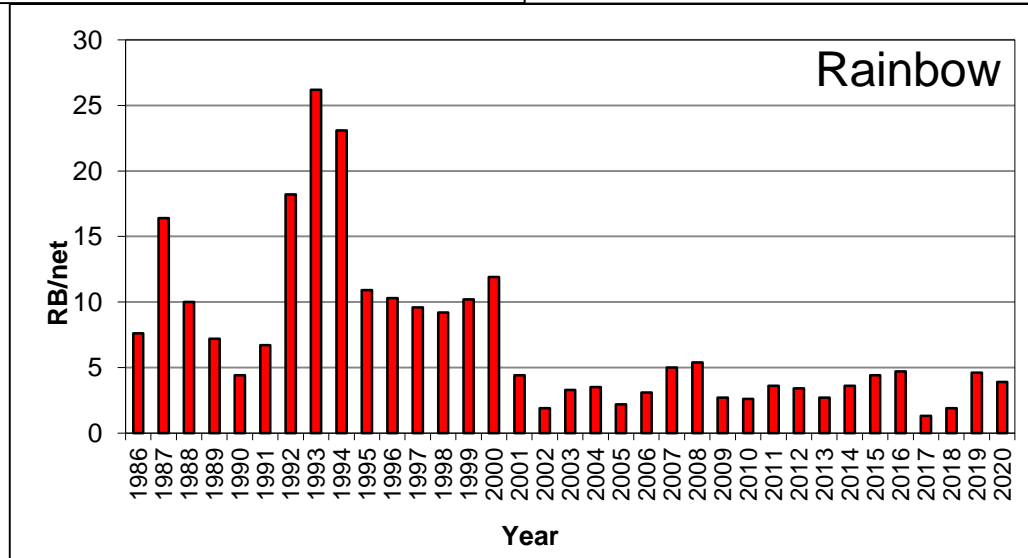
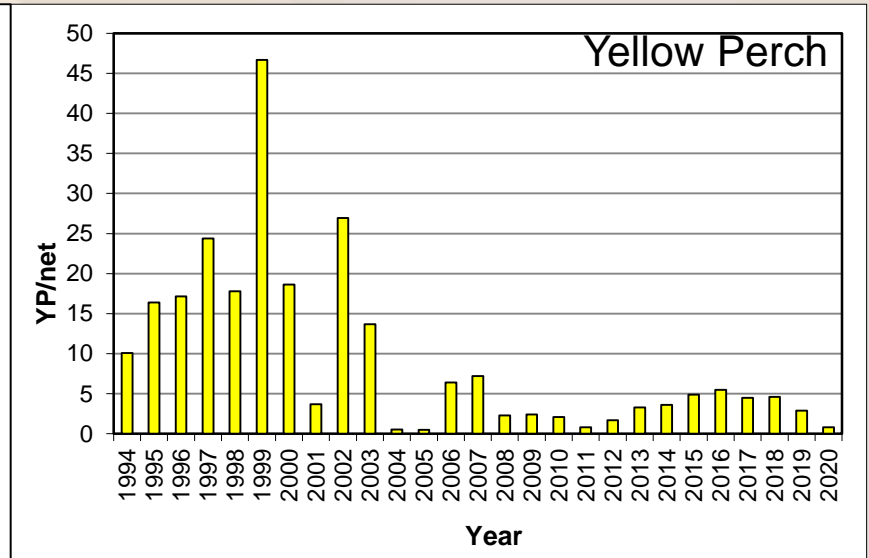
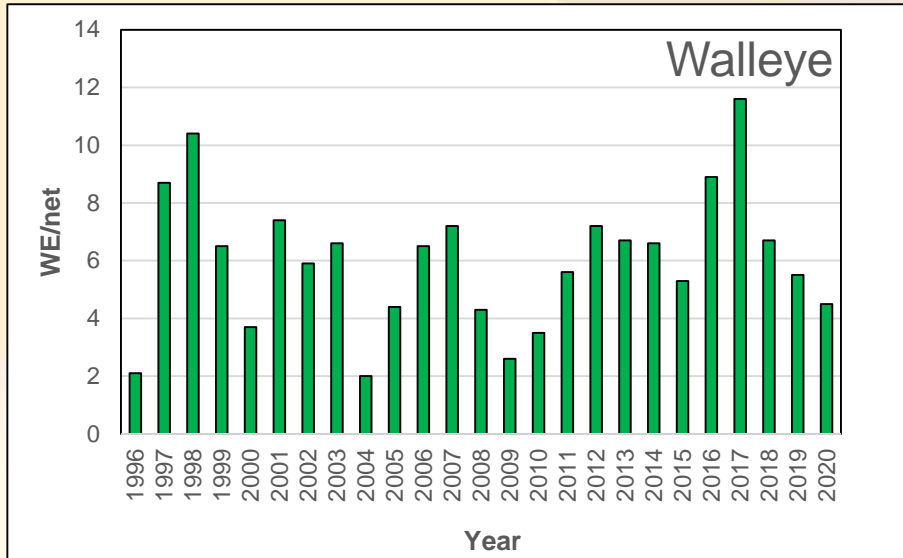


Canyon Ferry Reservoir

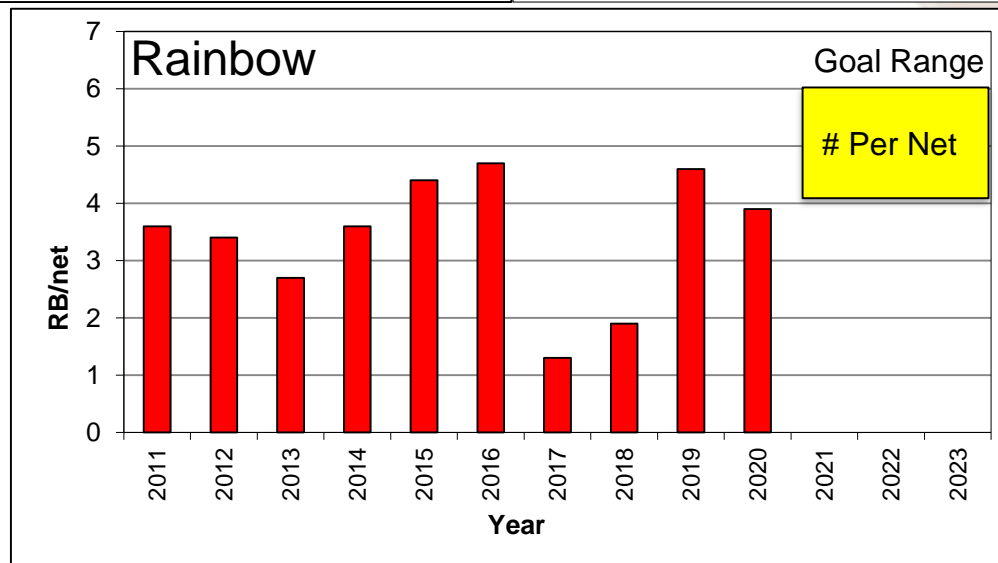
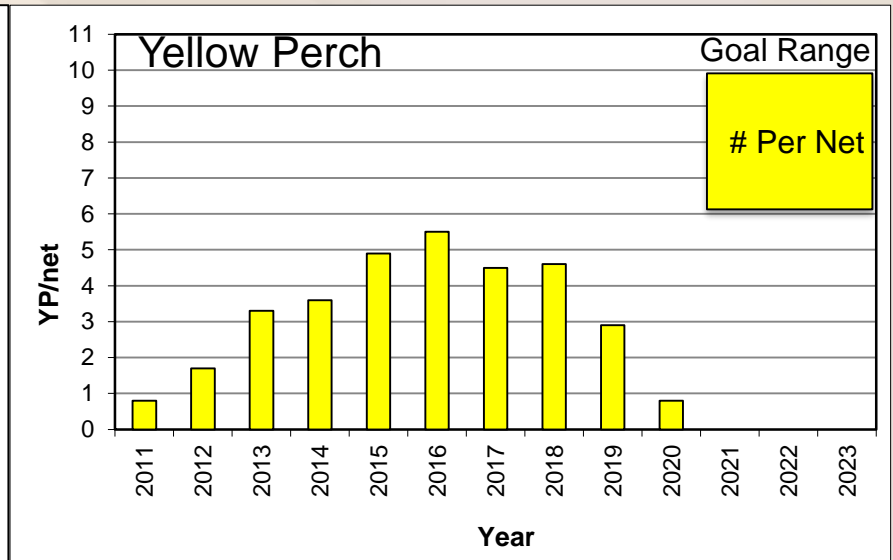
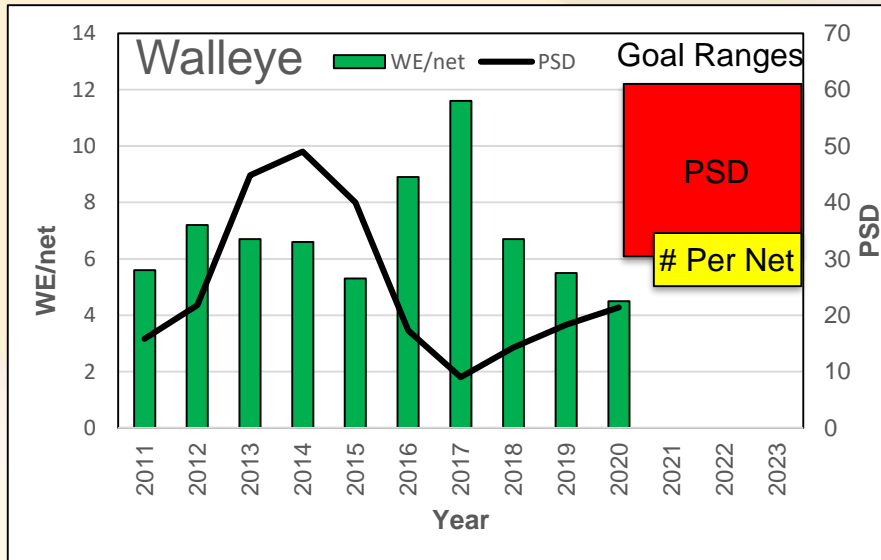
2020 Survey Results and Analysis



2020 Canyon Ferry - Relative Abundance Gillnetting Surveys



2020 Canyon Ferry - Relative Abundance Gillnetting Surveys



2020 Walleye

PSD – 21.4

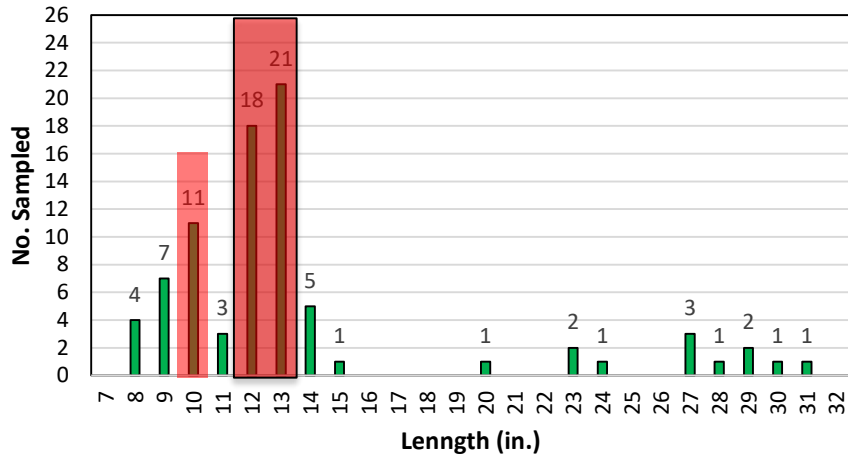
#/net – 4.5

PSD Goal Range
#/Net Goal Range

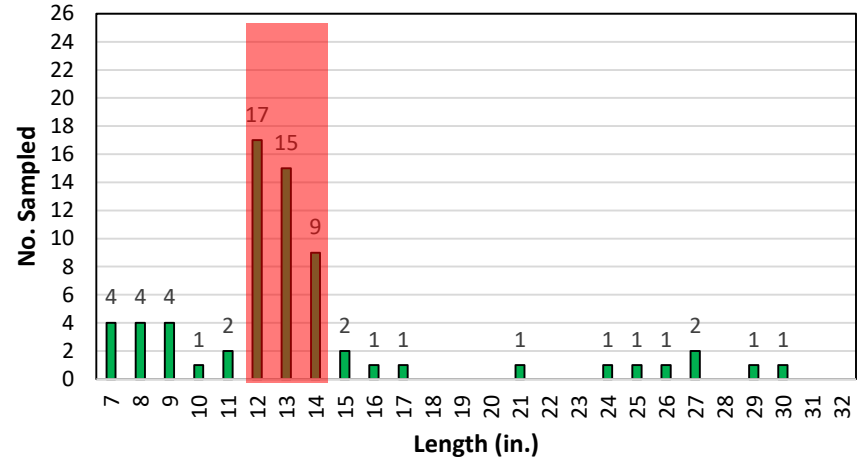


Canyon Ferry Reservoir Walleye

Canyon Ferry Reservoir - Walleye
2019 Fall Gillnet Survey - Histogram (n=82)

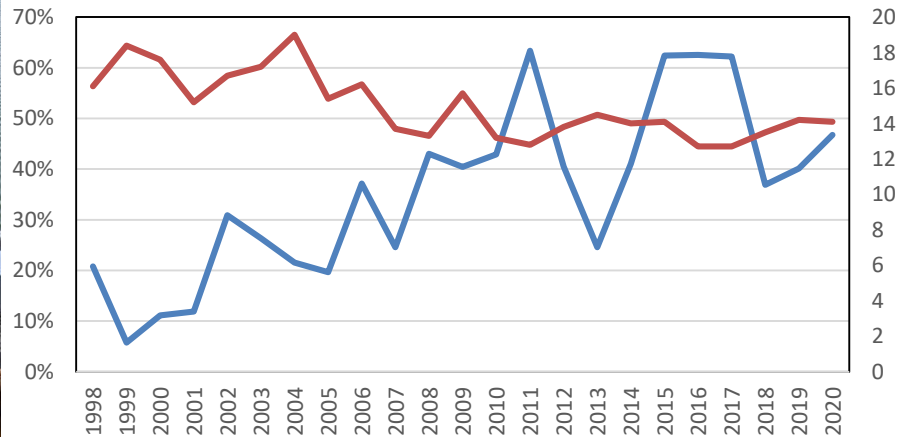


Canyon Ferry Reservoir - Walleye
2020 Fall Gillnet Survey - Histogram (n=68)

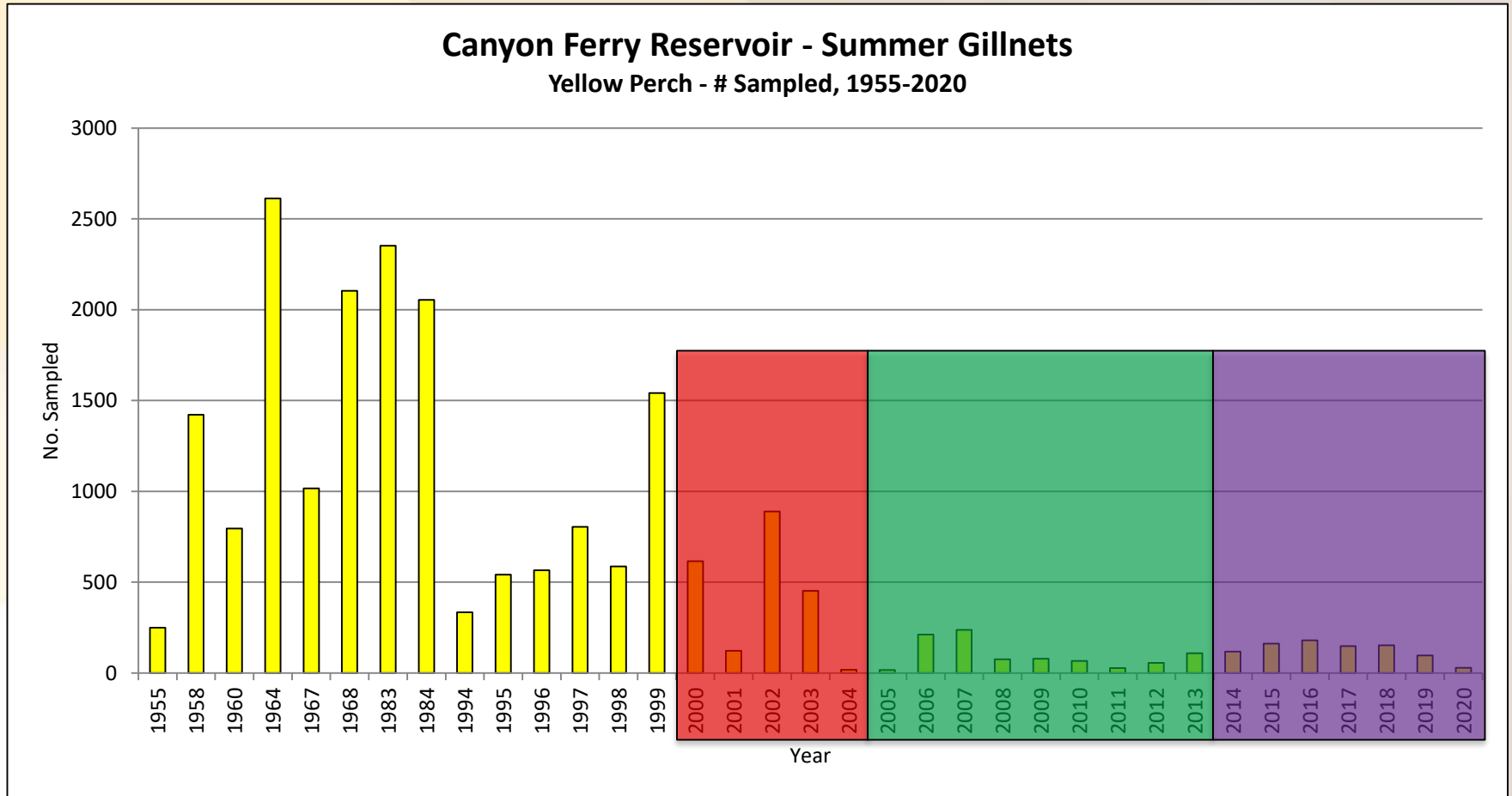


Canyon Ferry Reservoir - Walleye

*% Released by Anglers (Creel) & Average Length
(Fall Nets) *Anglers Targeting WE



Canyon Ferry Reservoir Yellow Perch



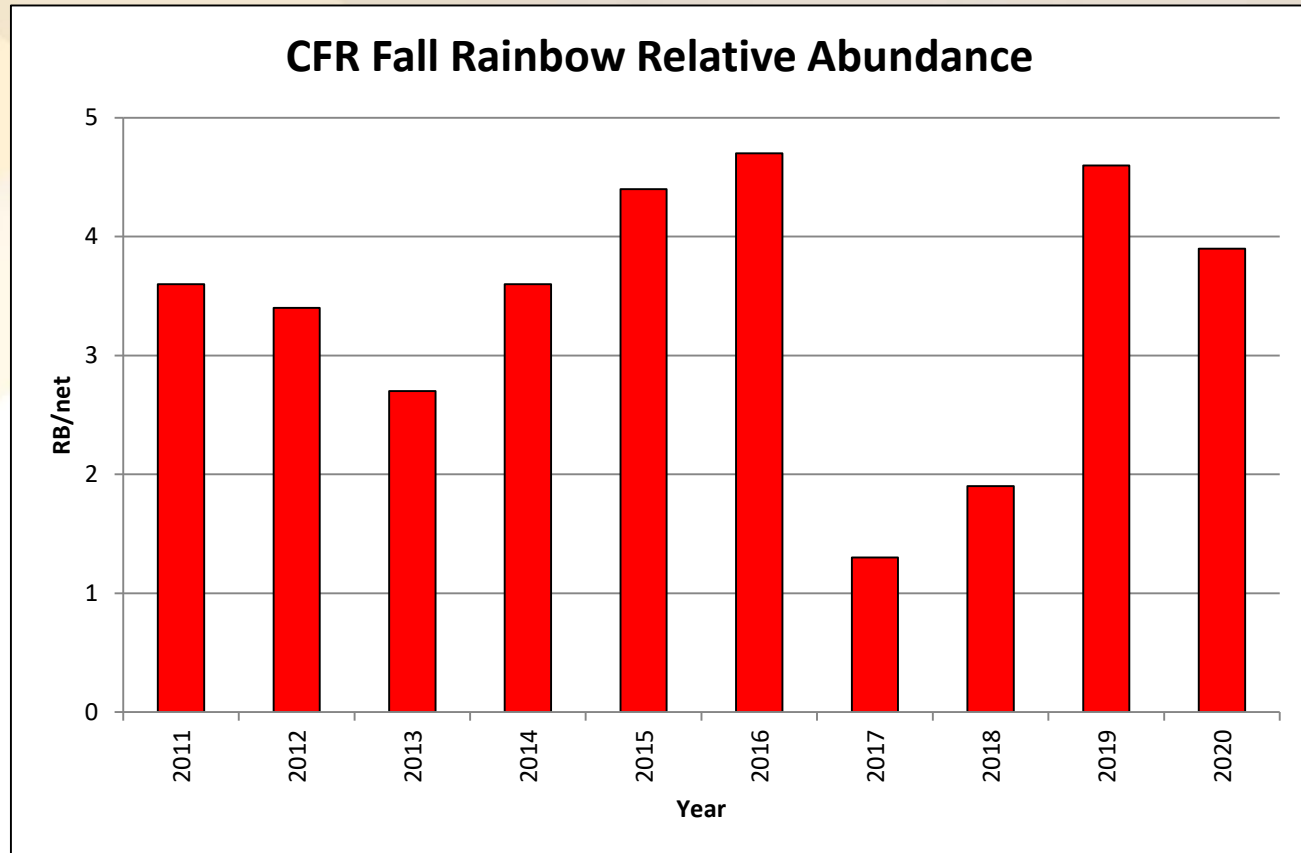
50 daily and no possession

15 daily and in possession

10 daily and in possession



Canyon Ferry Reservoir Rainbow Trout



CFR Rainbow trout hatchery plants = 282,000 in 2017,
156,000 in 2018, 134,000 in 2019 and 260,000 in 2020
(50,000 lost from Bluewater Hatchery due to AIS)



Hauser and Holter Reservoir Fisheries Trends & Plan Area Pressure and Goals



Adam Strainer - FWP

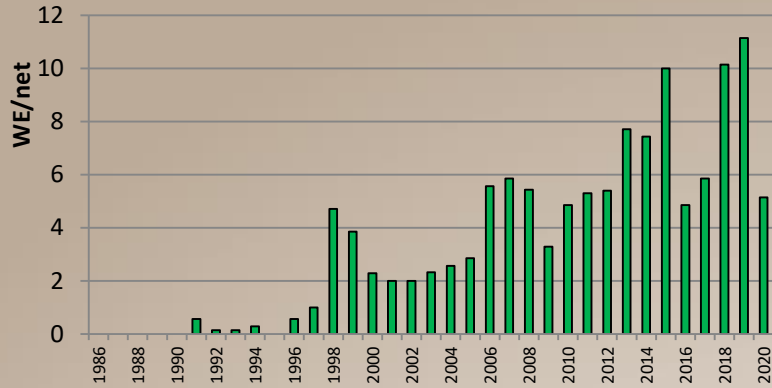


Hauser Reservoir

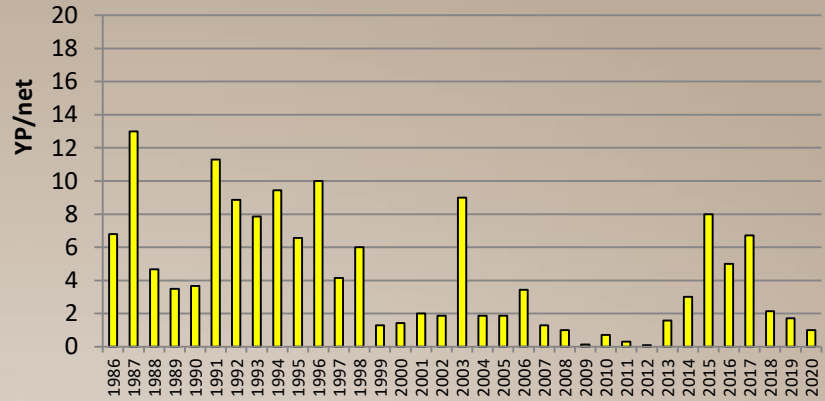
Annual Relative Abundance

Fall Gillnetting Survey

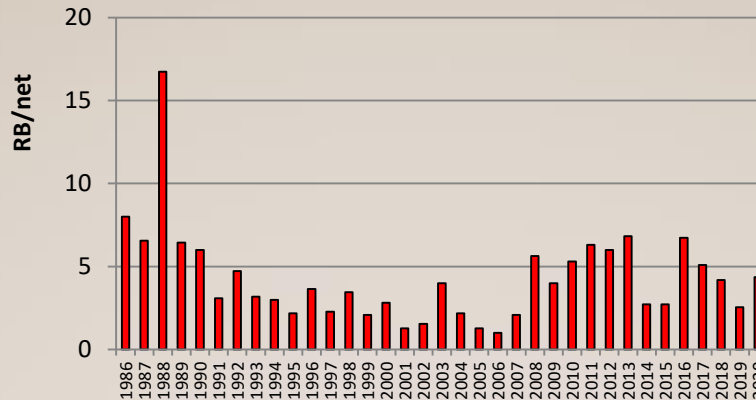
Walleye



Yellow Perch

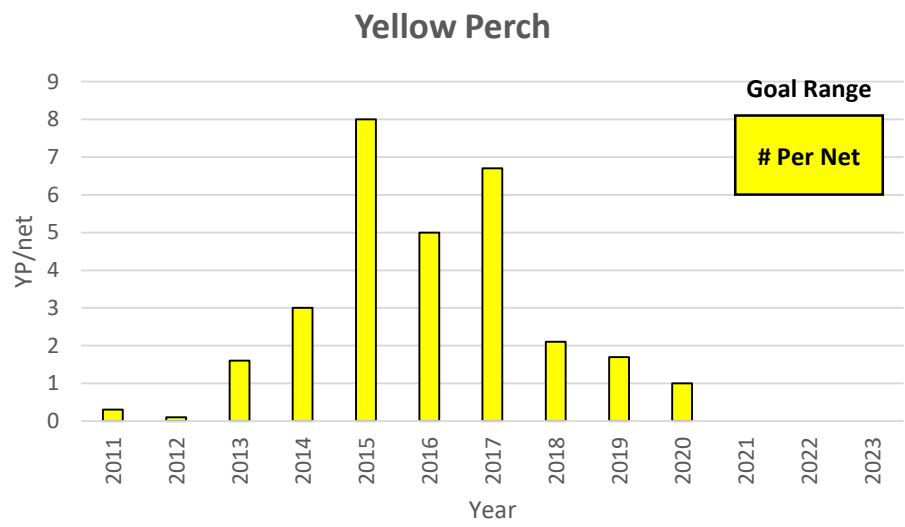
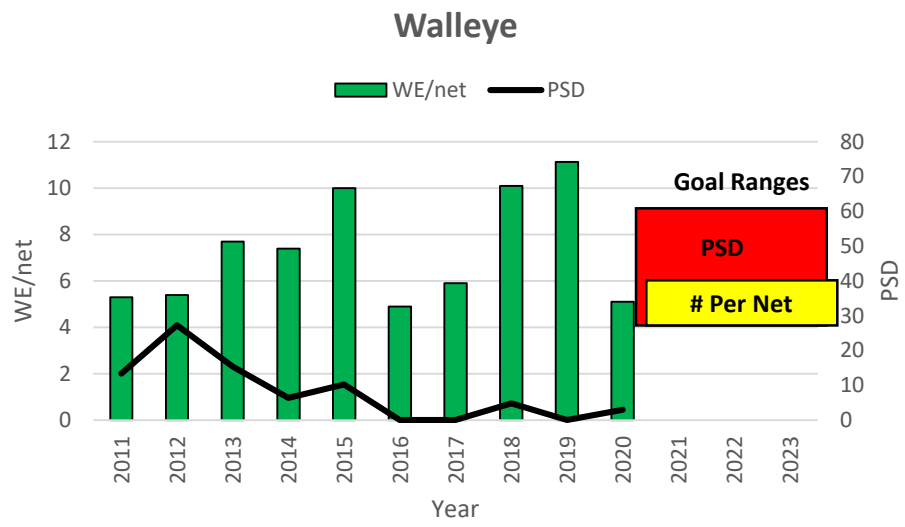


Rainbow Trout



Hauser Reservoir - Annual Relative Abundance

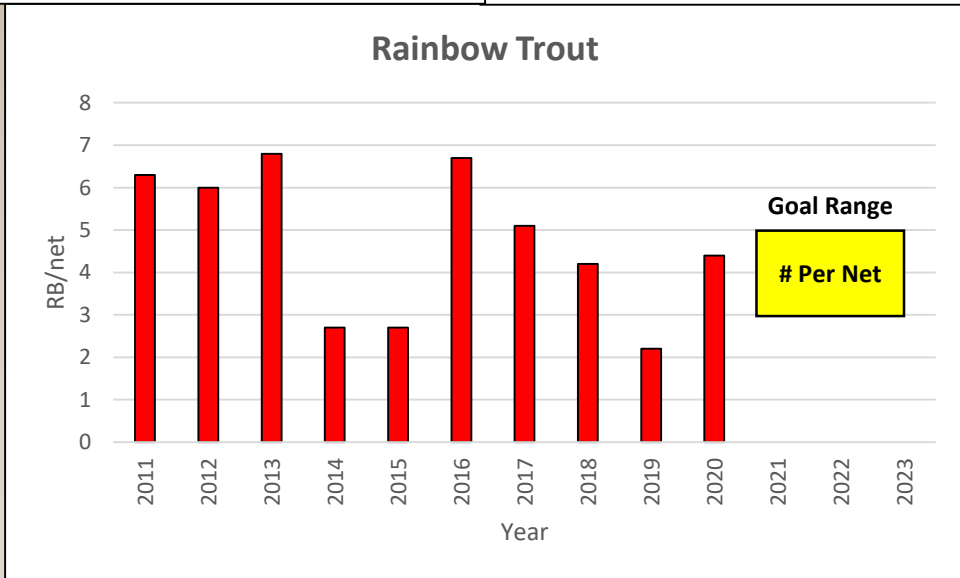
Fall Gillnetting Surveys



2020 Walleye

PSD – 3

#/net – 5.1





October 2020

Black Sandy State Park

Helena Valley Northeast

Lake Helena

Missouri River

Hauser Lake

Missouri River

York

Canyon Ferry

284



100K

June 2020



Wild



Hauser Kokanee Salmon – Update

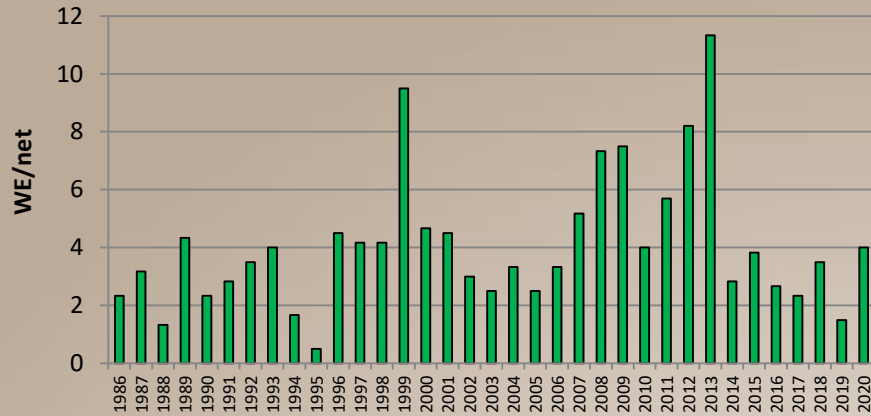


Holter Reservoir

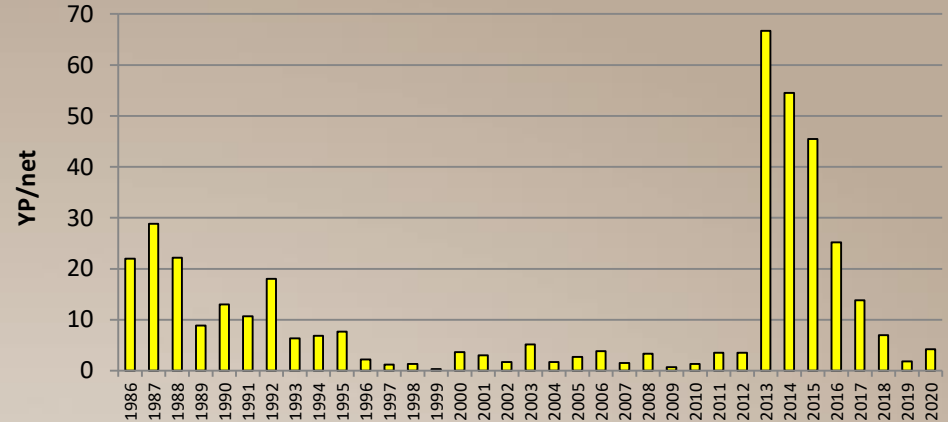
Annual Relative Abundance

Fall Gillnetting Survey

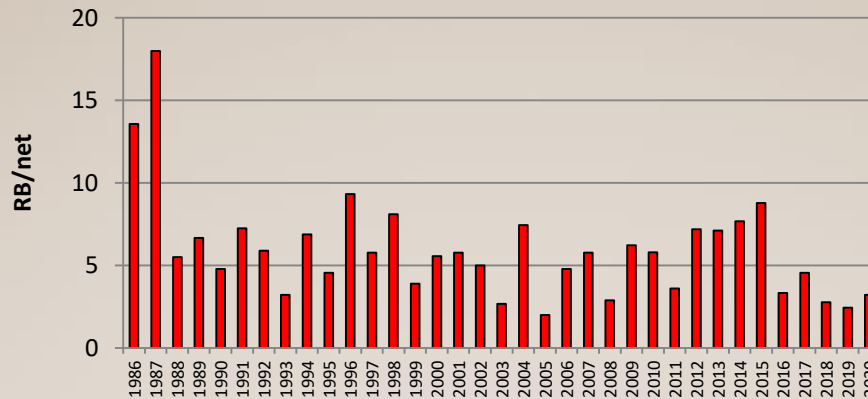
Walleye



Yellow Perch

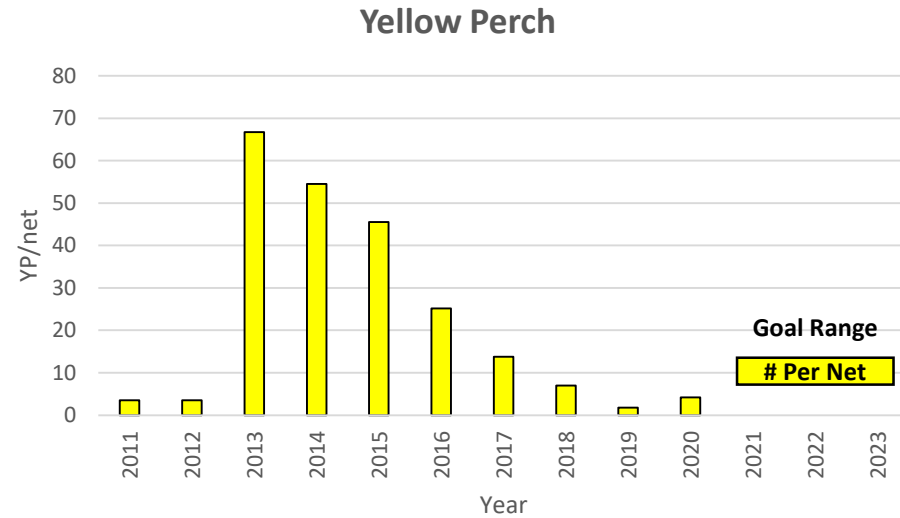
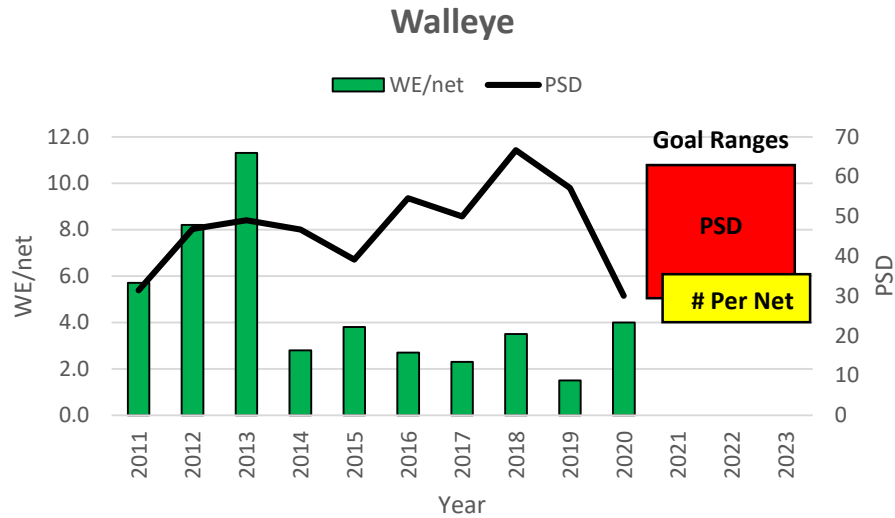


Rainbow Trout



Holter Reservoir - Annual Relative Abundance

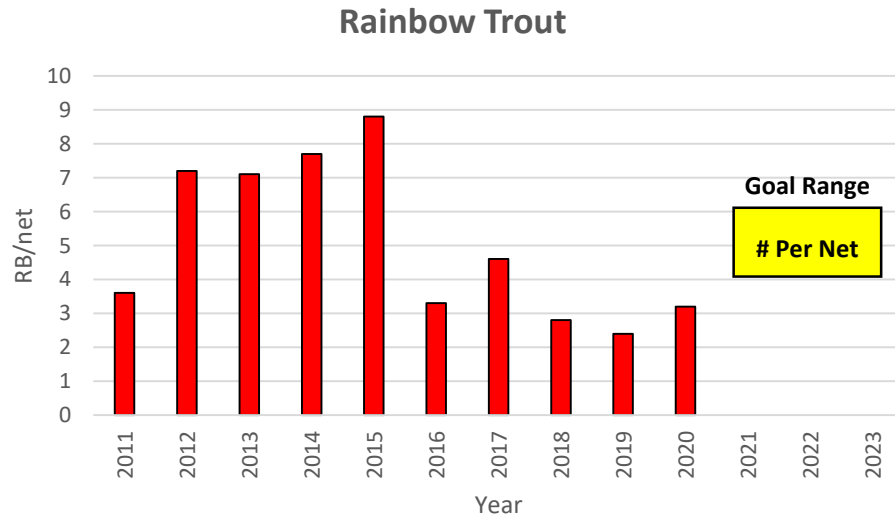
Fall Gillnetting Survey



2020 Walleye

PSD – 30

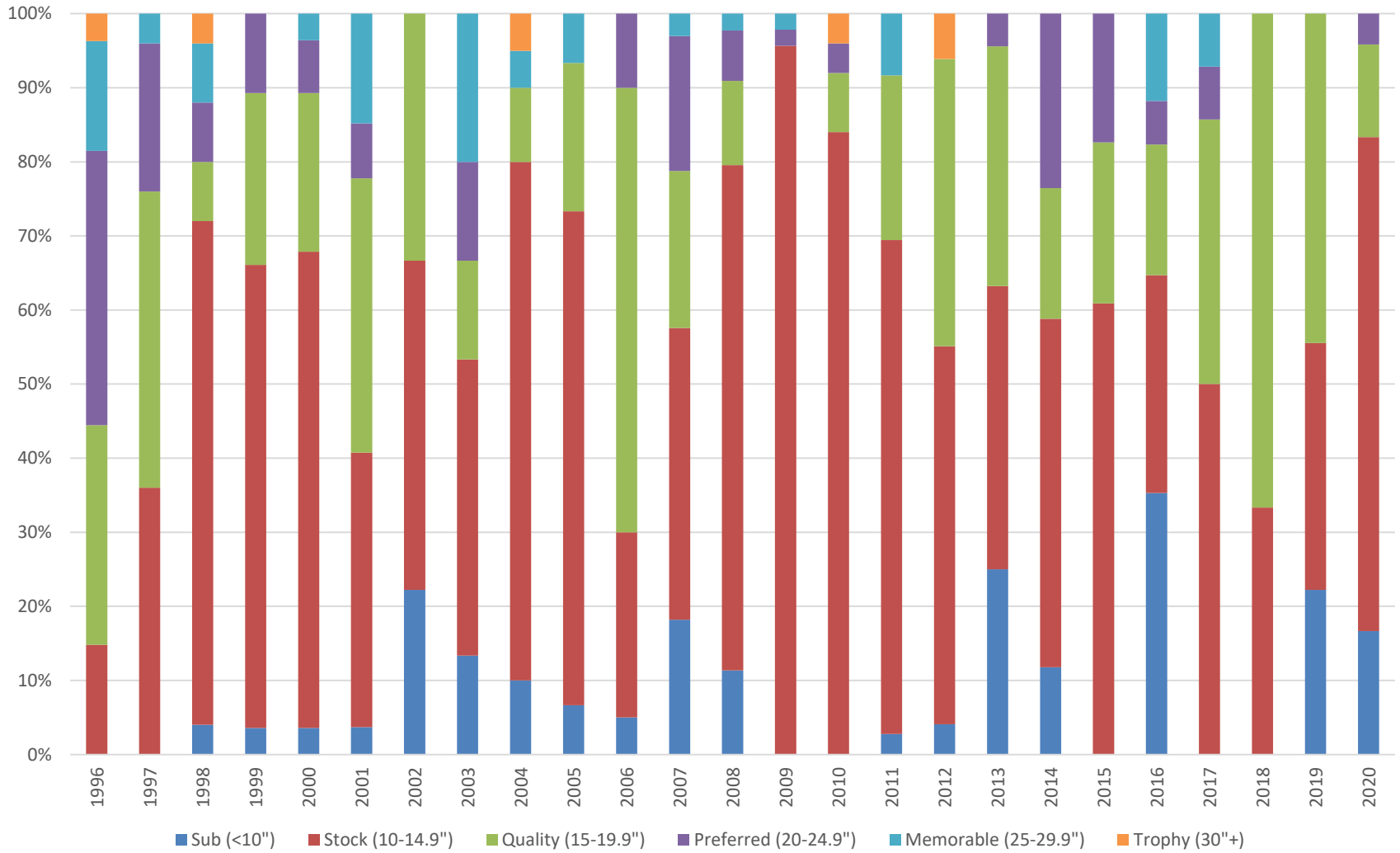
#/net – 4.0



	PSD Goal Range
	#/Net Goal Range



Holter Reservoir Walleye RSD Frequency - Fall Survey



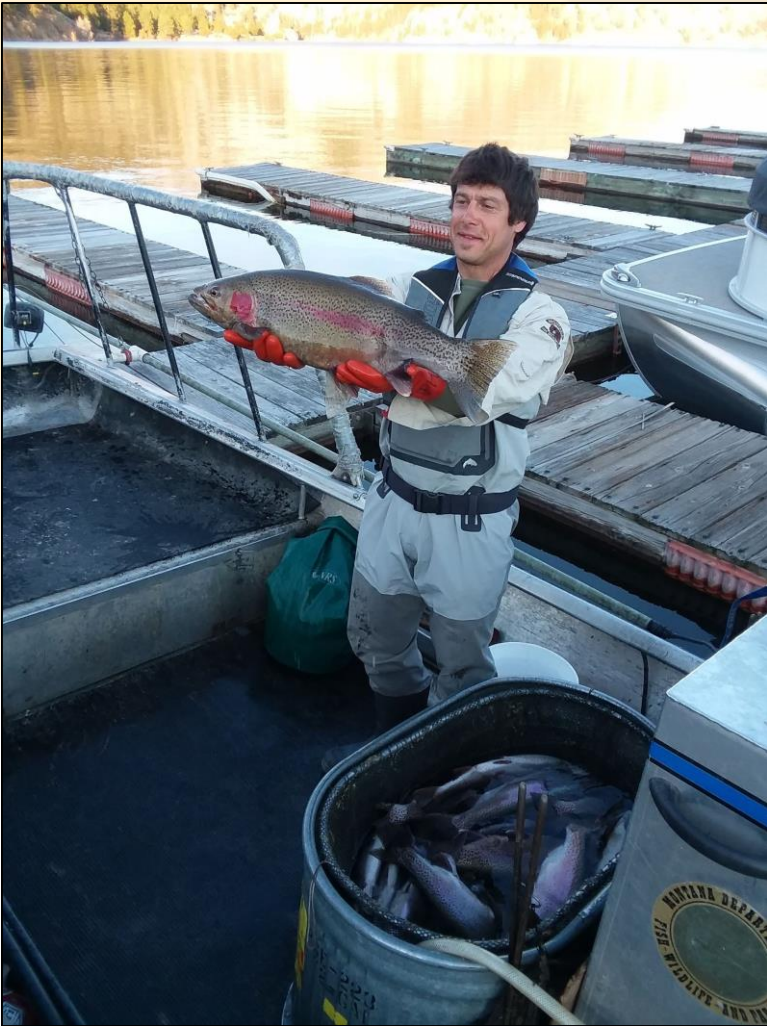
Holter - Northern Pike

Highest # sampled on record

- Stepwise downstream movement
 - 2008 - Toston Res.
 - 2009 – CFR (consistent since 2015)
 - 2018 – Hauser
 - 2020 – Holter
 - 2020 – Holter Tailrace?

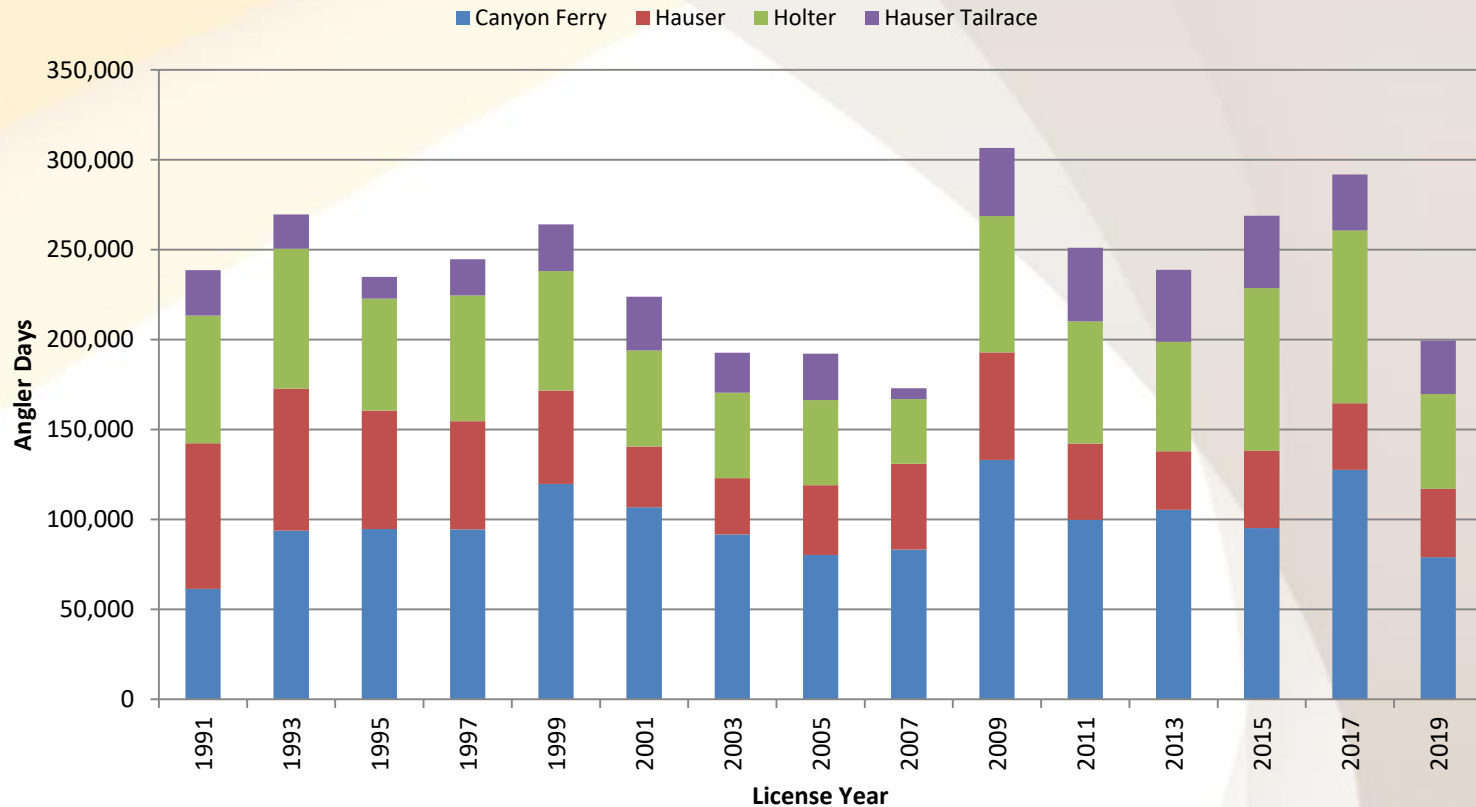


Holter Egg Take – 2020



Preliminary Pressure – 2019 License Year

Upper Missouri River Reservoir System - Total Angling Pressure



Walleye

	Target Range	Goal	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Canyon Ferry	3-6.9/net	5/net	3.5	3.9	5.4	6.5	6.1	5.5	6.2	8.6	9.1	7.9
Hauser	2-5.9/net	2-3/net	4.5	4.5	5.2	6.1	6.8	8.4	7.4	6.9	6.9	9.1
Holter	2-5.9/net	4/net	6.3	5.7	6.0	8.4	7.4	6.0	3.1	2.9	2.8	2.4

Rainbow Trout

	Target Range	Goal	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Canyon Ferry	>3/net	5-6/net	3.6	3.0	3.2	3.2	3.2	3.6	4.2	3.5	2.6	2.6
Hauser	>1/net	3/net	5.0	5.2	5.9	6.4	5.2	4.1	4.0	4.0	5.3	3.8
Holter	>2/net	6/net	5.0	5.2	5.5	6.0	7.3	7.9	6.6	5.6	3.6	3.3

Yellow Perch

	Target Range	Goal	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Canyon Ferry	3-14.9/net	10/net	2.3	1.8	1.2	1.9	2.9	3.9	4.6	4.9	4.7	4
Hauser	1-6.9/net	4/net	0.6	0.4	0.4	0.7	1.6	4.2	5.3	6.6	4.3	3.5
Holter	2-9.9/net	6/net	1.8	1.8	2.8	24.6	41.6	55.6	41.7	28.2	15.3	7.5

- = meets management goals
- = below management goals, within management range
- = exceeds upper or lower management triggers

Report Card

NEW

Canyon Ferry		
	Goal	2020
WE	5 to 7 (PSD 30-60)	4.5 (21)
RB	4 to 6	3.9
YP	6 to 10	0.8

Hauser		
	Goal	2020
WE	4 to 6 (PSD 30-60)	5.1 (3)
RB	3 to 5	4.4
YP	6 to 8	1.0

Holter		
	Goal	2020
WE	4 to 6 (PSD 30-60)	4 (30)
RB	4 to 6	3.2
YP	8 to 12	4.2

- = meets plan goal range
- = above or below plan goal range



Management Considerations



Analysis



Plan - Species Goals

River Sections

The primary plan goal for the two river sections is to emphasize management for wild trout while recognizing the importance of walleye, burbot and kokanee (Hauser Tailrace only) for providing additional angling opportunity.

- Management decisions based on standardized CPUE surveys (e.g., electrofishing)

River Section Species Goals					
	Species				
	Rainbow trout	Brown trout	Walleye	Northern Pike	Kokanee
Toston Dam to Canyon Ferry Reservoir	1.0 per minute	0.40 per minute	Monitor	Suppress	Monitor
Hauser Dam to Holter Reservoir	3,500 per mile	150 per mile	Monitor	Suppress	Monitor

Reservoir Sections

The UMRRFMP emphasizes management for trout and walleye while recognizing the importance of yellow perch as a game fish and a forage species.

- Management decisions based on standardized Relative Abundance surveys (e.g., gillnetting)
- Introduce Proportional Stocking Density (PSD) to walleye management in reservoirs throughout the plan area. PSD goal for all reservoirs is 30-60

Reservoir Section Species Goal Ranges (number per net)					
	Species				
	Rainbow trout	Yellow perch	Walleye	Brown trout	Burbot
Canyon Ferry Reservoir	4 to 6	6 to 10	5 to 7	0.5 to 1.5	0.25 to 0.5
Hauser Reservoir	3 to 5	6 to 8	4 to 6	0.5 to 1.5	0.5 to 1.5
Holter Reservoir	4 to 6	8 to 12	4 to 6	NA	0.25 to 0.5



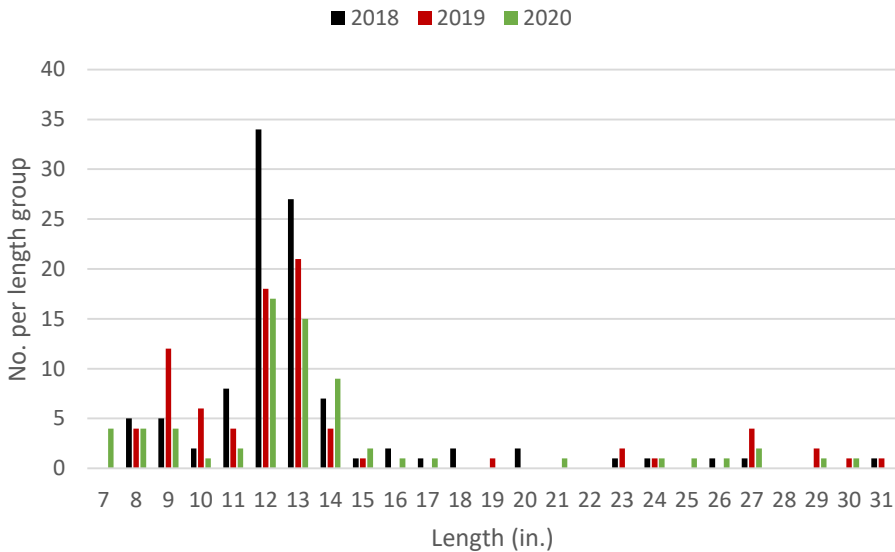
Regulation History

	Canyon Ferry		Hauser	
	#/net	Reg*	#/net	Reg*
2010	3.5	20 daily, 1 over 28"	4.9	10 daily, 1 over 28"
2011	5.6	10 daily, only 4 over 16", 1 over 28"	5.3	20 daily, 1 over 28"
2012	7.2		5.4	
2013	6.7		7.7	
2014	6.7	12 daily, 1 over 25"	7.4	20 daily, 1 over 25"
2015	5.3		10	
2016	8.9		4.9	
2017	11.6		5.9	
2018	6.7	20 daily, 1 over 20"	10.1	
2019	5.5		11.1	
2020	4.5		5.1	
	*Possession is twice the daily limit			

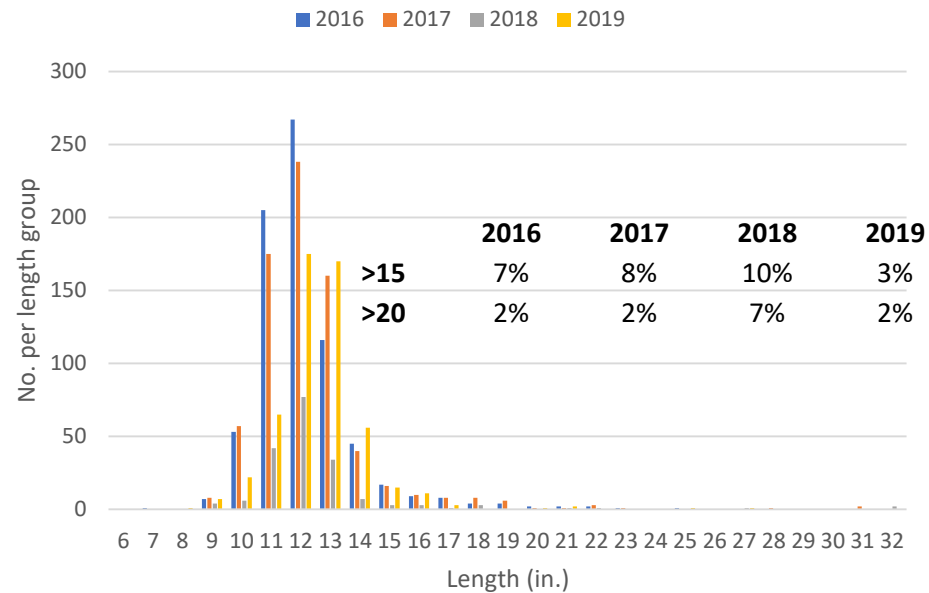


Walleye Length Frequency's

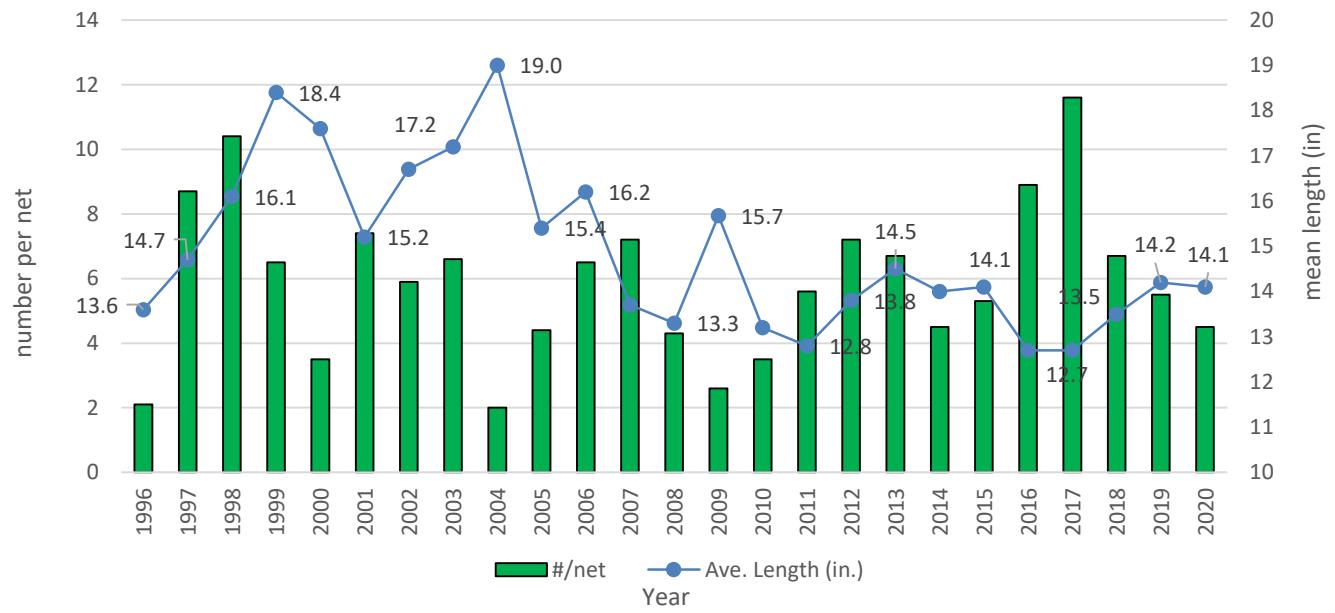
Canyon Ferry Reservoir Walleye
Fall Survey - 3 YR Histogram (2018-20)



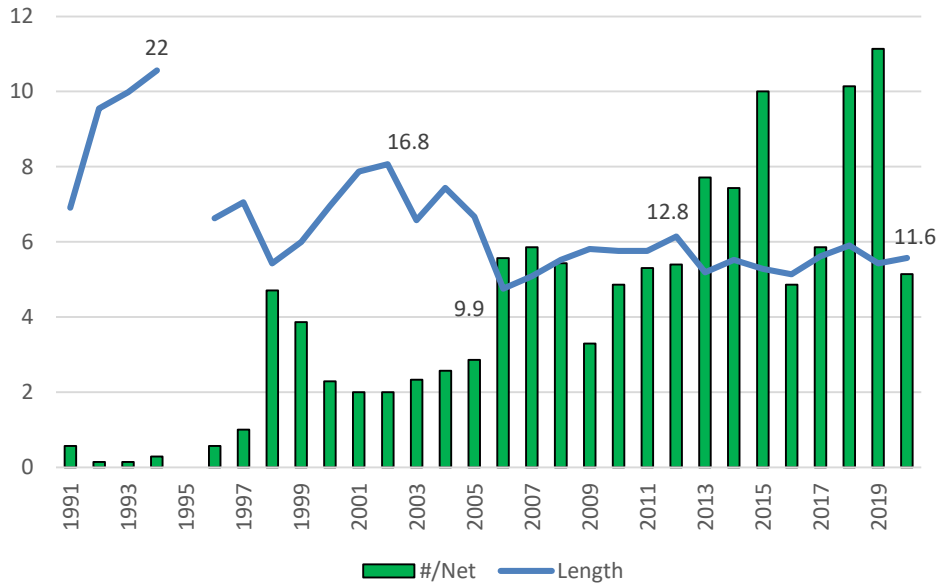
CFR Creel - Walleye '16-'19



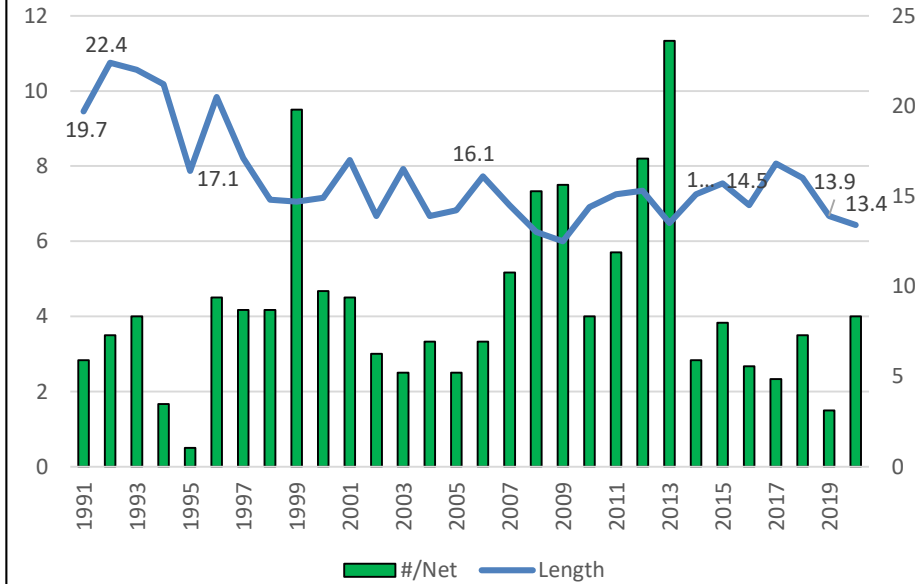
Canyon Ferry Walleye - Abundance & Average Length



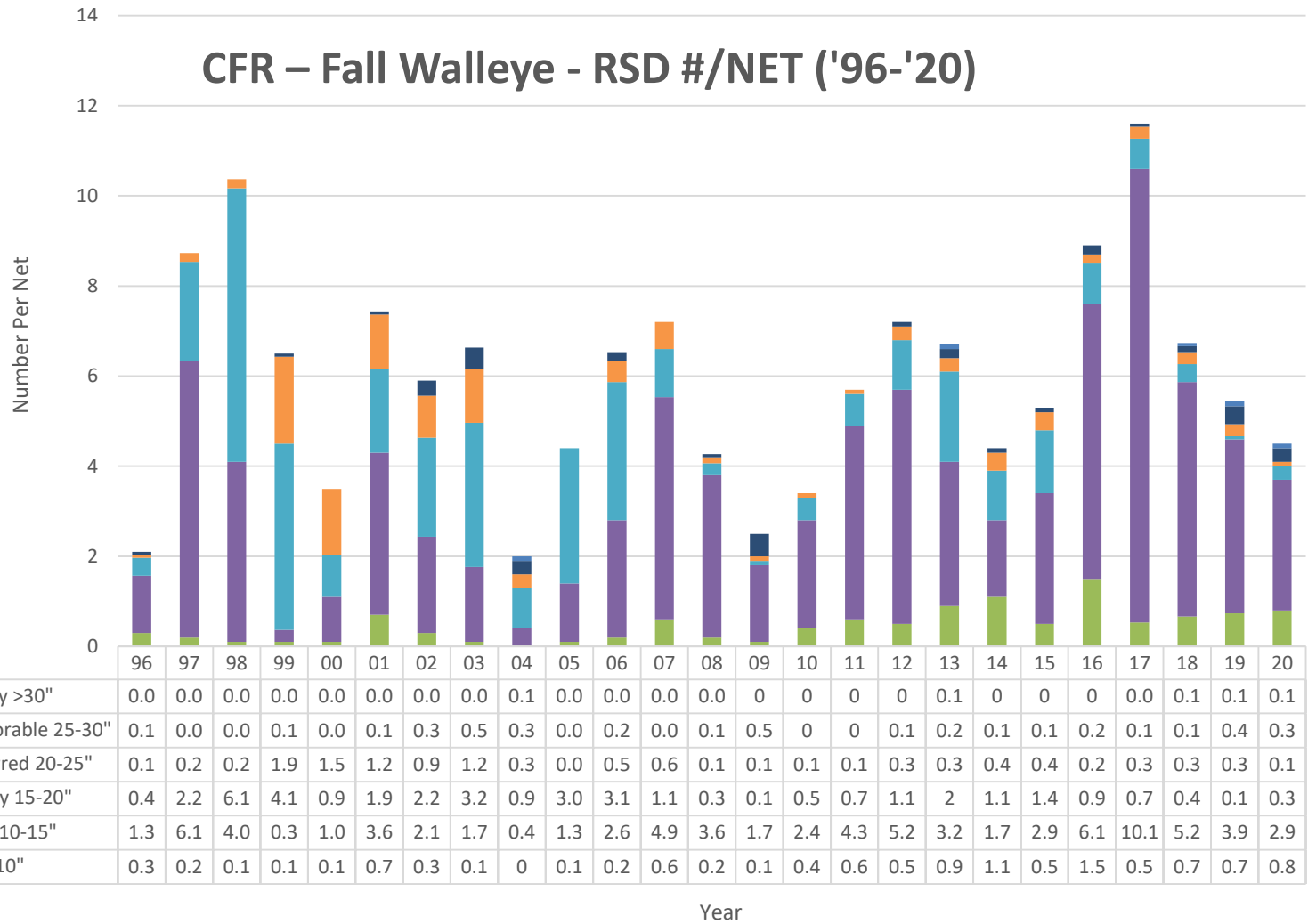
Hauser Walleye - Abundance and Average Length



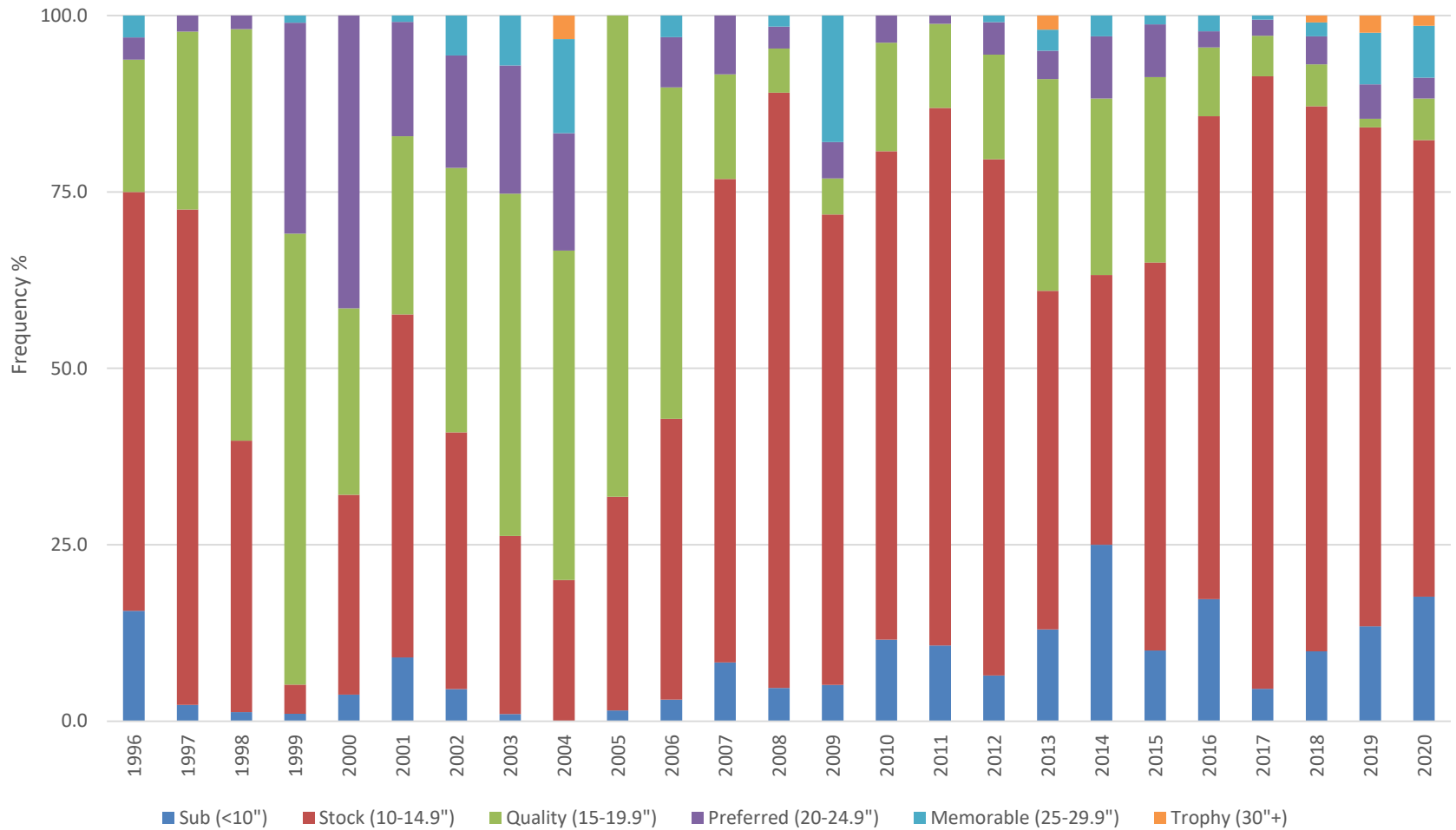
Holter Walleye - Abundance and Average Length



CFR – Fall Walleye - RSD #/NET ('96-'20)

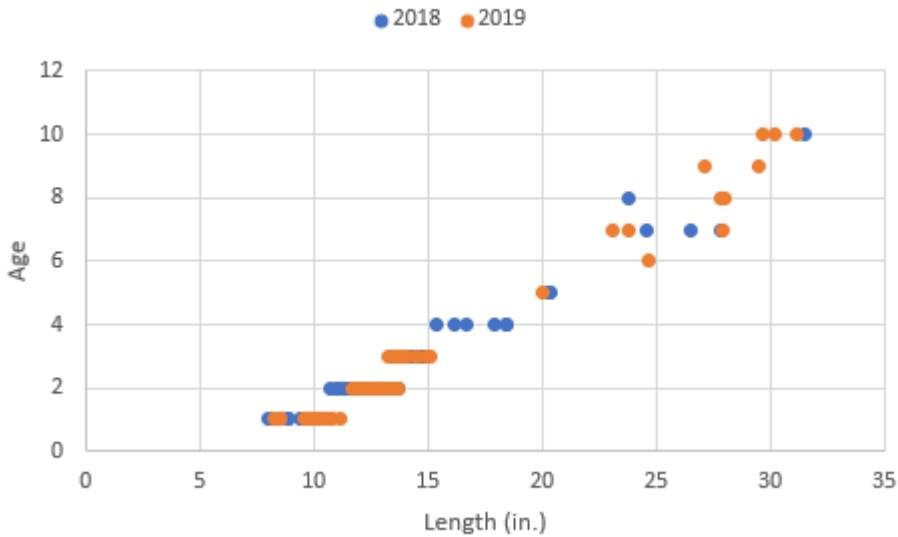


Canyon Ferry Reservoir Walleye RSD Frequency - Fall Survey

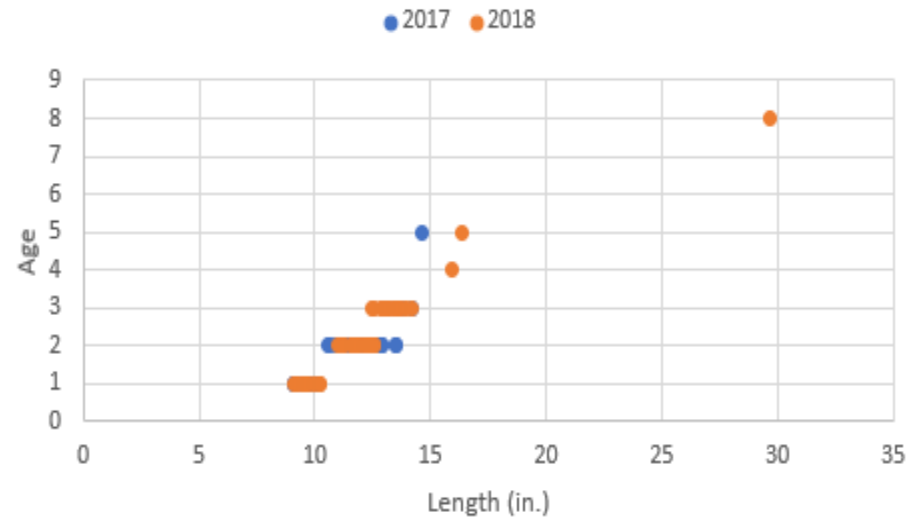


Walleye - Length at Age

CFR WE Length at Age, 2018-19



Hauser WE Length at Age, 2017-2018



CFR Summer Creel – Catch Rates

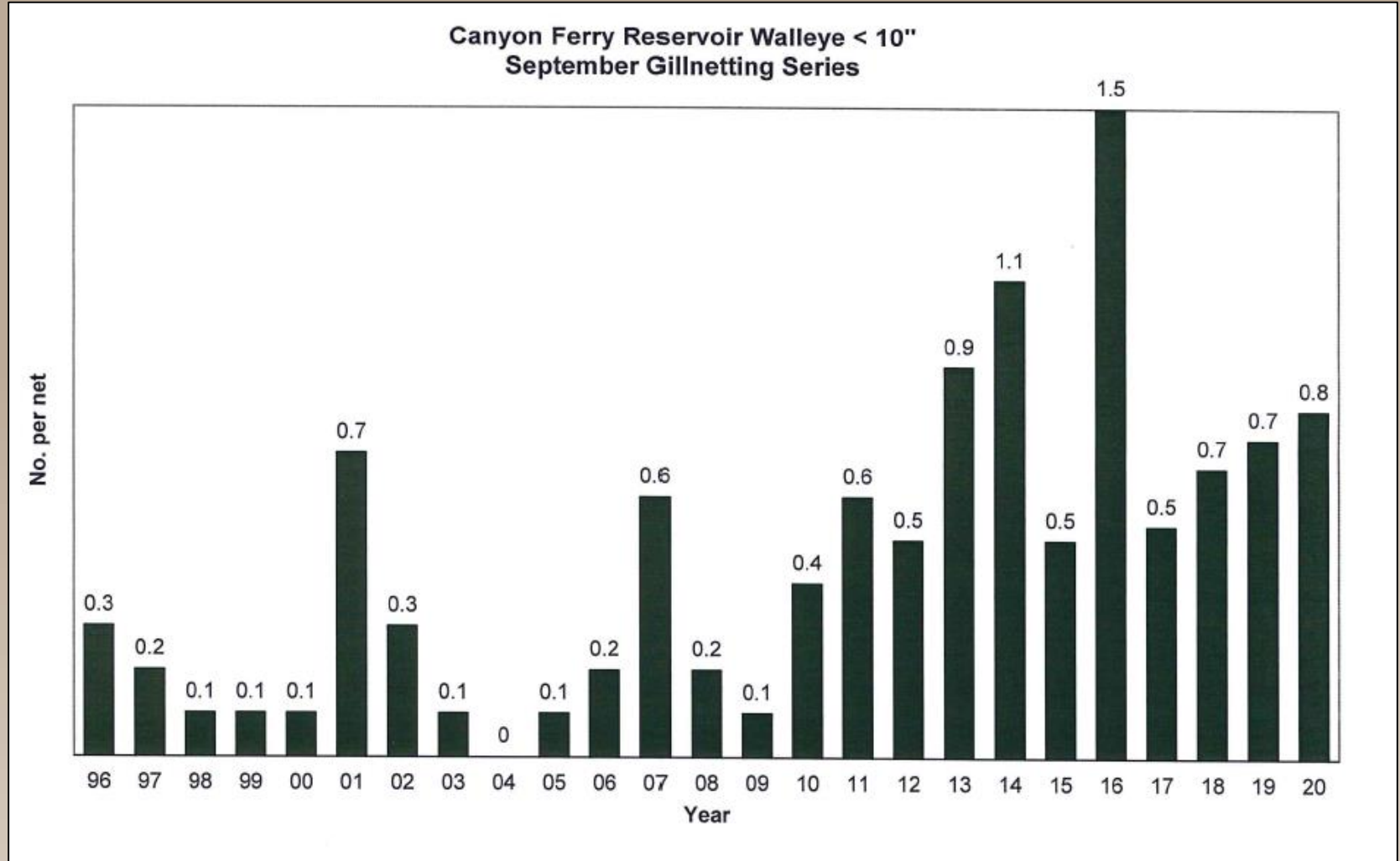
Target Specific

Summer Creel									
Year	<i>Rainbow</i>			<i>Yellow Perch</i>			<i>Walleye</i>		
	<i>No. Ang.</i>	Total Fish	Fish/hr	<i>No. Ang.</i>	Total Fish	Fish/hr	<i>No. Ang.</i>	Total Fish	Fish/hr
2011	1058	957	0.42	4	0	0	626	985	0.49
2012	426	369	0.34	2	15	2.5	600	901	0.35
2013	1775	531	0.27	2	0	0	1003	1046	0.21
2014	556	558	0.39	3	0	0	732	1731	0.5
2015	462	782	0.65	3	0	0	544	1207	0.47
2016	283	620	0.78	0	0	0	721	2158	0.62
2017	420	660	0.58	3	2	0.48	780	2525	0.65
2018	62	70	0.32	1	0	0	325	499	0.34
2019	261	200	0.28	4	4	0.26	640	1435	0.50
2020	578	1098	0.71	0	0	0	622	1395	0.48
Mean	588	585	0.47	2	2	0.32	659	1388	0.46



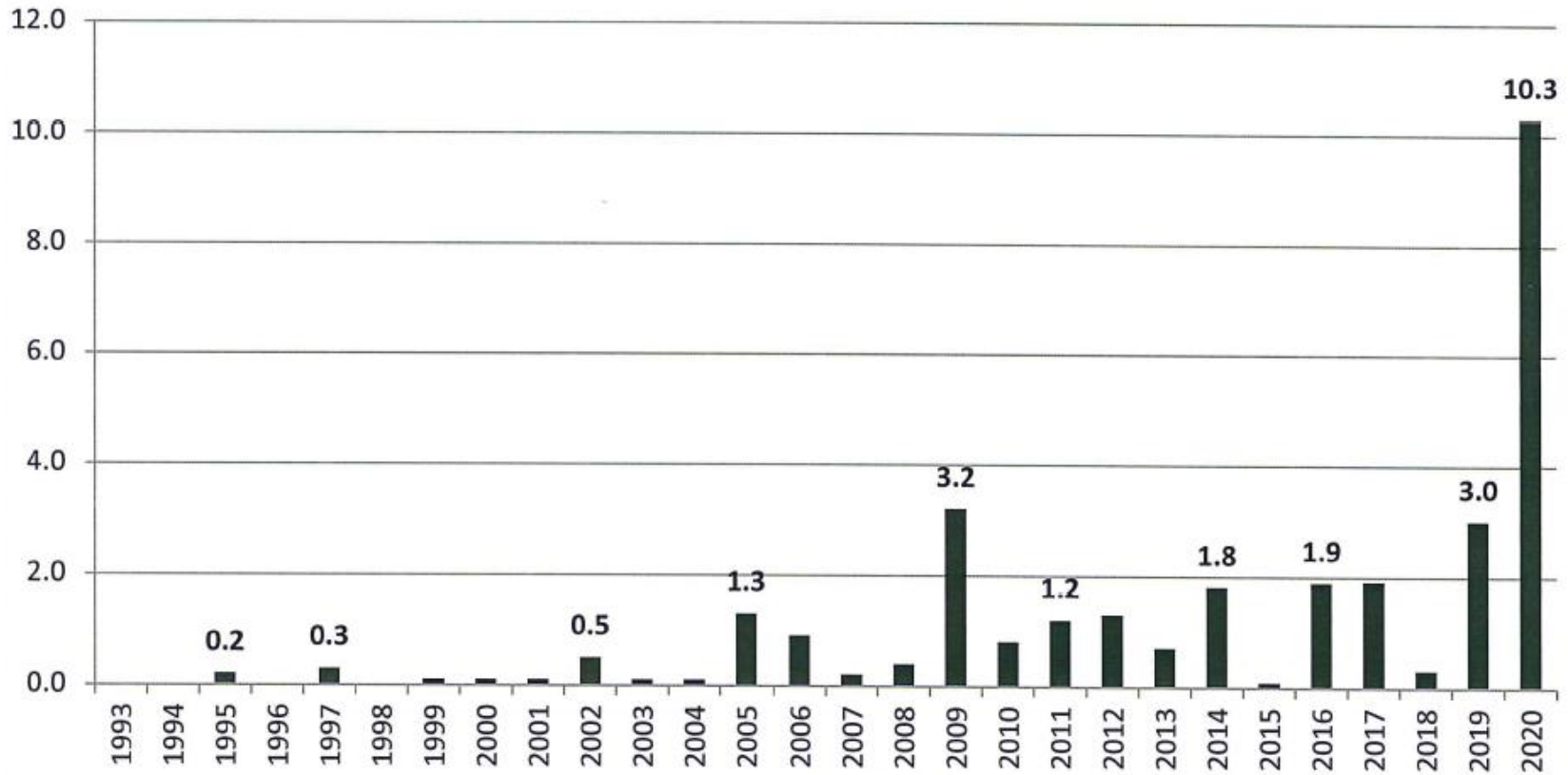
CFR – RSD Sub-stock

Fall Netting Survey



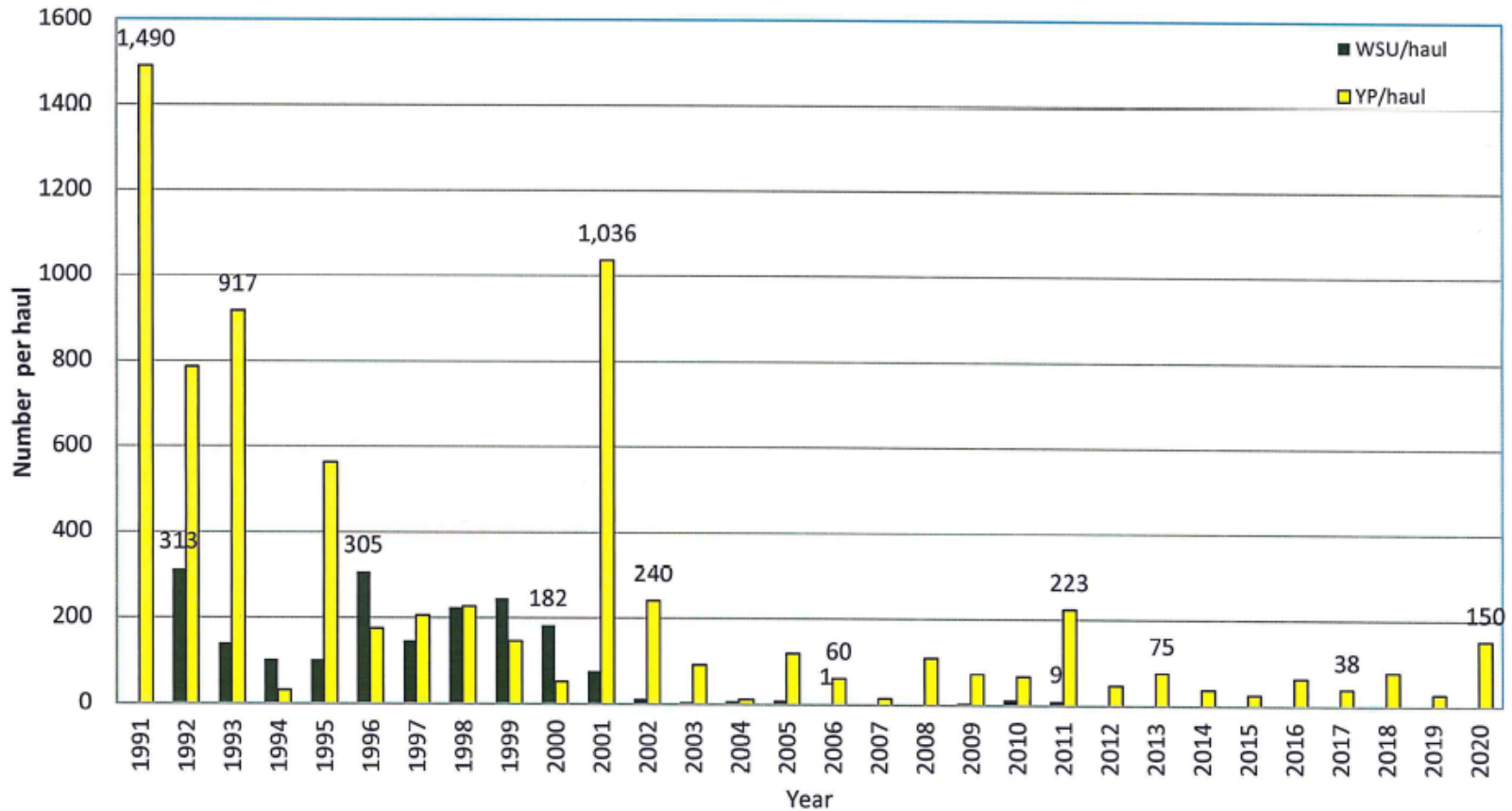
CFR – Beach Seine Survey

CFR - Walleye per seine haul

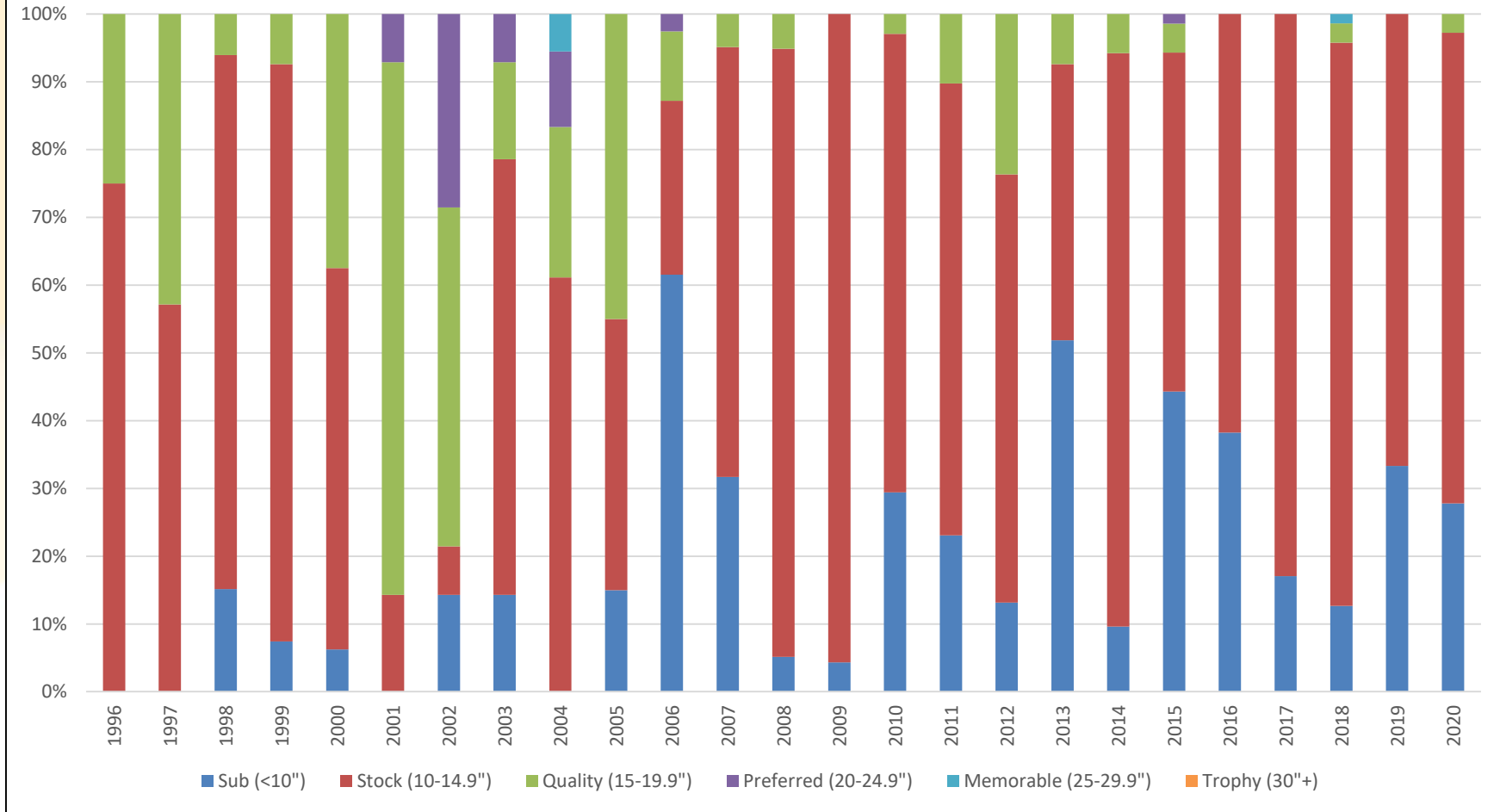


CFR - Beach Seine Survey

Canyon Ferry Res. - Summer Beach Seine Survey
Yellow Perch (YP) and White Sucker (WSU) Results (# per haul)

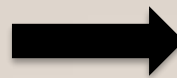
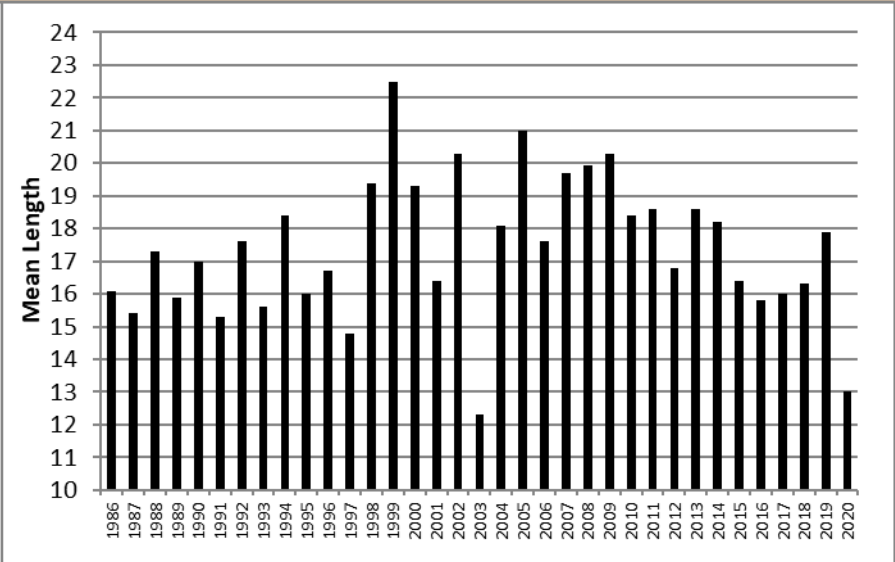
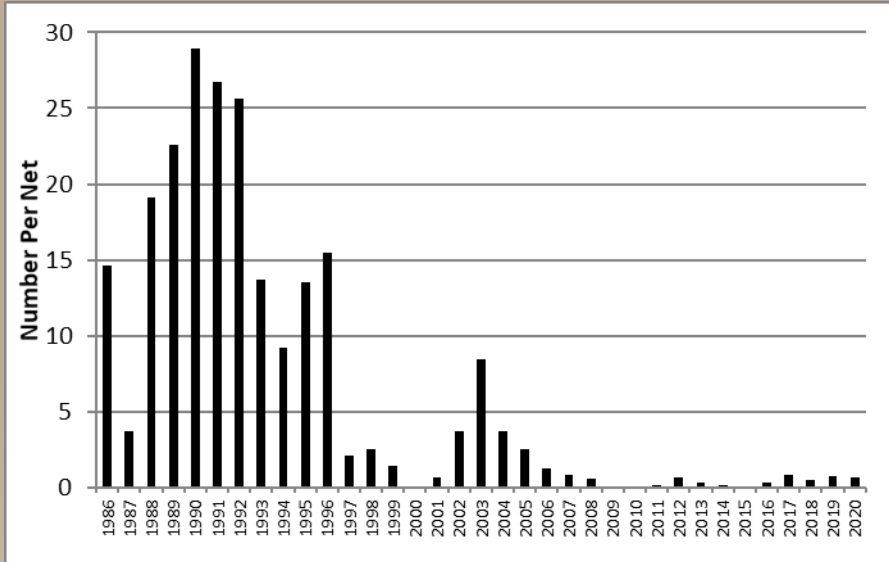


Hauser Reservoir Walleye RSD Frequency - Fall Survey



Hauser Kokanee Salmon

Fall Survey



October 2020



Hauser Kokanee Salmon

Stocking 2000-2004; 2020

Water	County	Region	Date	Species	Strain	Number	Size
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	6/2/2020	8 - Kokanee	D	113150	3
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	10/5/2004	8 - Kokanee	S	26730	3.83
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	9/30/2004	8 - Kokanee	D	22962	5
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	7/17/2003	8 - Kokanee	D	8280	7.82
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	7/16/2003	8 - Kokanee	D	7808	7.97
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	7/15/2003	8 - Kokanee	D	8100	8.21
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	7/15/2003	8 - Kokanee	D	6380	8.28
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	7/14/2003	8 - Kokanee	D	8040	8.11
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	7/14/2003	8 - Kokanee	D	7475	8.2
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	7/11/2003	8 - Kokanee	D	7920	7.94
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	7/11/2003	8 - Kokanee	D	7232	8.35
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	7/10/2003	8 - Kokanee	D	9684	7.75
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	7/9/2003	8 - Kokanee	D	4752	7.71
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	10/2/2002	8 - Kokanee	D	7711	6.7
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	9/30/2002	8 - Kokanee	D	10147	6.7
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	9/30/2002	8 - Kokanee	D	11415	6.7
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	9/25/2002	8 - Kokanee	D	8762	6.6
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	9/25/2002	8 - Kokanee	D	10514	6.6
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	6/3/2002	8 - Kokanee	D	36190	4
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	2/5/2002	8 - Kokanee	D	319104	1
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	10/3/2001	8 - Kokanee	R	34971	4.3
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	9/18/2001	8 - Kokanee	R	41760	3.9
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	7/12/2001	8 - Kokanee	R	75030	2.9
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	7/10/2001	8 - Kokanee	R	25700	2.9
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	6/21/2001	8 - Kokanee	D	95872	2.5
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	6/21/2001	8 - Kokanee	D	74814	2.5
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	7/17/2000	8 - Kokanee	R	42280	2.7
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	7/17/2000	8 - Kokanee	R	60876	3
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	7/17/2000	8 - Kokanee	R	64870	2.9
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	7/10/2000	8 - Kokanee	R	69920	2.7
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	6/19/2000	8 - Kokanee	D	133275	2.7
Hauser Reservoir (Hauser Lake)	Lewis & Clark	4	1/20/2000	8 - Kokanee	D	413838	1.1



Hauser Kokanee Salmon

Goal – Provide an additional angling opportunity for Kokanee Salmon in Hauser Reservoir while adhering to fisheries management strategies established in the 2020-2029 Upper Missouri River Reservoirs Fisheries Management Plan (UMRRFMP).

Objective – Evaluate stocking approximately 100,000 surplus Kokanee Salmon fingerlings (approx. 3” in length) in the uppermost extent of Hauser Reservoir in spring 2020*. Investigation will provide direction on the probability of attaining the goal with current conditions and modified variables (e.g., stocking location).

Surplus Stocking Evaluation – Conduct surveys to evaluate potential variables that influence surplus kokanee salmon survival and recruitment.

Defining Success – Ultimately, the goal of stocking surplus kokanee in Hauser Reservoir is to provide an additional angling opportunity within the UMRRFMP area. **If an increase to the kokanee population is observed in nets** and/or creel surveys, consider adding a specified kokanee stocking frequency component to the UMRRFMP. If an increase to the kokanee population is *not* observed in nets and/or creel surveys, future kokanee stocking opportunities may not be considered unless more favorable recruitment and survival variables, potentially identified in this investigation, are present.



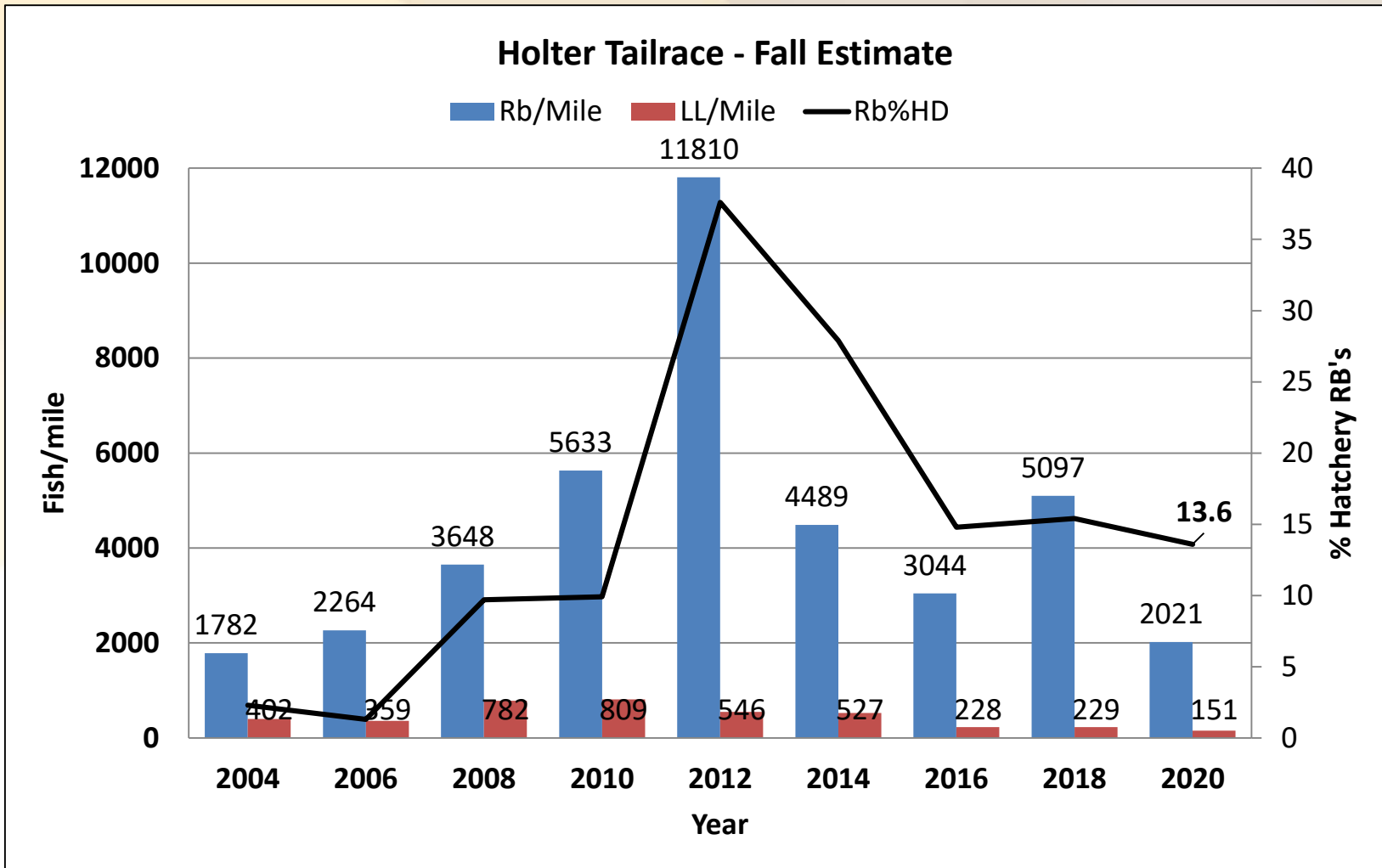


Missouri River Surveys

Holter and Hauser Tailwaters



Missouri River Surveys



Missouri River Surveys

2012-2020 Missouri River (Hauser Tailrace) Creel Summary

Year	# Interv	Hours	RB	KOK	LL	WE	RB/HR	KOK/HR	LL/HR	WE/HR	# Boats
2012	1943	4862.7	3163	1	138	41	0.65	0.00	0.03	0.01	264
2013	2376	6107.5	3694	0	167	20	0.60	0.00	0.03	0.003	459
2014	2459	5765.4	4749	10	86	124	0.82	0.002	0.01	0.02	367
2015	1569	4129.8	3959	1	87	47	0.96	0.0002	0.02	0.01	257
2016	2721	6703.2	6155	1	98	52	0.92	0.0001	0.01	0.008	583
2017	2483	6218.7	5164	28	115	62	0.83	0.005	0.02	0.01	515
2018	2421	6179.8	5244	14	164	200	0.85	0.002	0.03	0.03	546
2019	1858	4818.5	2111	30	93	113	0.44	0.006	0.02	0.02	312
2020*	1329	3362.0	1445	0	25	15	0.43	0.000	0.01	0.00	223
Average	2129	5350	3965	9	108	75	0.72	0.002	0.02	0.01	392
Total	19159	48148	35684	85	973	674					3303

*Data only available through October

