainbow trout stocks collected from Lake Tahoe. The performance of these fish will be assessed through the Marlette Lake Rainbow Trout Study, which was initiated in 2009.

When broodstock operations at Big Springs Reservoir failed due to insufficient water supplies, Lahontan cutthroat trout were restocked into Marlette Lake for bowcutt/cuttbow trout production. Pyramid Lake strain and Independence Lake strain LCT were stocked between 2002 and 2007. In 2008, the Pilot Peak strain of LCT became available for sport fisheries management for use to create bowcutt trout eggs. The introduction of Pilot Peak LCT will be assessed through the Marlette Lake Pilot Peak LCT Study, which was initiated in 2009. The fishery at Marlette Lake is currently comprised of rainbow trout, brook trout, Lahontan cutthroat trout, Tahoe suckers, speckled dace, and tui chub.

In 2006, Marlette Lake was opened as a public fishery. The lake is managed under the Quality Coldwater Fishery Management Concept, which establishes angler success rates of 0.30-1.25 fish per hour and 2.0-3.5 fish per angler day. Fishing regulations allow angling from July 15 – September 30, one hour before sunrise until two hours after sunset. There is a zero-limit on fish and tackle is restricted to artificial lures with single barbless hooks.

OBJECTIVES

General Management Objectives:

- Conduct a general assessment of angler use and success through opportunistic angler contacts, return of angler drop-box surveys, and mail-in angler questionnaire data.
- Assist with the trout spawning operation during the spring to ensure fulfillment of eggs for NDOW's hatchery program.

Study Specific Objectives - Marlette Lake Pilot Peak Strain Lahontan Cutthroat Trout:

- PIT tag all LCT captured in the spring spawning operation. Measure to fork length, weigh, determine sex, and take a tissue sample for genetic analysis.
- Record tag number, length, weight, and fin clips of any recaptured PIT or Floy-tagged LCT.
- Monitor the performance of tagged LCT by utilizing data collected during NDOW spawning operations.
- Conduct creel survey on 2 weekend days per month between July 15 and September 30 to assess angler use and success.

Study Specific Objectives - Marlette Lake Rainbow Trout:

- Monitor the performance of tagged rainbow trout by utilizing data collected during NDOW spawning operations.

PROCEDURES

General Management Objectives

Conduct a general assessment of angler use and success through opportunistic angler contacts, return of angler drop-box surveys, and mail-in angler questionnaire data. Visits were made to Marlette Lake throughout the summer/early-fall for conducting creel surveys. Information on angler harvest, effort, and origin were recorded. Harvested fish were measured to fork length in millimeters.

During the course of other duties, a volunteer angler survey box at Marlette Lake was maintained and restocked. At the end of the calendar year, data was summarized.

Angler use and success was also assessed through the Department's Mail-in Angler Questionnaire Survey. Angler questionnaire data is derived from a survey that is mailed to 30,000 license purchasers from 2013.

Assist with the trout spawning operation during the spring to ensure fulfillment of eggs for NDOW's hatchery program. Beginning in late-May and concluding at the end of June, NDOW, U.S. Fish and Wildlife Service (USFWS), and volunteers staffed the fish spawning station at Marlette Lake. During this time, pre-spawning rainbow trout and LCT were captured in the fish trap along Trelease Creek, a main tributary to the reservoir. Twice daily, fish were counted and sorted by species, sex, and ripeness and placed into separate holding pens within the creek until spawned. Fish caught in the creek were augmented with fish captured in frame nets set throughout the lake.

Spawning activities and egg takes occurred on five occasions. On these days, fish were anesthetized, rinsed, hand spawned, and eggs were fertilized on station. Fork length of the first 25 fish of each species and gender were recorded. After cleaning and water hardening, eggs were transported to the Mason Valley Hatchery.

All rainbow trout and LCT captured were examined for fin clips and/or tags. Tagged fish were subsequently measured and weighed on an electronic scale. Fin clips, tag types (Floy vs. PIT) and/or tag numbers were recorded.

Marlette Lake Pilot Peak Strain Lahontan Cutthroat Trout Study Specific Objective

PIT tag all LCT captured in the spring spawning operation. Measure to fork length, weigh, determine sex, and take a tissue sample for genetic analysis. In cooperation with USFWS, all untagged adipose clipped LCT caught were classified by gender and scanned electronically for a PIT tag. Fish without an existing tag were

anesthetized, measured, weighed, and had a PIT tag surgically implanted. A fin clip was also taken from all untagged LCT for genetic analysis.

In an effort that maximized genetic diversity during spawning, the USFWS maintained a comprehensive database detailing the strain, life history, and family origin of all LCT PIT tagged at Marlette Lake. Beginning in 2011, all LCT either stocked or captured during spawning operations were implanted with a PIT tag.

Record tag number, length, weight, and fin clips of any recaptured PIT or Floy-tagged LCT. Tag number, tag color, sex, fork length, weight, and presence of prior fin clips were recorded for all recaptured LCT during spawning operations.

Monitor the performance of tagged LCT by utilizing data collected during NDOW spawning operations. Length and weight were recorded on all previously tagged LCT captured. This data was compared to previous data in an effort to determine growth rate, longevity, and performance of LCT in Marlette Lake.

Marlette Lake Rainbow Trout Study Specific Objective

Monitor the performance of tagged rainbow trout by utilizing data collected during NDOW spawning operations. Data gathered this year (length, weight, and body condition) from previously tagged rainbow trout was used to examine growth rate, longevity, and performance of rainbow trout in Marlette Lake.

FINDINGS

General Management Objective

Conduct a general assessment of angler use, success and harvest through opportunistic angler contacts, return of angler drop-box surveys, and mail-in angler questionnaire data. One trip was made to Marlette Lake during the 2014 fishing season, however, no opportunistic angler contacts were made.

A total of 20 surveys were received from the drop-box and anglers fished for 95.5 hrs and caught 123 fish consisting of 101 rainbow trout, 5 brook trout, 10 LCT, and 7 tui chub (Figure 1). Catch rates (all fish) were 6.15 fish per angler and 1.29 fish per hour. Because regulations prohibit harvest at Marlette Lake, all fish were reported as released.

An examination of length frequency found tui chub was predictably less than 10.0 in (Figure 2). The majority of LCT was larger, from 16.0 to 19.9 in, while rainbow trout mostly appeared to be in the middle range at 14.0 to 15.9 in. Brook trout length frequency was somewhat unexpected as 40 percent of the catch was reported in the largest size range of 20 in or greater, while the remaining ones were more the typical size at 10 to 13.9 in. An explanation of the large brook trout occurrence is the likely misidentification of LCT or just gross overestimates by anglers.

Figure 1.

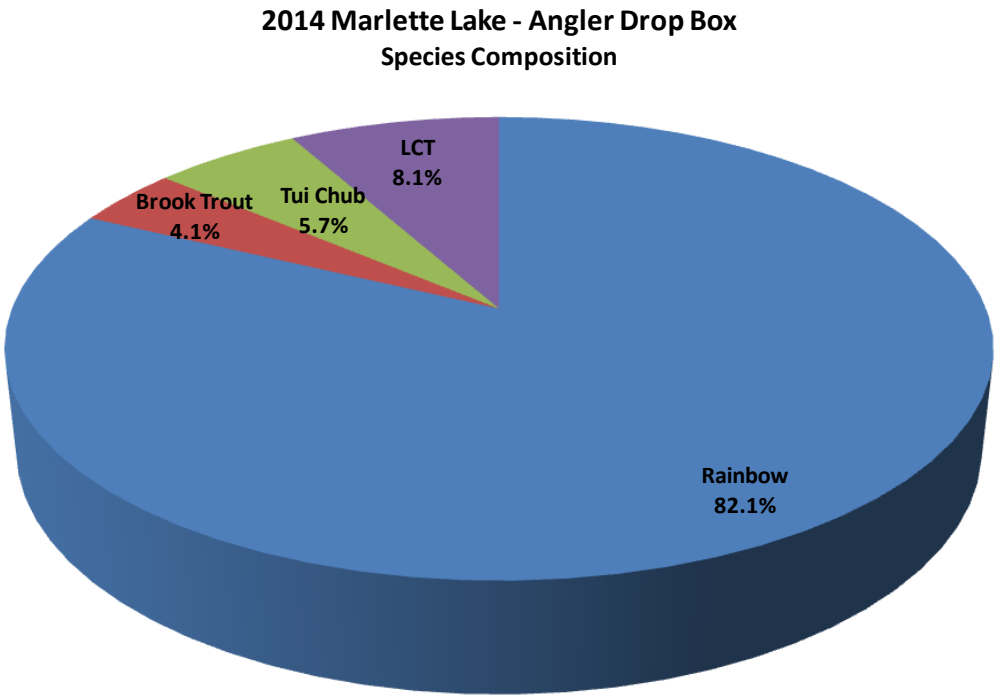
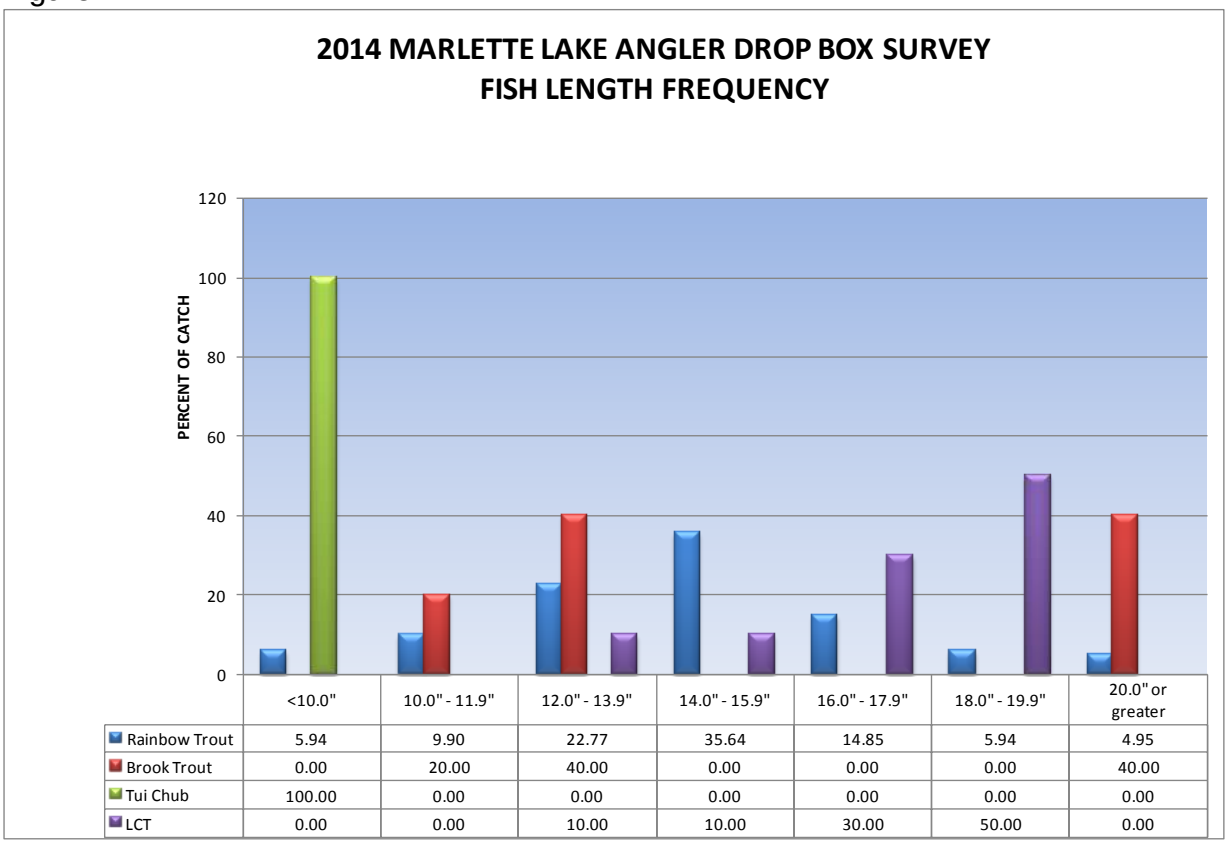


Figure 2.



	<10.0"	10.0" - 11.9"	12.0" - 13.9"	14.0" - 15.9"	16.0" - 17.9"	18.0" - 19.9"	20.0" or greater
Rainbow Trout	5.94	9.90	22.77	35.64	14.85	5.94	4.95
Brook Trout	0.00	20.00	40.00	0.00	0.00	0.00	40.00
Tui Chub	100.00	0.00	0.00	0.00	0.00	0.00	0.00
LCT	0.00	0.00	10.00	10.00	30.00	50.00	0.00

Shore anglers (55%) and those fishing from float tubes (45%) were split rather evenly, and three quarters of the anglers reported fly-fishing while the rest used lures. Angler satisfaction in 2014 was rated on a scale of -2 to +2, with -2 being unsatisfied and +2 representing satisfaction. Average ratings were positive at 1.34 for total fishing experience, 1.58 for size of fish, and 1.04 for number of fish.

The 2013 Mail-in Angler Questionnaire Survey estimated use at 89 anglers that fished for 443 days. These estimates were lower than the average established since the fishery was opened in 2006. However, average days fished (4.99) and average fish per angler (12.39) were well above the 8-yr average.

Stocking Program

Marlette Lake was stocked twice in 2014 (Table 1). From June through August, the lake received 7,280 catchable Tahoe strain rainbow trout and 1,944 catchable Pilot Peak strain LCT. The five-year stocking history is presented in Table 2.

Table 1. Marlette Lake Stocking Summary – 2014.

Date	Species	Strain	Number	Size (in)
6/20/2014	LCT	PILOT PEAK	1,944	8.9
7/3/2014	RB	TAHOE	7,280	8.8
		Total Stocked	**9,224**	

Assist with the trout spawning operation during the spring to ensure fulfillment of eggs for NDOW's hatchery program. Five days in June were spent conducting spawning activities where 2,316 rainbow trout and 438 LCT were hand spawned and resulted in a take of 777,943 eggs. There were 1,984 Tahoe-strain rainbow trout (927 females and 1,057 males) used to generate five lots and resulting in 605,035 eggs. Average length of 375 rainbow trout (including those used for bowcutt production) was 11.6 in (295 mm), with a range from 10.4 in (200 mm) to 18.9 in (480 mm).

A total of 85 male rainbow trout and 102 female LCT were hand spawned to produce two lots of bowcutt trout, totaling 12,745 eggs harvested. Conversely, 247 female rainbow trout and 260 male LCT were used in the production of four lots of cuttbow trout that resulted in a take of 145,977 eggs. Two lots of LCT were also produced from 40 male and 36 female LCT. The average length of all LCT used for production LCT, bowcutts, and cuttbows was 11.5 in (293 mm) and ranged from 8.7 in (220 mm) to 20.9 in (530 mm).

<u>Marlette Lake Pilot Peak Strain Lahontan Cutthroat Trout Study Specific Objective</u>

PIT tag all LCT captured in the spring spawning operation. Measure to fork length, weigh, determine sex, and take a tissue sample for genetic analysis. A total of 327 LCT, consisting of 134 males and 193 females, was captured during spawning operations at Marlette Lake in 2014. Of these, 98.2% (321 fish) were not fitted previously with a Floy or PIT tag. The average length of untagged fish was 11.5 in

(292 mm) and ranged from 8.7 in (220 mm) to 20.9 in (530 mm). Untagged LCT were anesthetized, measured, weighed, and had a PIT tag surgically implanted. A fin clip was also collected for genetic analysis.

Table 2. Marlette Lake Stocking History 2009 – 2013

Year	Species	Number	Size Range (in.)	Clips
2009	Rainbow (Incline)	2,986	9.5	
	LCT (Pilot Peak)	2,984	9	
2009 Total		**5,970**		
2010	Rainbow (Incline)	3,065	9.2	
	LCT (Pilot Peak)	2,993	9.2	Adipose
	LCT (Pilot Peak)	500	17.3	Adipose
2010 Total		**6,558**		
2011	Rainbow (Tahoe)	3,001	9.2	
	LCT (Pilot Peak)	1,001	9	Adipose
2011 Total		**4,002**		
2012	N/A	0	-	
2012 Total		**0**	**-**	
2013	LCT (Pyramid Lake)	2,857	8.5	
2013	LCT (Pilot Peak)	730	12.51	Adipose
2013	LCT (Pilot Peak)	1,918	9.07	Adipose
2013	Rainbow (Tahoe)	3,000	9.5	
2013	Rainbow (Tahoe)	3,885	9.9	
2013	Rainbow (Tahoe)	2,150	9.9	
2013 Total		**14,540**		
Total		**31,070**		

Table 3. Marlette Lake Spawning Station LCT Return

	# Spawned	Avg. length (mm)	% Tagged	# Stocked Since 2009	%Return
Pilot Peak	**274**	**280.5**	**1.8**	**7,142**	**3.8**
Male	155	282.9		*stocked 2010-13	
Female	119	277.2			
Unknown*	**53**	**355.5**	**1.9**	**5,841**	**0.9**
Male	38	347.2			
Female	15	376.6			
Total	**327**				

*One lot of Pilot Peak LCT were stocked in 2009 that were not adipose clipped and cannot be positively identified as either Pyramid or Pilot Peak LCT stocked in 2013

A large proportion (83.9%) of untagged LCT caught were thought to be Pilot Peak strain stocked in either 2010 or 2011, as all Pilot Peak strain LCT were adipose clipped prior to stocking but not PIT tagged. The other 16.1 percent were probably

Independence strain LCT, one lot of unclipped Pilot Peak strain fish, and Pyramid strain LCT stocked from 2007, 2009, and 2013, respectively. Several large untagged LCT captured were most likely holdovers from being stocked in 2007.

Record tag number, length, weight, and fin clips of any recaptured PIT or Floy-tagged LCT. Of the 327 LCT captured during the spawning operation in 2014, 1.8% (6 fish) had been previously PIT tagged. No Floy tagged fish were captured. Of the six recaptured PIT tagged LCT, five were pilot peak strain stocked in 2011 (four years old) and had an average length of 12.4 in (316 mm). The remaining fish was Independence strain stocked in 2007 (eight years old) and had a length of 17.1 in (450 mm). Of the PIT tagged LCT recaptured, prior genetic analysis revealed five to be Pilot Peak strain and one to be Pyramid strain. Four of the five (one unmeasured) recaptured Pilot Peak LCT had an average length of 12.5 in (316 mm) and ranged from 11.5 in (291 mm) to 13.6 in (345 mm).

Monitor the performance of tagged LCT by utilizing data collected during NDOW spawning operations. A database maintained by the USFWS detailed the strain, life history, and family origin of every PIT tagged LCT in Marlette Lake. Although strain identity of untagged LCT captured this year remains unknown until genetic analysis is complete, length frequency analysis can provide information of LCT captured (Figure 3). There appeared to be six distinct size classes of LCT, with this year having Pilot Peak strain (stocked in 2009) comprising a significant portion of the population. Previously, only 44 Pilot Peak strain were caught compared to 274 in 2014. It is possible that Pilot Peak strain reach sexual maturity at an older age than Pyramid or Independence strain, which typically spawn within three years of stocking.

The average growth rate for the oldest age class of Pilot Peak strain LCT (stocked in 2009) would be 0.4 in per year. For the three remaining age classes (2010, 2011, and 2013) growth rates were 0.45 in, 0.67 in, and 1.0 in per year, respectively. Assuming that several different age classes made up the spawning run of Pilot Peak LCT, then there was an average growth rate of 0.63 in per year. When analyzing growth rate of Pyramid strain LCT, it was difficult to distinguish recently stocked Pyramid strain from older Pilot Peak strain LCT if they were not tagged or clipped.

Pilot Peak strain LCT has been stocked at catchable size since 2009, but brood stock was stocked in 2010 having an average size of 17.9 in (455 mm). Therefore, five distinct age (size) classes should be identifiable, but there appears to be only two size classes with no indication of the 2010 brood stock (Figure 4). It is suspected that Pilot Peak LCT has poor survival and growth rates in Marlette Lake and continued data collection should help us better understand the differences between LCT strains.

Figure 3.

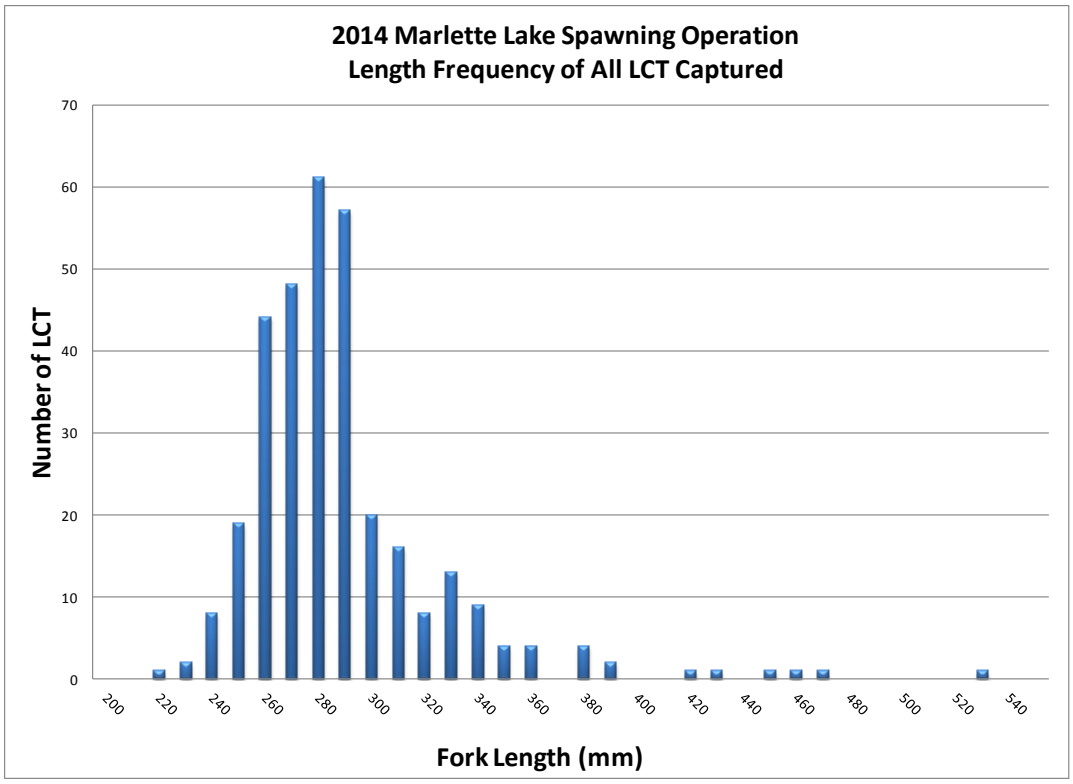
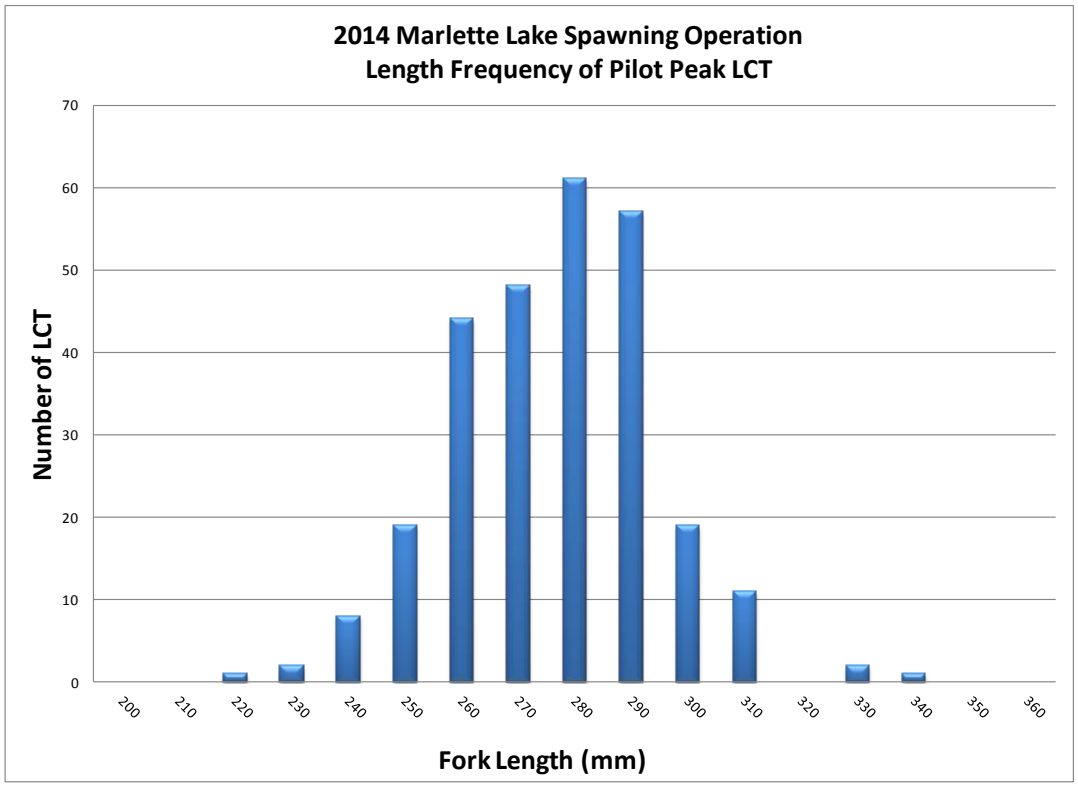


Figure 4.



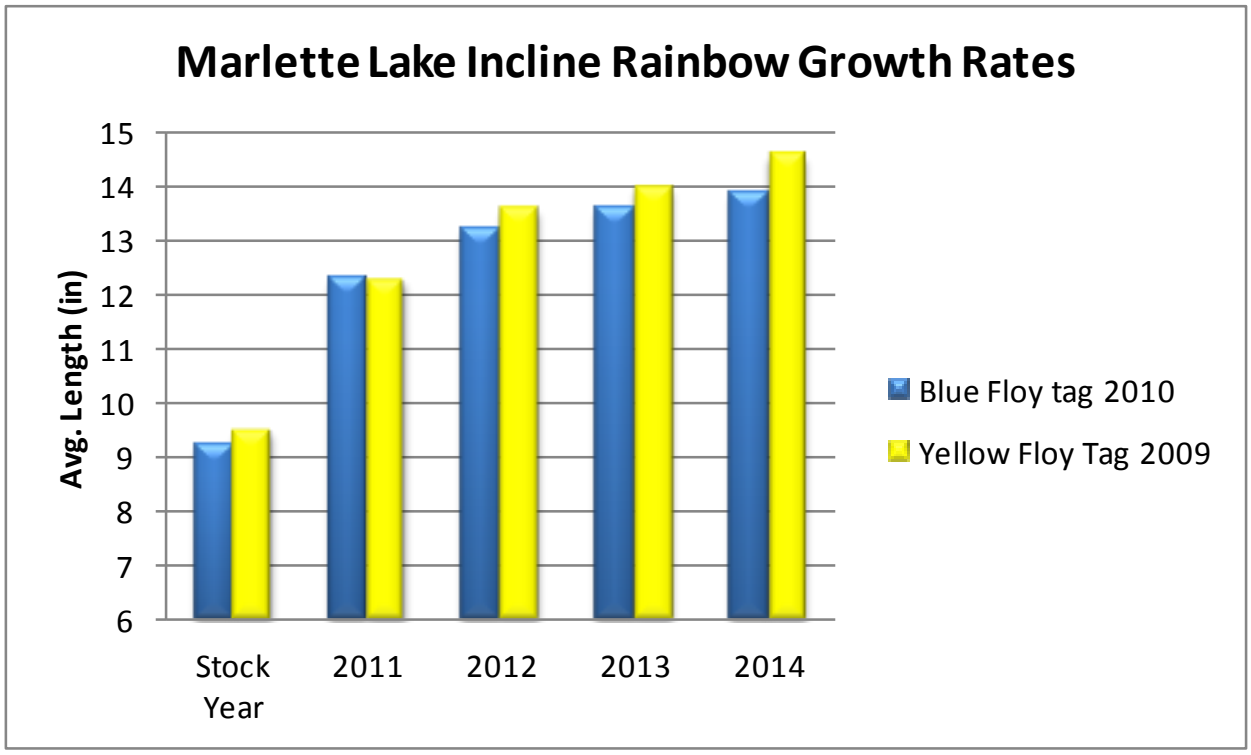
Marlette Lake Rainbow Trout Study Specific Objective

Monitor the performance of tagged rainbow trout by utilizing data collected during NDOW spawning operations. A total of 83 Floy tagged Incline-strain rainbow trout, consisting of 20 males and 63 females, was captured during spawning operations in 2014. Tagged rainbow trout represented two lots of fish that were hand-spawned from Third and Incline creeks, hatched and reared at Mason Valley Hatchery, and stocked into Marlette Lake to augment the reservoir's broodstock. Yellow Floy tagged rainbow trout captured were the progeny of fish spawned in 2008 and stocked in 2009 (now six year old fish), while blue Floy tagged rainbow trout were spawned in 2009 and stocked at Marlette Lake in 2010 (now five year old fish).

Of the tagged rainbow trout captured, 81 had blue Floy tags and they averaged 1.1 lbs (481 g). Their average length was 13.9 in (354 mm) and ranged from 9.3 in (236 mm) to 18.9 in (480 mm). They showed an average increase in total growth of 4.7 in (119 mm) or 1.2 in (31 mm) per year since the time they were stocked in July of 2010.

Only two tagged rainbow trout had yellow Floy tags, having an average length of 14.6 in (370 mm) and weight of 1.05 lbs (476 g). The average growth was 5.1 in (130 mm) and growth rate was 1.0 in (25 mm) since the time they were stocked in July of 2009.

Figure 5.



MANAGEMENT REVIEW

General Management Objective

Angler success rates of 1.29 fish per hour documented in the Angler Drop-box Survey and 12.39 fish per angler day from the Mail-in Angler Questionnaire Survey exceed the Coldwater General Fishery Management Concept guidelines of 0.30-1.25 fish per hour and 2.0-3.5 fish per angler day. Although angler use at Marlette Lake has declined since it was opened to angling in 2006, fishing remained good for anglers willing to make the 4.5-mile hike. Because the reservoir offers habitat not subject to dramatic fluctuations, trout populations remain stable from year to year.

Artificial spawning collected 605,035 rainbow trout, 12,745 bowcutt trout, 145,977 cuttbow trout, and 14,186 LCT eggs that exceeded the goal for the year. For the first time since 2011, a substantial number of LCT ascended Trelease Creek to be captured in the spawning trap. Pilot Peak LCT is believed to mature at an older age than Pyramid or Independence strain LCT, and if true, then the number of LCT should continue to increase in upcoming spawning operations. Sufficient numbers of rainbow trout were captured during this year's spawning effort and stocking should continue in order to maintain the productivity of the statewide hatchery program.

Years of sedimentation at the confluence of Trelease Creek and Marlette Lake have led to a very shallow bay that appears to be hindering the spawning migration and operation. Prior to the 2014 spawning run, the sediment was shoveled away to improve the ability for fish to pass into the Trelease Creek trap. This provided a tremendous, but short-lived benefit and will continue until time and funding can be allocated to improving the spawning trap and channel.

Marlette Lake Pilot Peak Strain Lahontan Cutthroat Trout Study Specific Objective

The Marlette Lake Pilot Peak LCT study appeared successful. Data were gathered and analyzed in an effort to learn more about growth, survival, and spawning habits of Pilot Peak-strain LCT in Marlette Lake. In 2011, the study was modified to facilitate future use of Marlette Lake as a potential egg source for Pilot Peak strain LCT. All untagged LCT captured from fish trapping and hoop netting during the spawning program were categorized by sex, measured, weighed, and had a PIT tag surgically implanted. A fin clip was taken from all untagged LCT for genetic analysis to aid in strain identification. In addition, length, weight, sex, and tag identification data were gathered from LCT having existing Floy tags or PIT tags in an effort to determine longevity, growth rate, and post-spawn survival. A total of 278 previously untagged LCT were PIT tagged in 2014.

The performance of Pilot Peak-strain LCT up to 2013 in Marlette Lake was considered poor, since there had been low returns during spawning operations. During 2014, the run of Pilot Peak LCT at the spawning station was more than 4 times higher than in 2013, which was the largest previous run. Growth rates for Pilot Peak LCT remained poor; however, larger fish were beginning to return for spawning. Continued

monitoring of LCT strains should provide useful information regarding the future of the Marlette Lake LCT brood stock and the spawning operation.

Marlette Lake Rainbow Trout Study Specific Objective

A sufficient number of Floy tagged rainbow trout was captured during spawning activities to adequately assess growth. As expected, rainbow trout stocked in 2009 were, on average, longer and heavier than those stocked in 2010. Although growth slowed considerably in the second year after stocking, the performance of Incline-strain rainbow trout appeared to outpace other strains stocked at Marlette Lake.

RECOMMENDATIONS

General Management Objectives:

- Conduct a general assessment of angler use, success and harvest through opportunistic angler contacts, return of angler drop-box surveys and mail-in angler questionnaire data.
- Assist with the trout spawning operation during the spring to ensure fulfillment of eggs for the statewide hatchery program.
- Install an angler drop-box and information Kiosk at the western most access point to Marlette Lake.
- Monitor performance of tagged LCT by utilizing data collected during spawning operations.
- Monitor performance of tagged rainbow trout by utilizing data collected during spawning operations.

Study Specific Objectives - Marlette Lake Pilot Peak Strain Lahontan Cutthroat Trout:

- Discontinue the Marlette Lake Pilot Peak Strain Lahontan Cutthroat Trout Study.

Study Specific Objective - Marlette Lake Rainbow Trout:

- Discontinue the Marlette Lake Rainbow Trout Study.

Prepared By: Travis Hawks
Biologist III, Western Region

Date: January 28, 2015