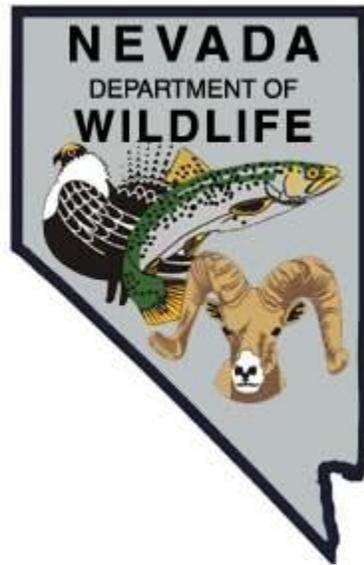


NEVADA DEPARTMENT OF WILDLIFE
STATEWIDE SPORT FISHERIES MANAGEMENT



FEDERAL AID JOB PROGRESS REPORTS

F-20-50
2014

EASTERN REGION RAINBOW TROUT
STRAIN EVALUATION
EASTERN REGION



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

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**NEVADA DEPARTMENT OF WILDLIFE, FISHERIES DIVISION
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: *Eastern Region Rainbow Trout Strain Evaluation Study*
Period Covered: *January 1, 2014 through December 31, 2014*

SUMMARY

Selected northeastern Nevada reservoirs (Illipah, South Fork, Wildhorse, and Wilson Sink) were surveyed during 2014 to document return of marked fish from the initial stocking of 26,673 Eagle Lake strain and 28,976 Bel-Air strain rainbow trout that were released in spring 2011. Evaluation of both strains of marked rainbow trout was performed on area reservoirs during 2014, including but not limited to opportunistic angler contacts (creel survey), electroshocking surveys, and gill net surveys to contact as many marked trout as possible.

Marked fish returns for 2014 were very limited in numbers, with recovery of two marked fish contacted from one strain at Wildhorse Reservoir. To date, South Fork Reservoir has returned 14 marked Bel-Air rainbow trout (five in 2011, six in 2012, and three in 2013) and 16 marked Eagle Lake rainbow trout (five in 2011, eight in 2012, and three in 2013). Wilson Sink Reservoir has returned 16 marked Bel-Air rainbow trout (five in 2011 and 11 in 2012) and 13 marked Eagle Lake rainbow trout (seven in 2011 and six in 2012). Wildhorse Reservoir has returned six marked Bel-Air rainbow trout (four in 2013 and two in 2014). Illipah Reservoir reported the return of 13 marked Eagle Lake rainbow trout in early 2012.

Despite the limited amount of returns and the small sample size to compare sport fish attributes of each respective strain, the individual fishery characteristics of each reservoir (reservoir volume and type, productivity, catch rates, and fish lengths) are beginning to take shape on each strain. During all 2014 surveys, Wildhorse Reservoir returned only two Bel-Air marked rainbow trout in October that had an average size of 18.7 in TL (range 16.9 – 20.5 in, TL) and an average growth of 3.4 inches per year since time of stocking.

BACKGROUND

The Nevada Department of Wildlife depends on hatchery-reared trout to maintain and enhance recreational fishing opportunities in many waters, as natural recruitment of trout is negligible and unable to sustain desired catch rates, desired sizes, and return to anglers. Approximately 160,000 catchable size (>8.0 in FL) rainbow trout are planted each spring in the Eastern Region (Elko, Eureka, Lander, and White Pine counties) to provide recreational angling for cold water fish species under various fisheries management goals and objectives.

NDOW's historical use of particular strains of rainbow trout has recently become unavailable. Recent renovations and changes in trout management (i.e., a brood stock program) in the State's hatchery system since 2006 have not only shown a reduction in historical trout production, but commercial egg sources are no longer producing several strains that Nevada once found desirable. These changes have forced the agency to try rearing and stocking new and unproven spring stocking rainbow trout strains as replacements for historical fisheries.

OBJECTIVES and APPROACHES

Objective: Evaluate the effects of the new spring strain of rainbow trout (Bel-Air strain) and compare sport fish attributes with existing (Eagle Lake strain) and previous strain (Tasmanian) through marked fish returns in Illipah Reservoir, South Fork Reservoir, Wildhorse Reservoir, and Wilson Sink Reservoir.

Approaches:

- Set experimental gill nets for two net-nights in spring in Illipah Reservoir.
- Set experimental gill nets for four net-nights in spring in South Fork Reservoir (see South Fork Reservoir Fishery Study).
- Set experimental gill nets for three net-nights in spring in Wildhorse Reservoir (see Wildhorse Reservoir Fishery Study).
- Set experimental gill nets for two net-nights in spring and electroshock two established transects one night in late summer on Wilson Sink Reservoir.
- Collect marked fish returns through opportunistic angler contacts on all four waters.
- Build a database and begin to analyze waters and trout strains.

PROCEDURES

Eagle Lake and Bel-Air strains of rainbow trout were graded by size at Spring Creek Rearing Station and Gallagher Hatchery. NDOW personnel proceeded to mark Bel-Air and Eagle Lake strain rainbow trout at Gallagher Hatchery on October 13 and November 2, 2010 and Eagle Lake strain rainbow trout at Spring Creek Rearing Station. Subsequent to grading, fish were anesthetized, given an adipose or pectoral fin clip with standard scissors, and returned to hatchery raceways. Clipped fish were enumerated during the marking procedure.

Subsequent to grading, 7,700 Eagle Lake strain rainbow trout were given a right pectoral fin clip in October 2010 at Spring Creek Rearing Station. These fish were stocked at Illipah Reservoir on April 26 and April 27, 2011 at an average size of 9.9 in FL.

A total of 30,569 Bel-Air strain rainbow trout were clipped with an adipose fin clip on October 13, 2010 at Gallagher Hatchery. Prior to stocking in Elko County during the spring of 2011, surviving clipped Bel-Air strain were divided equally and stocked into Wilson, Wildhorse, and South Fork reservoirs. A total of 28,976 clipped Bel-Air strain

rainbow trout (94.6% of total fish clipped) were stocked in April, May, and late June at an average size of 9.2 in FL.

A total of 19,506 Eagle Lake strain rainbow trout were clipped with a left pectoral fin clip on November 3, 2010 at Gallagher Hatchery. Prior to stocking in Elko County during the spring of 2011, surviving clipped Eagle Lake strain rainbow trout were divided equally after mortality and stocked into Wilson and South Fork Reservoirs. A total of 18,973 clipped Eagle Lake strain rainbow trout (97.3% of total fish clipped) were stocked in April and late June at an average size of 9.1 in FL.

FINDINGS

As of December 2014, Wilson Sink Reservoir has returned a total of 11 Bel-Air marked rainbow trout that had an average length of 13.4 in TL (range 11.6 – 15.2 in TL), with an average growth increase of 32% since time of stocking. Wilson Sink Reservoir has also returned six Eagle Lake marked rainbow trout to date that had an average length of 14.4 in TL (range 12.4 – 16.5 in TL), with an average growth increase of 51% since time of stocking. No marked fish were contacted during 2014 sampling efforts.

Despite Wilson Sink Reservoir's relatively small sample-size for both strains (17 fish), the Eagle Lake strain rainbow trout exhibited a significantly larger growth increase of almost two inches (average. 5.57 in growth increase per year versus 3.69 in growth increase per year for Bel-Air strain since time of stocking. Figures 1 and 2 illustrate the growth increases of the two different strains to date of the four year study. The initial 2011 data collected in this study was also entered into the database for later analysis. The majority of the fish were sampled during the 2012 electrofishing and gill net survey on May 16, 2012 (Table 1).

During 2014, South Fork Reservoir returned no Eagle Lake marked rainbow trout and no Bel-Air marked rainbow trout. Figures 3 and 4 illustrate South Fork Reservoir rainbow trout strain comparison, with larger marked fish being caught at South Fork compared to other test reservoirs.

Both strains of rainbow trout performed well in South Fork Reservoir with similar yearly growth increases and similar longevity. Extrapolating out the average growth rate exhibited by the marked Eagle Lake strain sample of 2013 equates to approximately 5.03 in of growth per year, compared to 5.14 in of growth per year for the Bel-Air strain rainbow (Table 2).

During 2014, Wildhorse Reservoir returned two Bel-Air marked rainbow trout in October that had an average size of 19.5 in TL (range 17.8 – 21.3 in TL) and an average growth increase of 118% or 10.1 in since time of stocking (Figure 5 & Table 3), much lower than South Fork Reservoir in comparison. Illipah Reservoir returned no Eagle Lake marked rainbow trout during 2013 and 2014.

Figure 1. Eagle Lake Strain Rainbow Trout – Wilson Sink Reservoir

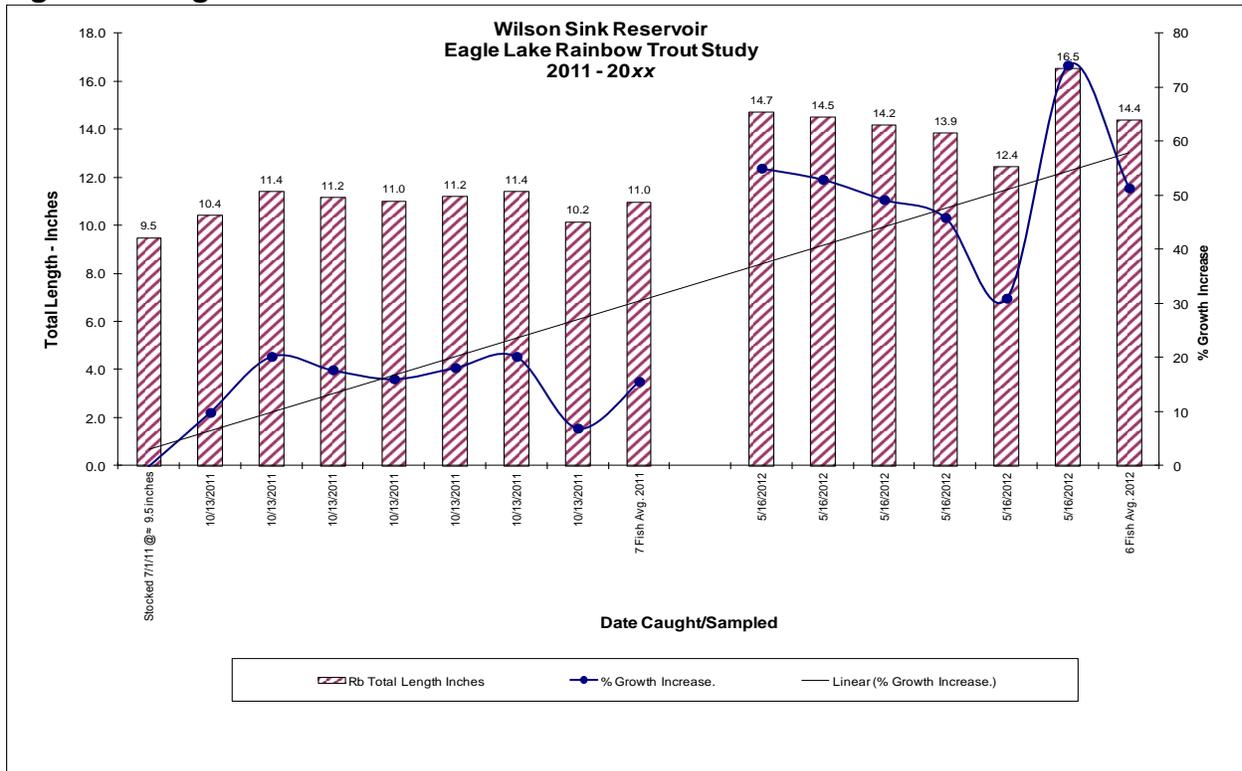


Figure 2. Bel-Air Strain Rainbow Trout – Wilson Sink Reservoir

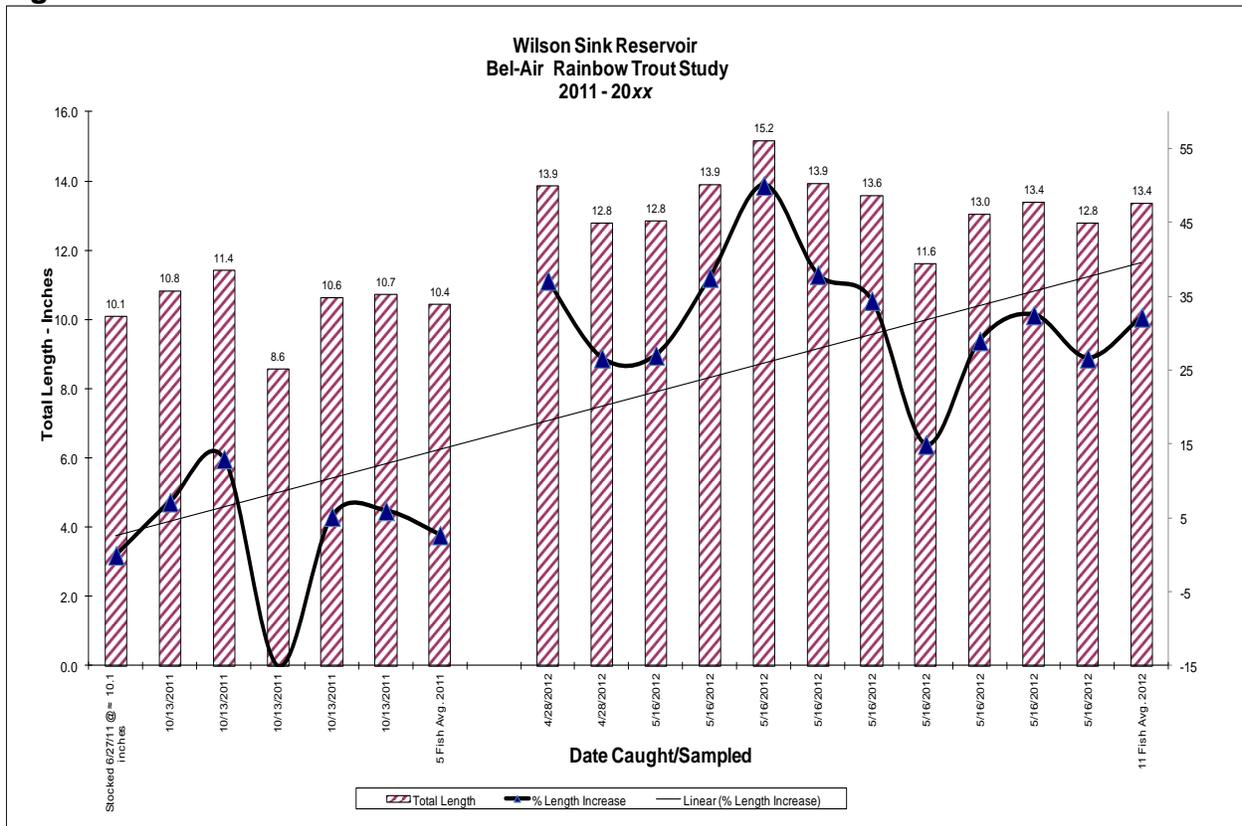


Figure 3. Eagle Lake Strain Rainbow Trout – South Fork Reservoir

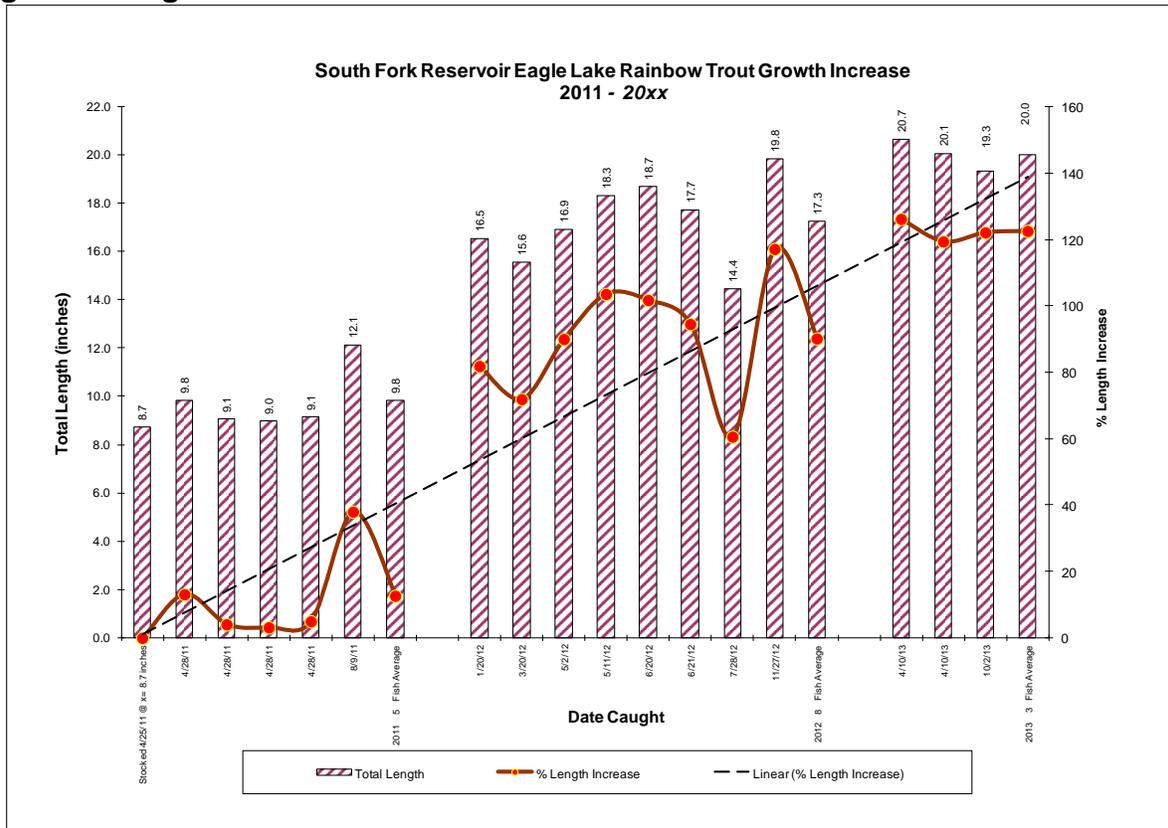


Figure 4. Bel-Air Strain Rainbow Trout – South Fork Reservoir

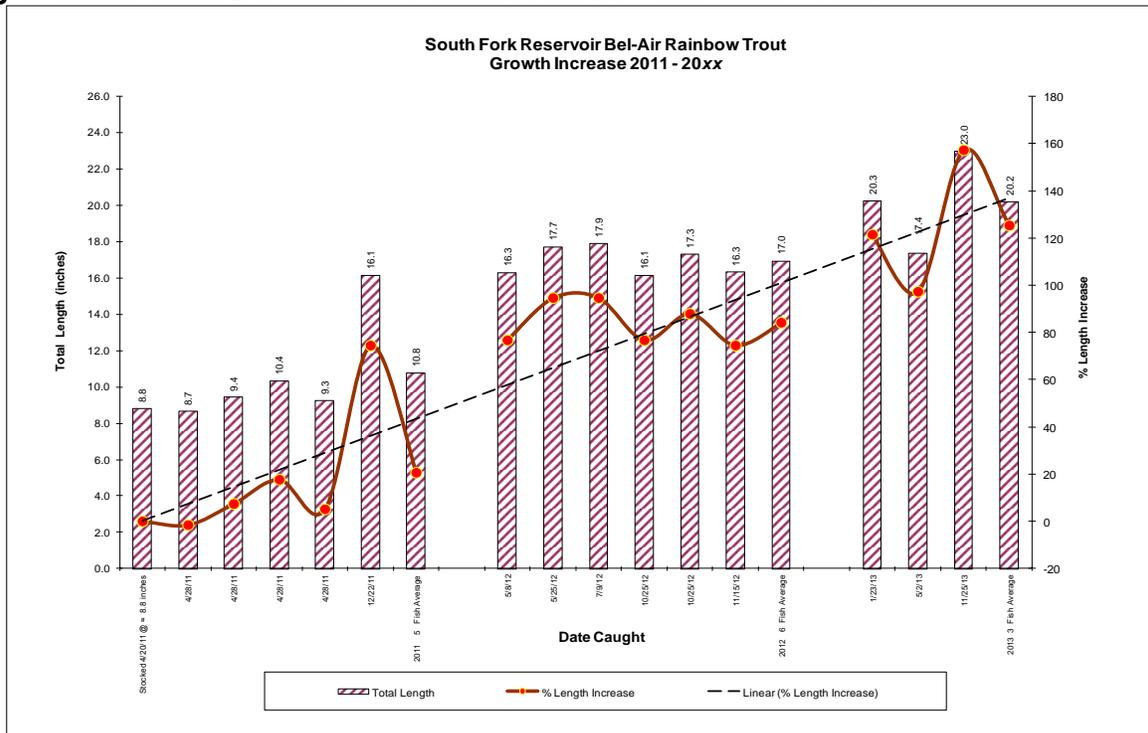
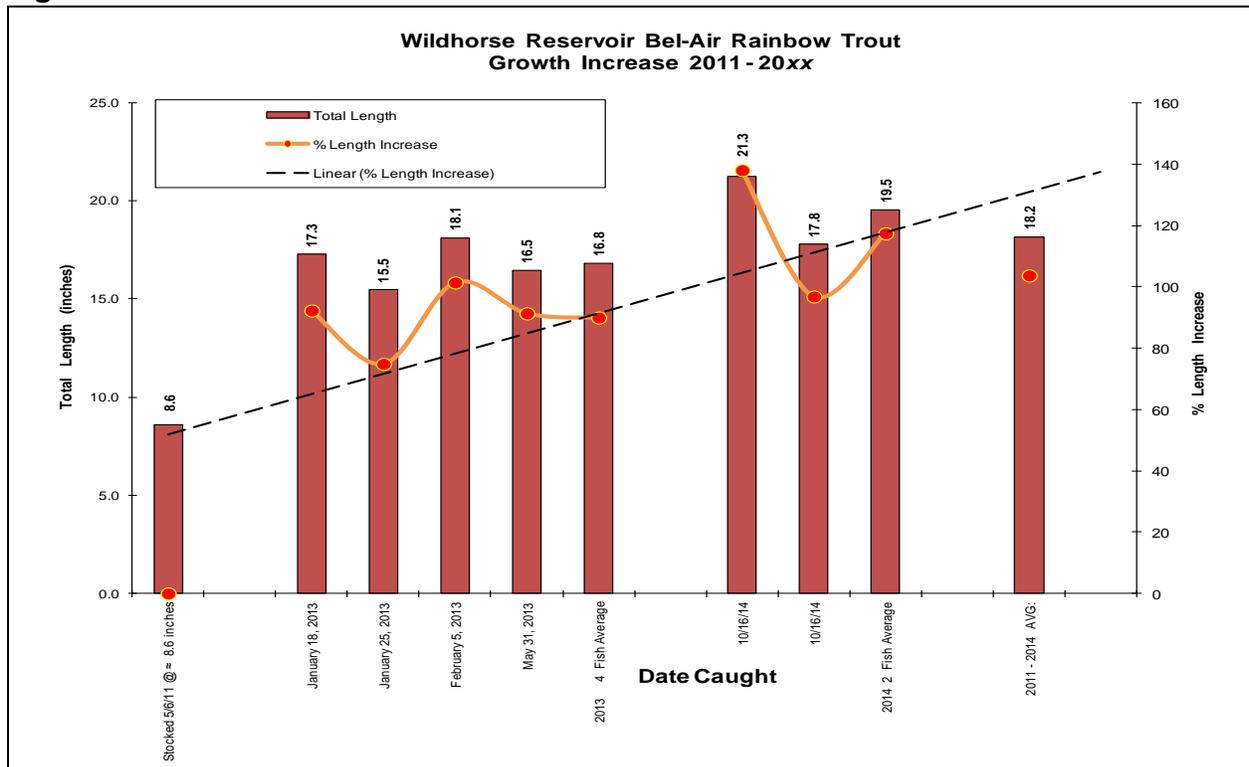


Figure 5. Bel-Air Strain Rainbow Trout – Wildhorse Reservoir 2014



MANAGEMENT REVIEW

All approaches for the Eastern Region Rainbow Trout Strain Evaluation Study were completed in 2014.

Regional drought conditions are impacting area fisheries in northeast Nevada, which is limiting the number of marked fish returns and can be deleterious unless much needed moisture is received within the basins.

Limited returns and the small sample size make it difficult to make management decisions in comparison of the two strains of rainbow trout. Hopefully, 2015 will provide for more returns with more comparable and discernible conclusions.

RECOMMENDATIONS

- Continue the electroshocking and gill netting objectives for Illipah, South Fork, Wildhorse, and Wilson Sink reservoirs in spring 2015 to collect marked fish in association with other fishery objectives.
- To collect marked fish returns through opportunistic angler contacts on all four waters associated with the Eastern Region Rainbow Trout Strain Evaluation Study and maintain a Regional Fisheries database for further analysis.

- Write up a final report on the Eastern Region Rainbow trout strain evaluation study by the end of June 2015.

Prepared by: Chris Drake
Biologist III, Eastern Region

Date: January 2015

Table 1

Wilson Sink Reservoir 2011 -- 20xx Creel & Population Survey Sample Lengths & Weights -- Bel-Air Rainbow Trout with Adipose fin clip												
Fish Number	Creel/Sample Date	Fork Length(mm)	Total Length(mm)	Weight (g)	Fork Length (In.)	Total Length(In.)	Weight (ounces)	Date Planted	Avg. Size @ Stocking	Days in Lake	Growth Increase(inches)	%Length Increase
Control Fish	Stocked 6/27/11 @ ≈ 10.1 inches	256	256	190	10.1	10.1	6.7	June 27, 2011	10.1			0
2011 Electrofish Survey Capture	10/13/2011		275			10.8	0.0	June 27, 2011	10.1	108	0.73	7.2
	2 10/13/2011		290			11.4	0.0	June 27, 2011	10.1	108	1.32	13.0
	3 10/13/2011		218			8.6	0.0	June 27, 2011	10.1	108	-1.52	-15.0
	4 10/13/2011		270			10.6	0.0	June 27, 2011	10.1	108	0.53	5.2
	5 10/13/2011		272			10.7	0.0	June 27, 2011	10.1	108	0.61	6.0
Total Fish Return 2011	5 Fish Avg. 2011		265			10.4				108	0.33	2.7
2011 x = 0.29 yrs											2011 x = 1.14 inch / yr (Extrapolated/Projected)	
6	4/28/2012	340	352		13.4	13.9		June 27, 2011	10.1	306	3.8	37.2
7	4/28/2012	310	325		12.2	12.8		June 27, 2011	10.1	306	2.7	26.7
8	5/16/2012		326	445		12.8	15.7	June 27, 2011	10.1	324	2.7	27.1
9 Gill Net / Electro Survey	5/16/2012		353	510		13.9	18.0	June 27, 2011	10.1	324	3.8	37.6
10 Gill Net / Electro Survey	5/16/2012		385	745		15.2	26.3	June 27, 2011	10.1	324	5.1	50.1
11 Gill Net / Electro Survey	5/16/2012		354	505		13.9	17.8	June 27, 2011	10.1	324	3.8	38.0
12 Gill Net / Electro Survey	5/16/2012		345	405		13.6	14.3	June 27, 2011	10.1	324	3.5	34.5
13 Gill Net / Electro Survey	5/16/2012		295	285		11.6	10.0	June 27, 2011	10.1	324	1.5	15.0
14 Gill Net / Electro Survey	5/16/2012		331	430		13.0	15.2	June 27, 2011	10.1	324	2.9	29.0
15 Gill Net / Electro Survey	5/16/2012		340	465		13.4	16.4	June 27, 2011	10.1	324	3.3	32.5
16 Gill Net / Electro Survey	5/16/2012		325	430		12.8	15.2	June 27, 2011	10.1	324	2.7	26.7
Total Fish Return 2012	11 Fish Avg. 2012		339	469		13.4	16.5			321	3.25	32.2
2012 x = 0.88 yrs											2012 x = 3.69 inch / yr (Extrapolated/Projected)	
16-Fish AVG. to date 2011 -- 20xx AVG.			302.1	468.9		11.9	16.5	June 27, 2011	10.1	214.4	1.79	17.8
Avg x = 0.59 yrs											x = 3.05 inch / yr (Extrapolated/Projected)	

Total clipped fish stocked in 2011 = 9,240

Wilson Sink Reservoir 2011 -- Creel & Population Survey Sample Lengths & Weights -- Eagle Lake Strain Rainbow Trout with Left Pectoral fin clip												
Fish Number	Creel/Sample Date	Fork Length(mm)	Total Length(mm)	Weight (g)	Fork Length (In.)	Total Length(In.)	Weight (ounces)	Date Planted	Avg. Size @ Stocking	Days in Lake	Growth Increase(inches)	%Length Increase
Control Fish	Stocked 7/1/11 @ ≈ 9.5 inches	241	241	157	9.5	9.5	5.5	July 1, 2011	9.5	0	0.0	0
2011 Electrofish Survey Capture	10/13/2011		265			10.4		July 1, 2011	9.5	104	0.9	9.8
	2 10/13/2011		290			11.4		July 1, 2011	9.5	104	1.9	20.2
	3 10/13/2011		284			11.2		July 1, 2011	9.5	104	1.7	17.7
	4 10/13/2011		280			11.0		July 1, 2011	9.5	104	1.5	16.0
	5 10/13/2011		285			11.2		July 1, 2011	9.5	104	1.7	18.1
	6 10/13/2011		290			11.4		July 1, 2011	9.5	104	1.9	20.2
	7 10/13/2011		258			10.2		July 1, 2011	9.5	104	0.7	6.9
Total Fish Return 2011	7 Fish Avg. 2011		279			11.0				104	1.5	15.6
2011 x = 0.29 yrs											2011 x = 5.17 inch / yr (Extrapolated/Projected)	
Gill Net /Electro Survey	8 5/16/2012		374	560		14.7	19.7	July 1, 2011	9.5	320	5.2	55.0
Gill Net /Electro Survey	9 5/16/2012		369	505		14.5	17.8	July 1, 2011	9.5	320	5.0	52.9
Gill Net /Electro Survey	10 5/16/2012		360	550		14.2	19.4	July 1, 2011	9.5	320	4.7	49.2
Gill Net /Electro Survey	11 5/16/2012		352	460		13.9	16.2	July 1, 2011	9.5	320	4.4	45.9
Gill Net /Electro Survey	12 5/16/2012		316	310		12.4	10.9	July 1, 2011	9.5	320	2.9	31.0
Gill Net /Electro Survey	13 5/16/2012		420	605		16.5	21.3	July 1, 2011	9.5	320	7.0	74.1
Total Fish Return 2012	6 Fish Avg. 2012		365	498		14.4	17.6			320	4.9	51.3
2012 x = 0.88 yrs											2012 x = 5.57 inch / yr (Extrapolated/Projected)	
13-Fish AVG. to date 2011 -- 20xx AVG.			322.0	498.3		12.7	17.6	July 1, 2011	9.5	212.0	3.2	33.4
Avg x = 0.58 yrs											x = 5.52 inch / yr (Extrapolated/Projected)	

Total clipped fish stocked in 2011 = 9,065

Table 2

South Fork Reservoir 2011 -- 20xx Creel & Population Survey Lengths & Weights -- Bel-Air Rainbow Trout with Adipose fin clip													
Fish Number	Creel/Sample Date	Fork Length(mm)	Total Length(mm)	Weight (g)	Fork Length (In.)	Total Length(In.)	Weight (ounces)	Date Planted	Avg. Size @ Stocking	Resident Days in Lake	Growth Increase (inches) / Year	Growth Increase (mm)	%Length Increase
Control Fish	Stocked 4/20/11 @ = 8.8 inches	224	224	126	8.8	8.8	4.4	April 20, 2011	8.8	0	0.0	0.0	0.0
Gill Net 1	4/28/11	220	220		8.7	8.7		April 20, 2011	8.8	8	-0.1	-3.5	-1.6
Gill Net 2	4/28/11	240	240		9.4	9.4		April 20, 2011	8.8	8	0.6	16.5	7.4
Gill Net 3	4/28/11	263	263		10.4	10.4		April 20, 2011	8.8	8	1.6	39.5	17.7
Gill Net 4	4/28/11	235	235		9.3	9.3		April 20, 2011	8.8	8	0.5	11.5	5.1
?? 5	12/22/11	390	410		15.4	16.1		April 20, 2011	8.8	246	6.6	166.5	74.5
2011 5 Fish Average		270	274		10.6	10.8				55.6	1.8	46	20.6
										Years =	0.16		
Electrofished 6	5/8/12	395	414	920	15.6	16.3	32.4	April 20, 2011	8.8	384	6.8	171.5	76.7
7	5/25/12	435	450	1,150	17.1	17.7	40.5	April 20, 2011	8.8	401	8.3	211.5	94.6
8	7/9/12	435	455	1,075	17.1	17.9	37.9	April 20, 2011	8.8	446	8.3	211.5	94.6
9	10/25/12	395	410	750	15.6	16.1	26.4	April 20, 2011	8.8	554	6.8	171.5	76.7
10	10/25/12	420	440	895	16.5	17.3	31.5	April 20, 2011	8.8	554	7.7	196.5	87.9
11	11/15/12	390	415	1,100	15.4	16.3	38.8	April 20, 2011	8.8	575	6.6	166.5	74.5
2012 6 Fish Average		412	431	982	16.2	17.0	34.6			485.7	7.4	188.1	84.2
										Years =	2012 x = 1.33 yrs	2012 x = 5.6 inch / yr -->	Extrapolated/Projected*
Female 12	1/23/13	495	515	1,825	19.5	20.3	64.3	April 20, 2011	8.8	644	10.7	271.5	121.5
Gill Net 13	5/2/13	441	441	982	17.4	17.4	34.6	April 20, 2011	8.8	743	8.6	217.5	97.3
? 14	11/25/13	575	584	2,500	22.6	23.0	88.1	April 20, 2011	8.8	950	13.8	351.5	157.2
2013 3 Fish Average		504	513	1,769	19.8	20.2	62.3			779.0	11.0	280.1	125.3
										Years =	2013 x = 2.14 yrs	2013 x = 5.14 inch / yr -->	Extrapolated/Projected*
14 fish reported to date South Fork Res. Bel-Air Rb Summative:		395.0	405.9	1,375.3	15.6	16.0	48.5	April 20, 2011	8.8	440.1	6.8	171.5	76.7
										Years =	x = 1.21 yrs	x = 5.6 inch / yr -->	Extrapolated/Projected*

Total clipped fish stocked in 2011 = 9,864

South Fork Reservoir 2011 -- 20xx Creel & Population Survey Lengths & Weights -- Eagle Lake Rainbow Trout with Left Pectoral fin clip													
Fish Number	Creel Date	Fork Length(mm)	Total Length(mm)	Weight (g)	Fork Length (In.)	Total Length(In.)	Weight (ounces)	Date Planted	Avg. Size @ Stocking	Resident Days in Lake	Growth Increase (inches) / Year	Growth Increase (mm)	%Length Increase
Control Fish	Stocked 4/25/11 @ x= 8.7 inches	221	221	120	8.7	8.7	4.2	April 25, 2011	8.7	0	0.0	0.0	0.0
1	4/28/11	250	250	120	9.8	9.8	4.2	April 25, 2011	8.7	3	1.1	29.0	13.1
2	4/28/11	230	230	120	9.1	9.1	4.2	April 25, 2011	8.7	3	0.4	9.0	4.1
3	4/28/11	228	228	120	9.0	9.0	4.2	April 25, 2011	8.7	3	0.3	7.0	3.2
4	4/28/11	232	232	120	9.1	9.1	4.2	April 25, 2011	8.7	3	0.4	11.0	5.0
5	8/9/11	305	308	315	12.0	12.1	11.1	April 25, 2011	8.7	106	3.3	84.0	38.0
2011 5 Fish Average		249	250	159	9.8	9.8	5.6			23.6	1.10	28	13
										Years =	0.07		
6	1/20/12	402	420	740	15.8	16.5	26.1	April 25, 2011	8.7	270	7.1	181.0	81.9
7	3/20/12	380	395	711	15.0	15.6	25.1	April 25, 2011	8.7	330	6.3	159.0	72.0
2012 Gill Net fish 8	5/2/12	420	430	800	16.5	16.9	28.2	April 25, 2011	8.7	373	7.8	199.0	90.1
Weight ?? 9	5/11/12	450	465	1,500	17.7	18.3	52.9	April 25, 2011	8.7	382	9.0	229.0	103.6
10	6/20/12	446	475	1,100	17.6	18.7	38.8	April 25, 2011	8.7	422	8.9	225.0	101.8
11	6/21/12	430	450	915	16.9	17.7	32.2	April 25, 2011	8.7	423	8.2	209.0	94.6
12	7/28/12	355	367	670	14.0	14.4	23.6	April 25, 2011	8.7	460	5.3	134.0	60.6
13	11/27/12	480	504	1,475	18.9	19.8	52.0	April 25, 2011	8.7	582	10.2	259.0	117.2
2012 8 Fish Average		420	438	989	16.6	17.3	34.9			405.3	7.85	199.4	90.2
										Years =	2012 x = 1.11 yrs	2012 x = 7.1 inch / yr -->	Extrapolated/Projected*
14	4/10/13	500	525	1,320	19.7	20.7	46.5	April 25, 2011	8.7	716	11.0	279.0	126.3
15	4/10/13	485	510	1,275	19.1	20.1	44.9	April 25, 2011	8.7	716	10.4	264.0	119.5
2013 Electrofish 16	10/2/13	491	491	1,540	19.3	19.3	54.3	April 25, 2011	8.7	891	10.6	270.0	122.2
2013 3 Fish Average		492	509	1,378	19.4	20.0	48.6			774.3	10.67	271.0	122.6
										Years =	2013 x = 2.12 yrs	2013 x = 5.03 inch / yr -->	Extrapolated/Projected*
16 fish reported to date South Fork Eagle Lake Rb Summative:		290.3	299.1	631.6	11.4	11.8	22.3	April 25, 2011	8.7	300.8	4.9	124.6	56.4
										Years =	x = 0.83 yrs	x = 5.9 inch / yr -->	Extrapolated/Projected*

Total clipped fish stocked 2011 = 9,728

Table 3

Wildhorse Reservoir 2011 -- 20xx Creel & Population Survey Lengths & Weights -- Bel-Air Rainbow Trout with Adipose fin clip													
Fish Number	Creel/Sample Date	Fork Length(mm)	Total Length(mm)	Weight (g)	Fork Length (in.)	Total Length(in.)	Weight (ounces)	Date Planted	Avg. Size @ Stocking	Resident Days in Lake	Growth Increase (inches) / Year	Growth Increase (mm)	% Length Increase
Control Fish	Stocked 5/6/11 @ ≈ 8.6 inches	218	218	126	8.6	8.6	4.4	May 6, 2011	8.6	0	0.0	0.0	0.0
1	January 18, 2013	420	439	950	16.5	17.3	33.5	May 6, 2011	8.6	623	7.9	201.6	92.3
2	January 25, 2013	382	393	645	15.0	15.5	22.7	May 6, 2011	8.6	630	6.4	163.6	74.9
3	February 5, 2013	440	460	1250	17.3	18.1	44.1	May 6, 2011	8.6	641	8.7	221.6	101.4
Gill Net 4	May 31, 2013	418	418	915	16.5	16.5	32.2	May 6, 2011	8.6	756	7.9	199.6	91.4
2013 4 Fish Average		415	428	940	16.3	16.8	33.1			662.5	7.7	197	90
									Years =	2013 x = 1.82 yrs	2013 x = 4.23 inch / yrs		
5	10/16/14	520	540	1,340	20.5	21.3	47.2	May 6, 2011	8.6	1,259.0	11.9	301.6	138.1
6	10/16/14	430	452	925	16.9	17.8	32.6	May 6, 2011	8.6	1,259.0	8.3	211.6	96.9
2014 2 Fish Average		475	496	1,133	18.7	19.5	39.9			1,259.0	10.1	256.6	117.5
									Years =	2014 x = 3.45 yrs	2014 x = 2.93 inch / yr -->	Extrapolated/Projected*	
6 fish reported to date	2011 - 2014 AVG:	445.0	461.8	1,036.3	17.5	18.2	36.5	May 6, 2011	8.6	960.8	8.9	226.6	103.7
Wildhorse Res. Bel-Air Rb Summative:													
									Years =	Avg. to Date x = 2.63 yrs	AVG. x = 3.39 inch / yr -->	Extrapolated/Projected*	

Total clipped fish stocked in 2011 = 9,872