Ref ID 72173

Upper Missouri River Reservoir
Fisheries Management Plan

Annual Report and Meeting Summary

Annual Meeting: December 12, 2000, Helena, Montana

OVERVIEW

	Canyon Ferry Reservoir	Hauser Reservoir	Holter Reservoir
Rainbow Trout	(+) Above management goal. The number of yearlings appeared to be low based on monitoring. We will be watching this closely.	(-) Below management goal. Anticipate that increased stocking rate will improve the population.	(-) Below management goal. Good size but low catch rates.
Yellow Perch	(+) Above management goal. Back to "normal" levels.	(-) Way below management goal. Working on habitat projects that may help.	(-) Way below management goal.
Walleye	(+) Within the management goal. Numbers of yearlings has been down for two years. We are watching this closely. Walleye recruitment is typically variable and there is potential for a large year class in the future. Yellow perch were the predominant prey of walleye.	(+) Above management goal. Had a record catch rate in 1999 but the fish are small.	(+) Above management goal. There is decreasing size in the creel. Yellow perch comprise a high percent of stomach contents.
Kokanee Salmon		(-) Stocking to re-establish a self-sustaining population.	

Montana Angling Pressure

	Canyon Ferry Reservoir	Hauser Reservoir	Holter Reservoir
1999			
Total	119,886	51,820	66,392
Resident	112,905 (94%)	46,892 (90%)	63,331 (95%)
Non Resident	6,981	4,928	3,061
1997			
Total	94,510	60,105	69,927
Resident	89,247 (94%)	53,533 (89%)	64,592 (92%)
Non Resident	5,263	6,572	5,335

Hauser and Holter Reservoirs – Steve Dalbey

The drought and fire closures this past year had benefits for the fishery by slowing the movement of water through the reservoir. Hauser Reservoir has a serious dissolved oxygen problem that needs to be resolved for improved fish management.

Enforcement efforts on Holter Reservoir showed that people were generally in compliance with the slot and daily possession limits. The most tickets issued during one effort were first for filleting walleye (regulations prohibit filleting fish when there is a size limit) and second for illegal transport of live fish in boat wells.

Canyon Ferry Reservoir – Ron Spoon, Dave Yerk

The management goal is to support a balanced (multi-species) fishery comprised of healthy populations of game fish and forage fish species. Wild fires forced closure of Canyon Ferry Reservoir in August and September, resulting in significantly less fishing pressure for all species during those months.

The walleye fishery has the potential to expand rapidly and upset the multi-species balance in Canyon Ferry. The 20 fish limit is intended to help prevent that possibility. The department is concerned about ethical behavior of anglers and potential for waste of fish due to liberal limits of walleye (20 daily) and perch (50 daily), and is looking for problems or issues that need to be resolved. It was suggested that education efforts (bumper stickers) and use of TIPMONT for angling violations would help the department. Enforcement relies on the public's assistance to enforce regulations.

Enforcement efforts detected few people catching their limit of walleye and reports of people with over-limits and filling their freezers proved to be groundless. Creel census showed that less than 5% of anglers surveyed had caught more than 10 walleye. Most walleye caught were harvested.

Public Issues (based on oral comments at the meeting and written comments received subsequently from meeting participants)

General: The Management Plan has settled for reduced numbers of other popular fish species (particularly perch) in order to support the burgeoning walleye population.

Fishing regulations should be based primarily on biological principles and scientific facts, not who yells the loudest. Bucket biology should not be rewarded.

Diversity in fisheries may be best supported through species-specific opportunities at different locations rather than multi-species in one reservoir.

Kokanee: It is a waste of money to keep stocking kokanee in Hauser Reservoir.

Yellow Perch: There should be a possession limit for perch to prevent overharvest and protect the perch fishery.

Brown Trout: The kokanee wiped out the brown trout fishery above Hauser Reservoir and below Toston Dam. It would be better to recover this fishery than to re-establish kokanee.

Walleye: The 20 fish limit on Canyon Ferry is unethical. The high limit is attracting the wrong kind of fisherman (slob fishermen or predators) and goes against what everyone wants. Is there a way to document the slob fishermen? The slob fisherman makes us all look bad. Conversely, it was pointed out that the fishery can easily withstand this harvest and it is those who prefer no harvest of walleye that are causing problems. An ethical number of fish is a number that may be harvested without impacting the fish population such that it cannot be sustained at a quality level. It is ethical to harvest the walleye in Canyon Ferry.

Reducing the limit to 5 daily may actually result in more fish being kept.

A slot limit on Canyon Ferry would go a long way to help everyone.

If there is a problem with too many walleye, then don't have any limits. If there isn't a problem, then the limits should be the same as the other waters.

The department should reconsider its methods for monitoring walleye and use live nets like those used for commercial fishing operations.

UPPER MISSOURI RIVER RESERVOIR MANAGEMENT PLAN

2000 Annual Update for Canyon Ferry Reservoir

MRBS 5399

Fig. 1. Shore fishermen (women too!) enjoy thousands of hours annually on Canyon Ferry Reservoir. Photo by Joe M. Halterman, April 9, 1961.

MRBS 5396

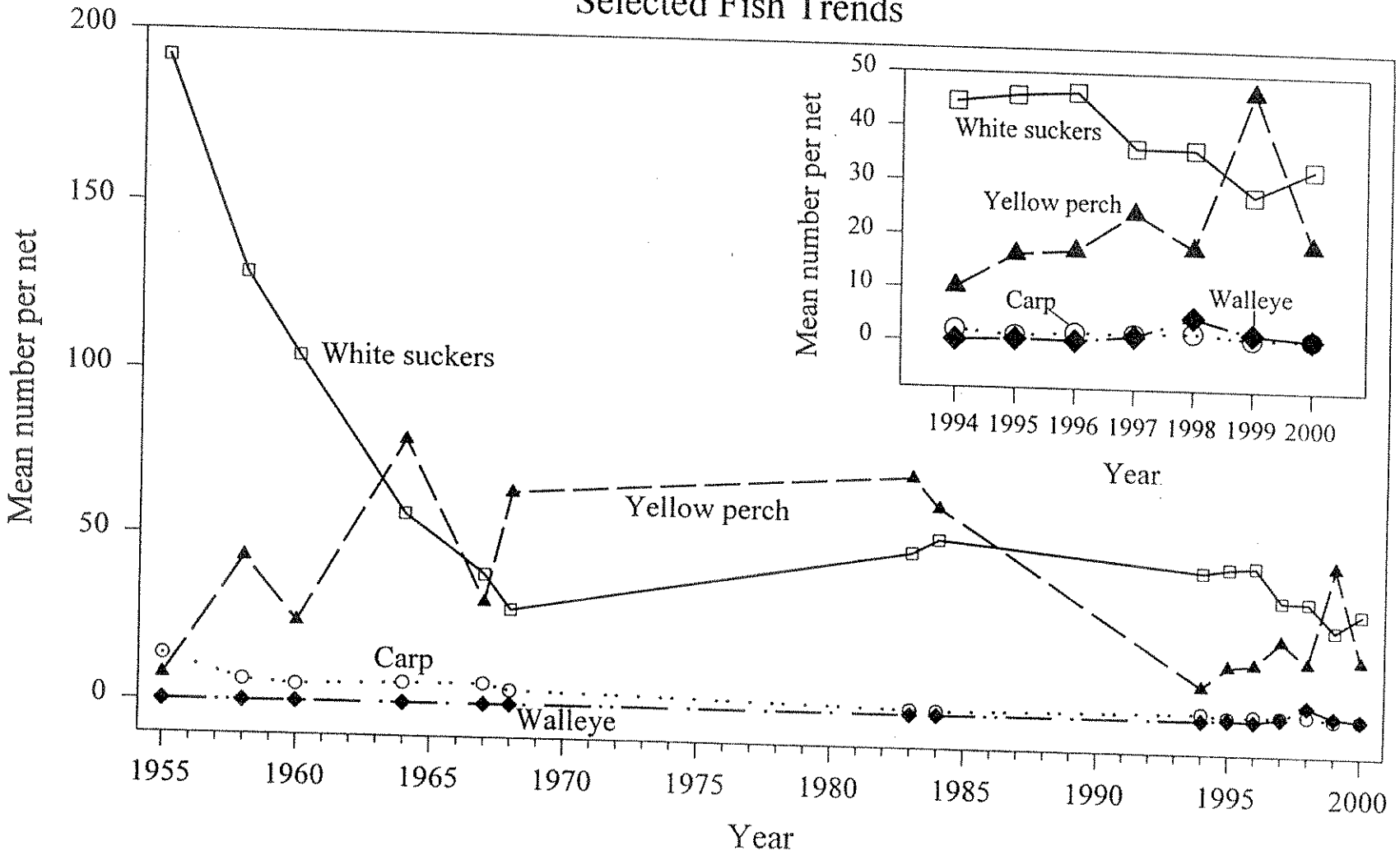
Fig. 2. Gill net studies by the State of Montana determine population trends, species abundance, and the effectiveness of extensive stocking of rainbow trout. Photo by Joe M. Halterman, June 22, 1960.

CANYON FERRY RESERVOIR
FWP ANNUAL FISH MONITORING

Canyon Ferry Reservoir is one of the most intensively monitored fisheries in Montana. The following monitoring efforts occur each year, and the Upper Missouri River Reservoir Fisheries Management Plan directs FWP to conduct annual meetings to present monitoring results to the public and review trend information as it relates to management goals.

May - November	Vertical Net Sampling for species distribution	monthly at 2 stations	3 days
January - February	Winter Creel Survey	2 weekdays and weekends	
April	Walleye Spawning Survey (large mesh gill nets)	variable number of nets	4 weeks
May	Spring Trout Survey	15 floating gill nets	3 days
May - October	Summer Creel Survey	2 weekdays and weekends	
June	Yellow Perch and Sucker Survey	17 sinking gill nets	4 days
August	Yellow Perch and Sucker Survey	16 sinking gill nets	4 days
August	Annual production of yellow perch, suckers, and cyprinids	60 beach seines sampling sites	4 days
September	Walleye Trend Survey	15 sinking nets	3 days
October	Fall Trout Survey	18 floating gill nets	3 days

Canyon Ferry Reservoir
Historical Sinking Net Series
Selected Fish Trends

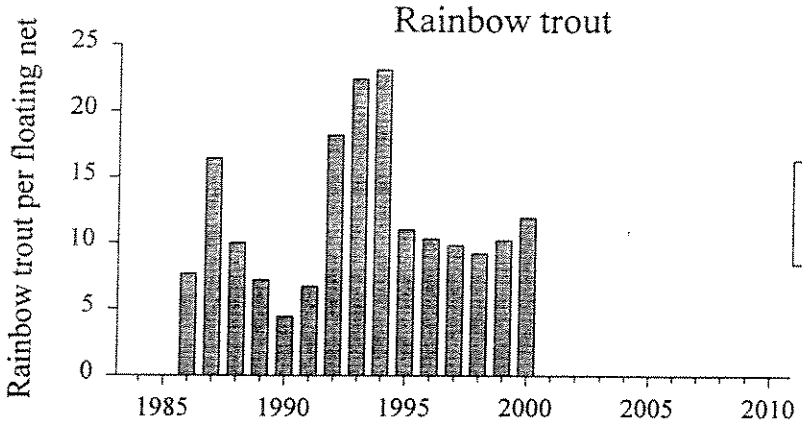


Summary

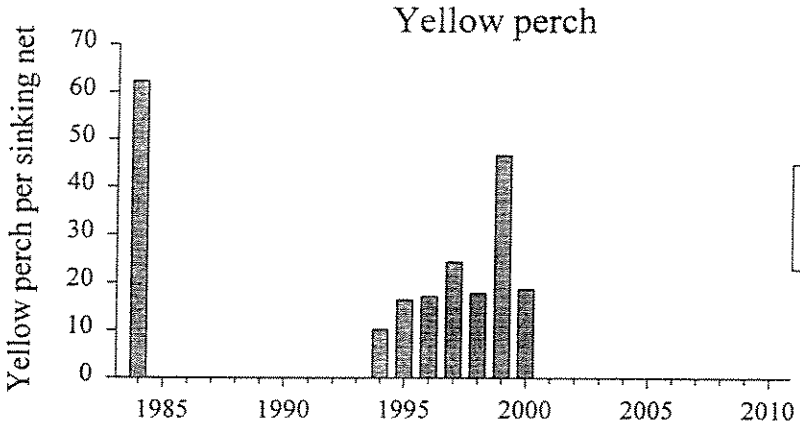
- yellow perch and white suckers are the two most abundant fish species in Canyon Ferry Reservoir

CANYON FERRY RESERVOIR

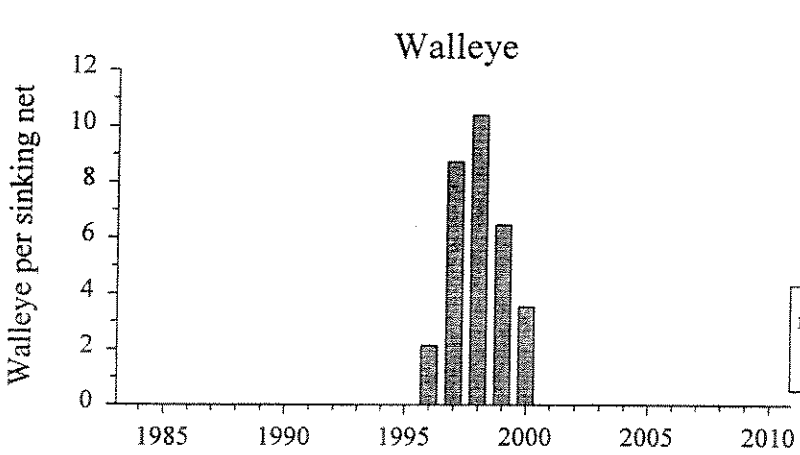
Species management objectives and trends

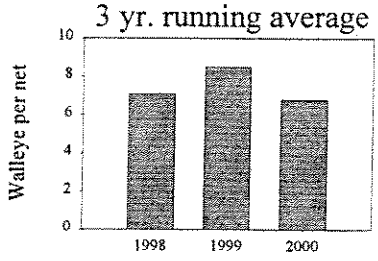


management plan objective: 10 / net
3 yr. (1998 - 2000) running average: 10.4 / net



management plan objective: 20 / net
3 yr. (1998 - 2000) running average: 27.7 / net



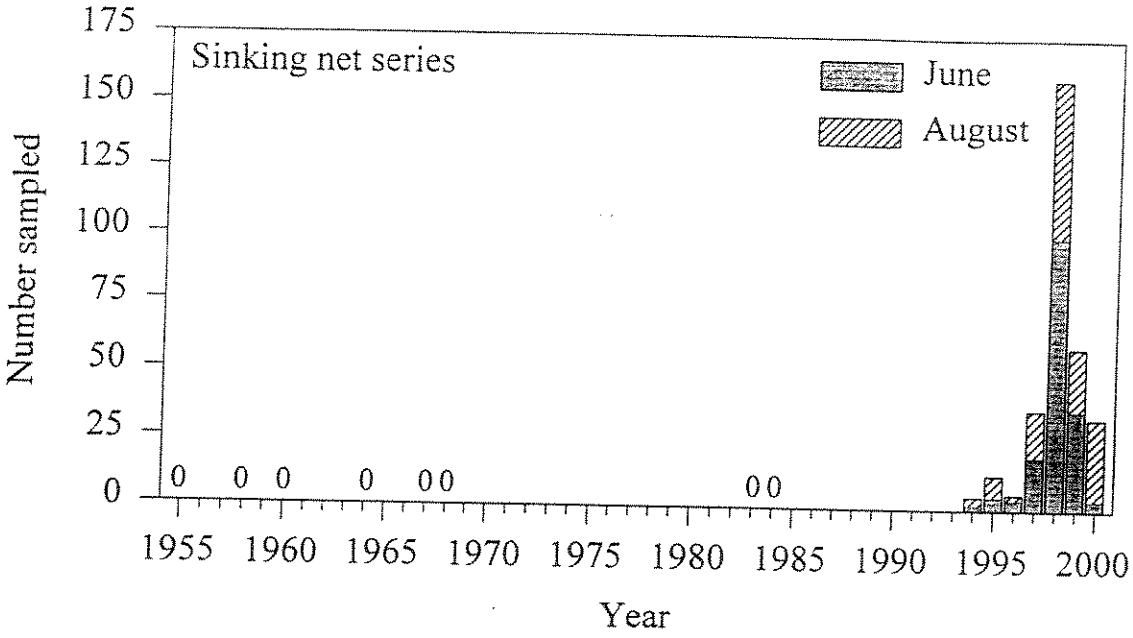


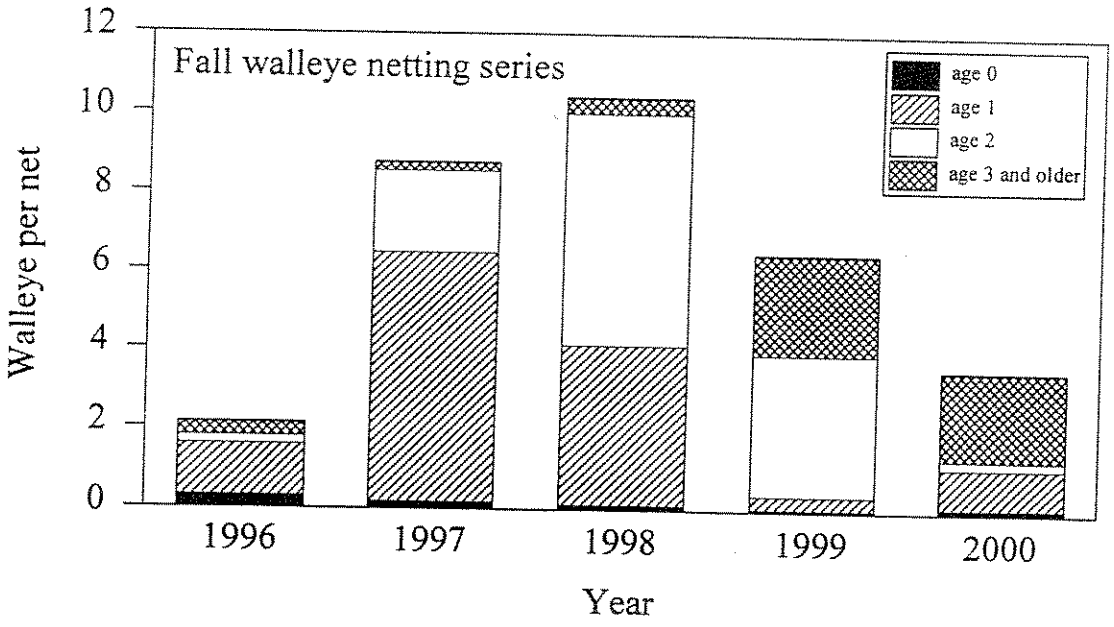
management plan objective: 5 - 10 / net
3 yr. (1998 - 2000) running average: 6.8 / net

<u>Summary</u>

- based on 3-year running average, rainbow trout, yellow perch, and walleye remain at levels within management plan objectives
- no management "triggers" were tripped during 2000 and no major changes in management strategies are proposed

Canyon Ferry Reservoir
Walleye population trends

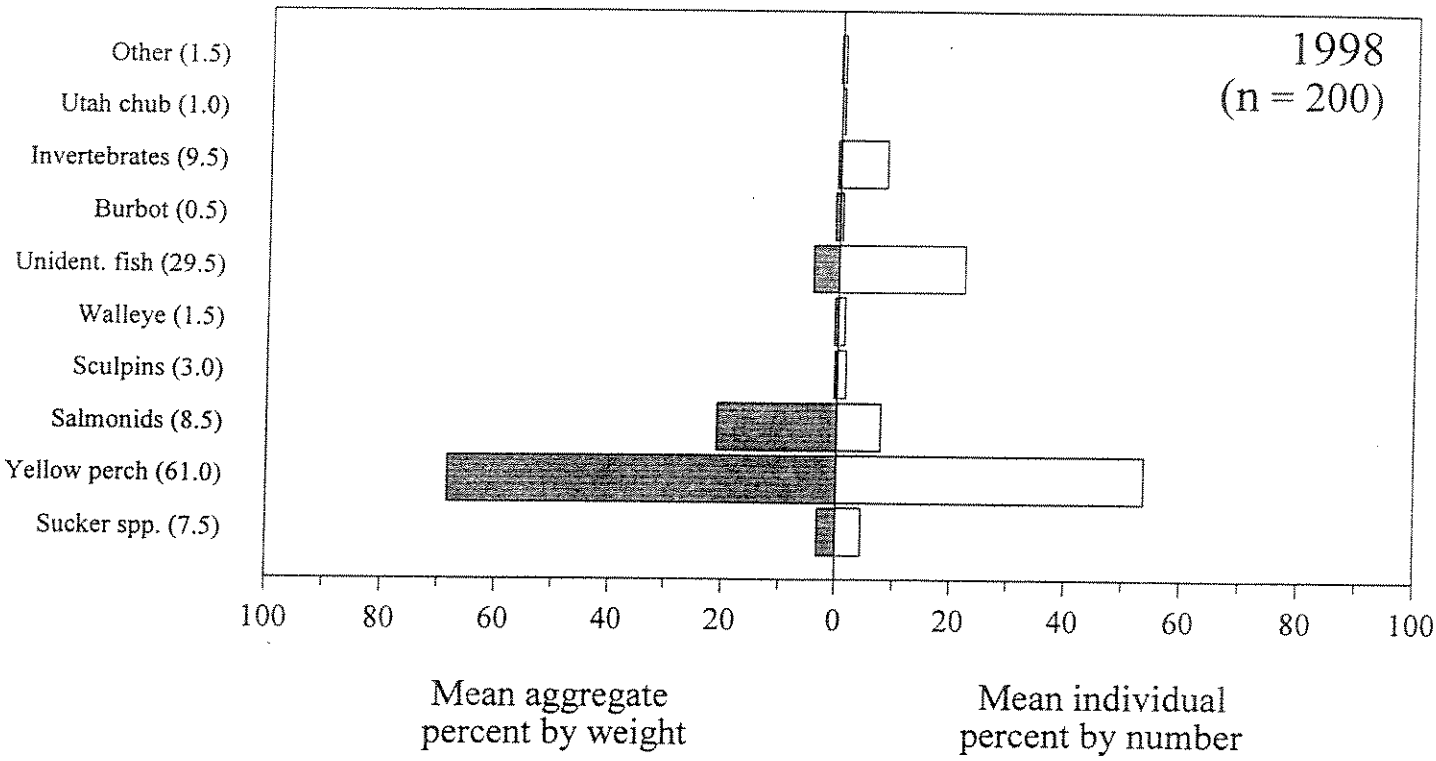


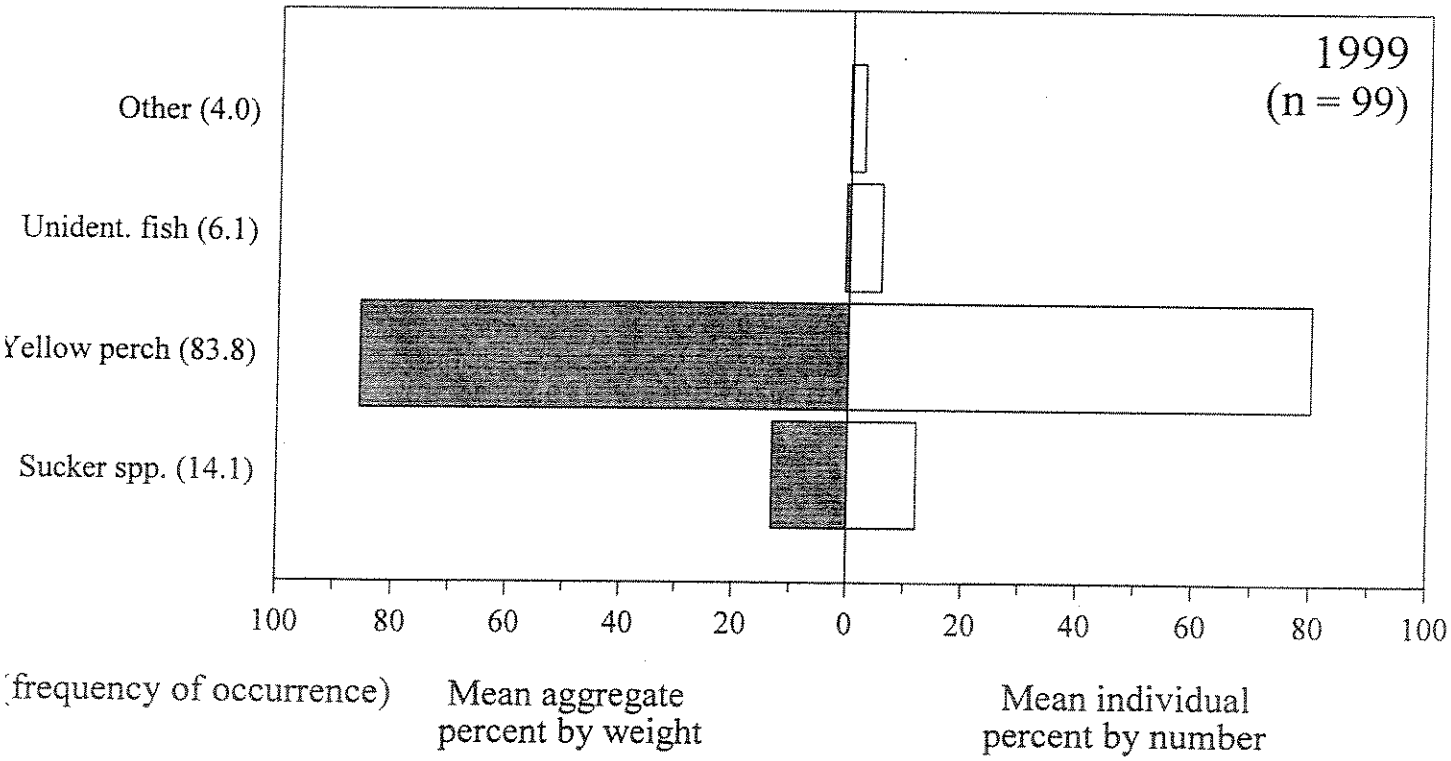


Summary

- poor reproduction in 1998 and 1999 has resulted in a declining population trend
- the majority of the fish are age 3 or older
- females produced in 1996 will spawn for first time in 2001 (at age 5)

Canyon Ferry Reservoir
Walleye food habits

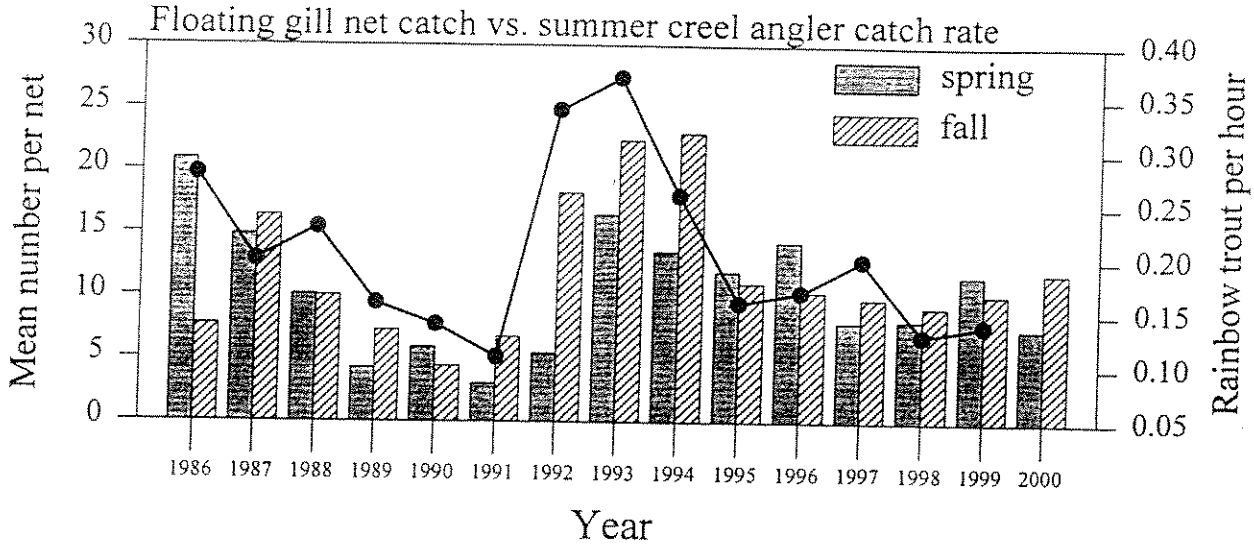


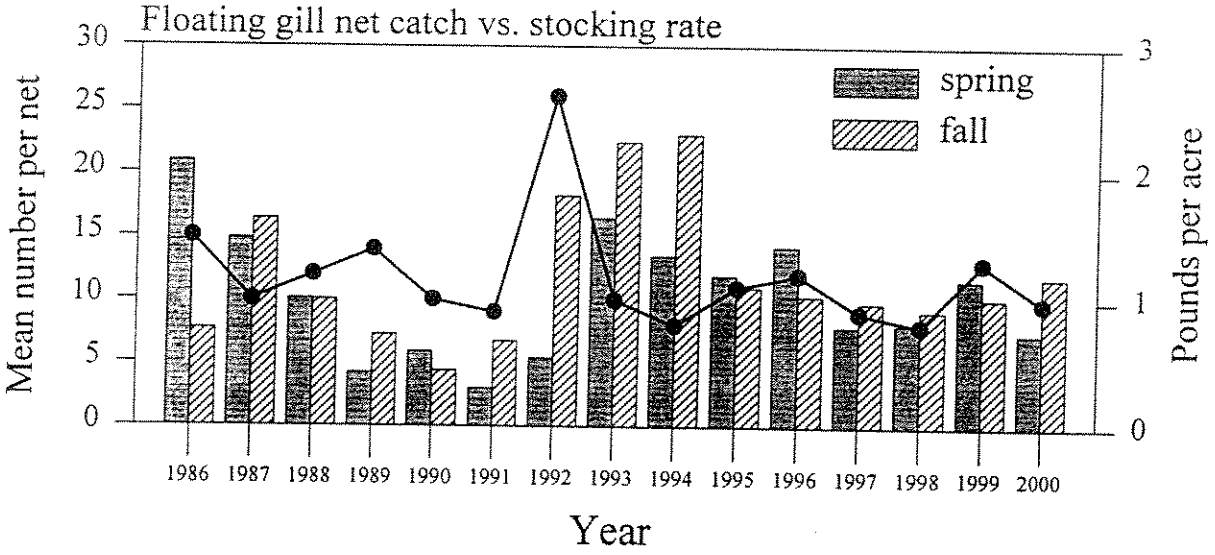


<u>Summary</u>

- yellow perch continue to be the primary prey species observed in walleye stomachs

Canyon Ferry Reservoir
Rainbow trout trends

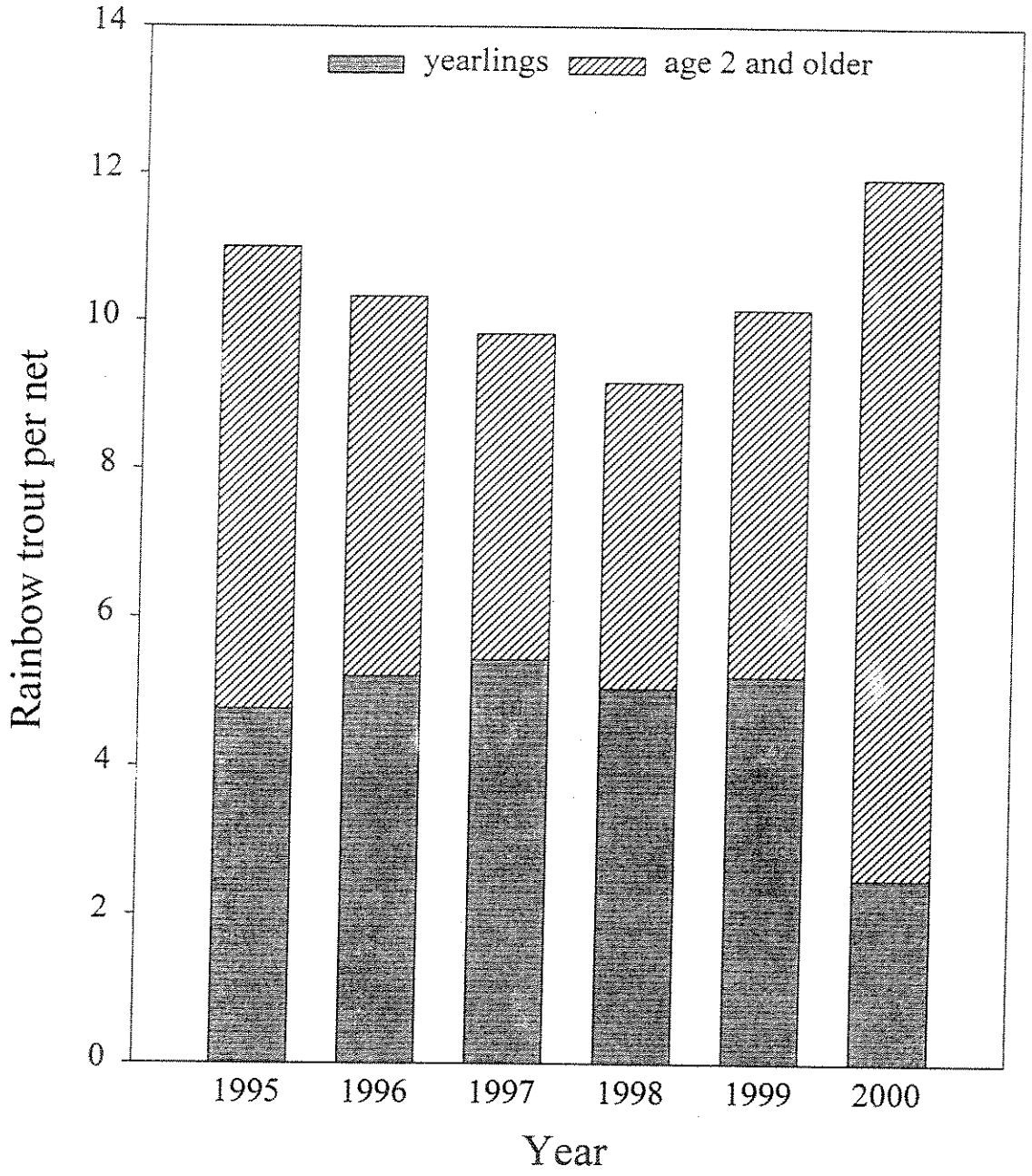




Summary

- stocking rate about 1 pound per acre (35,000 lbs. per year)
- positive relationship between stocking rate and abundance
- positive relationship between abundance in nets and angler catch rates
- no management changes planned in 2001

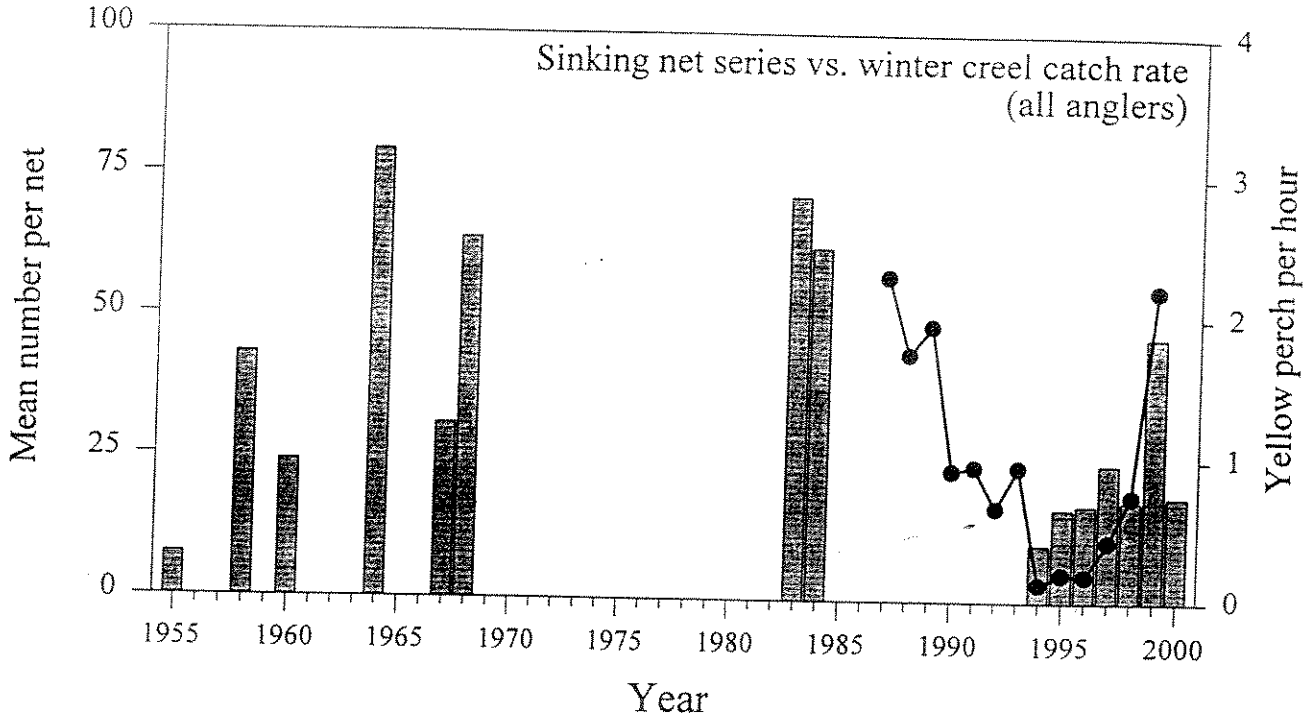
Canyon Ferry Reservoir
Fall floating net series
Rainbow trout catch

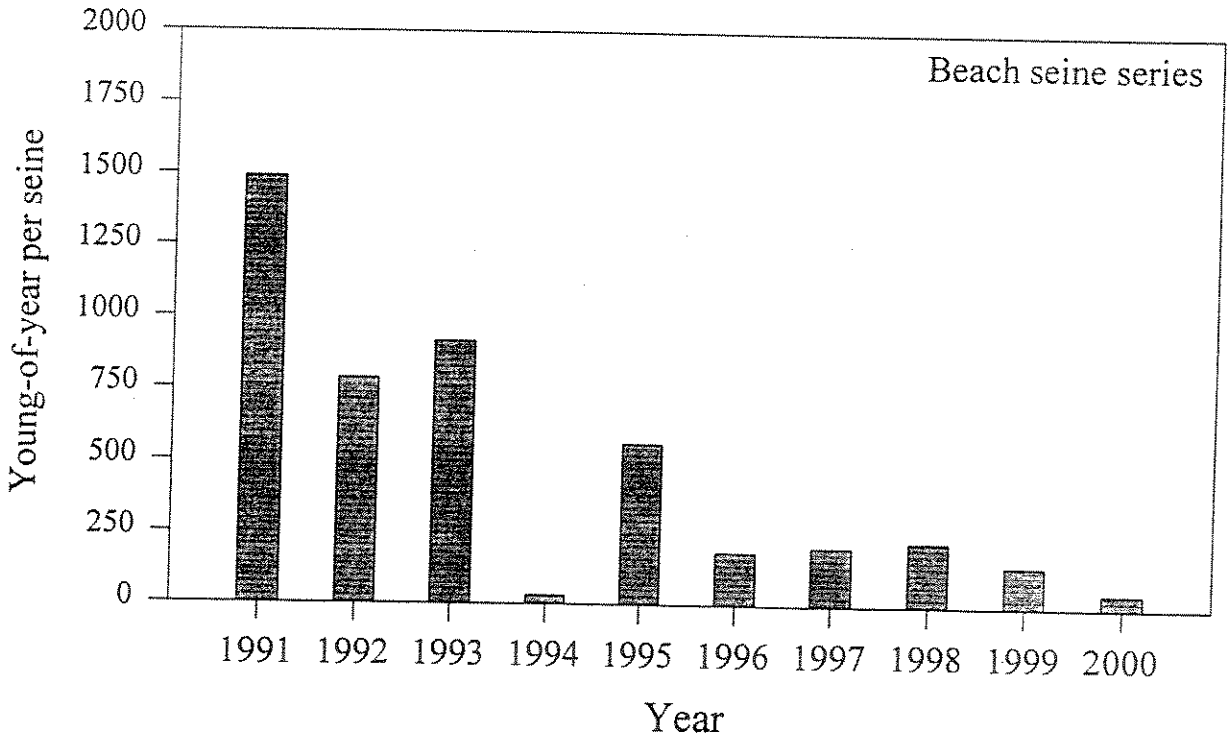


Summary

- number of yearling rainbow trout per net was stable from 1995 - 1999
- reduced number of yearling rainbow trout per net in 2000 may be cause for concern

Canyon Ferry Reservoir
Yellow perch trends

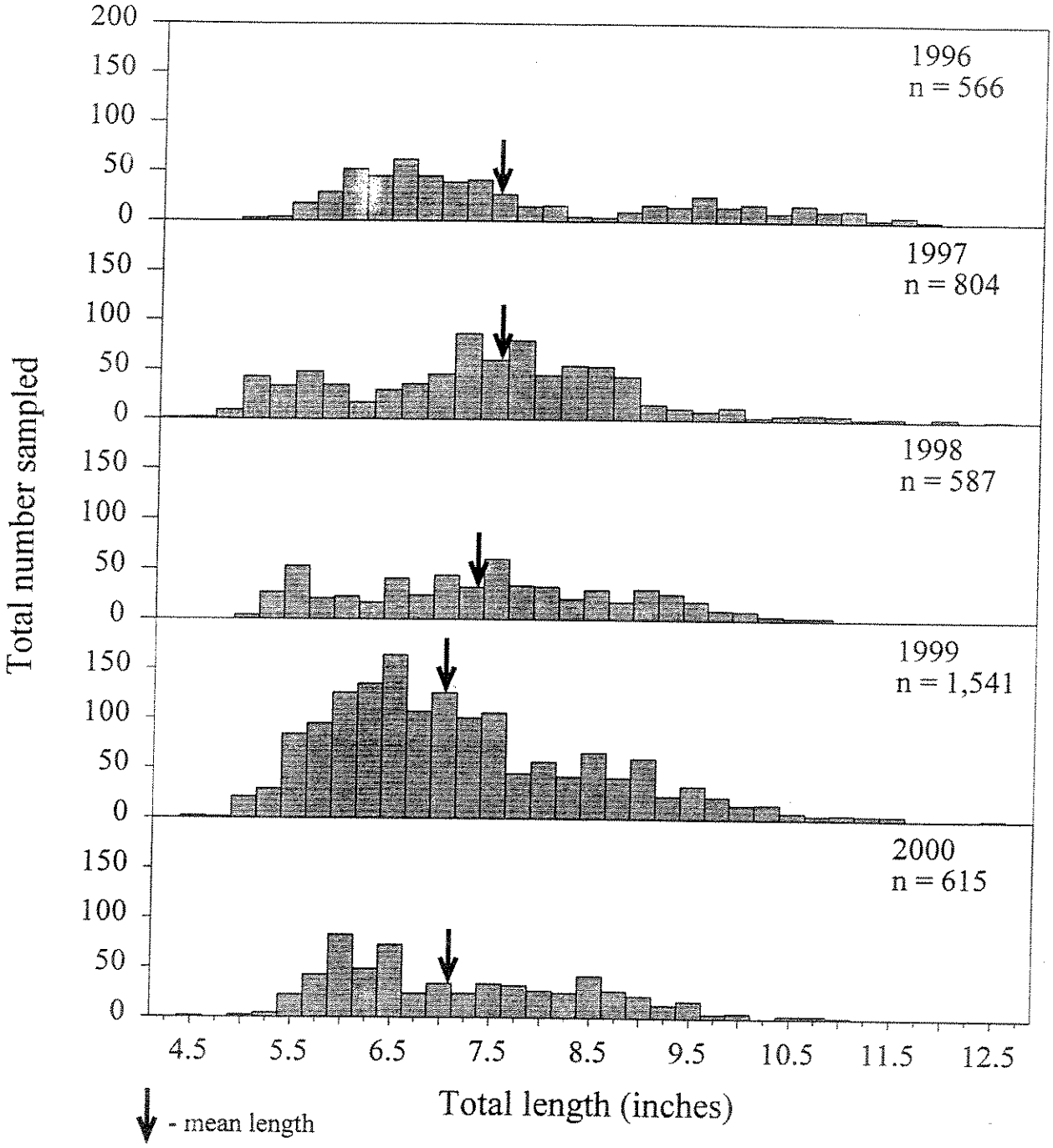




Summary

- the increased number of perch seen in 1999 was not maintained in 2000
- average size of perch was 7.1" in 2000
- beach seine sampling may not be a reliable predictor of perch production

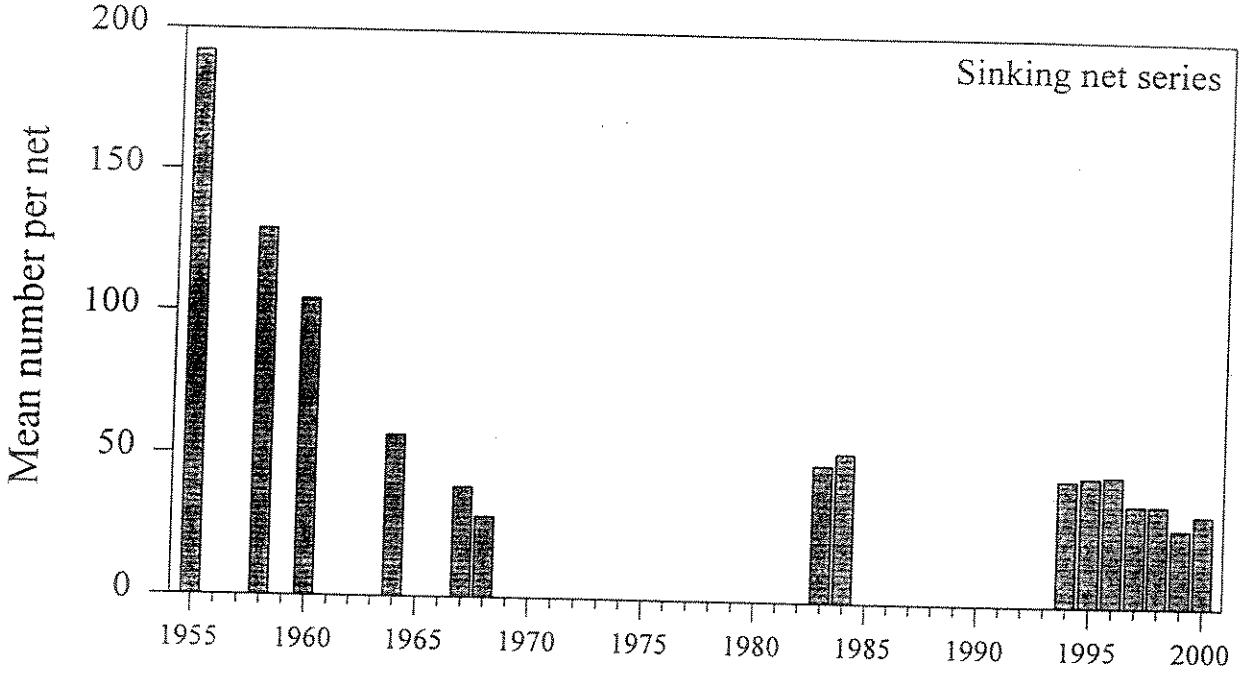
Canyon Ferry Reservoir
Yellow Perch Length Frequency
Historical Sinking Net Series

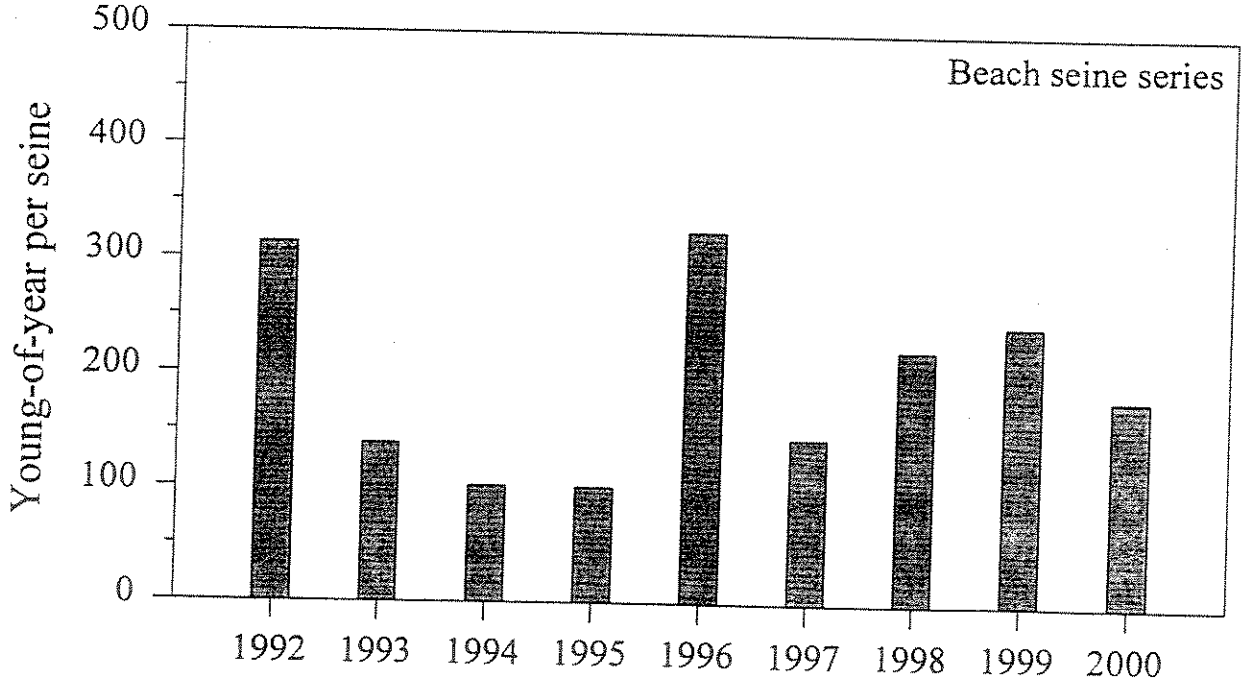


Summary

- most of the large number of perch sampled in 1999 were produced in 1996
- the decline observed in 2000 was across all size groups

Canyon Ferry Reservoir
White sucker trends

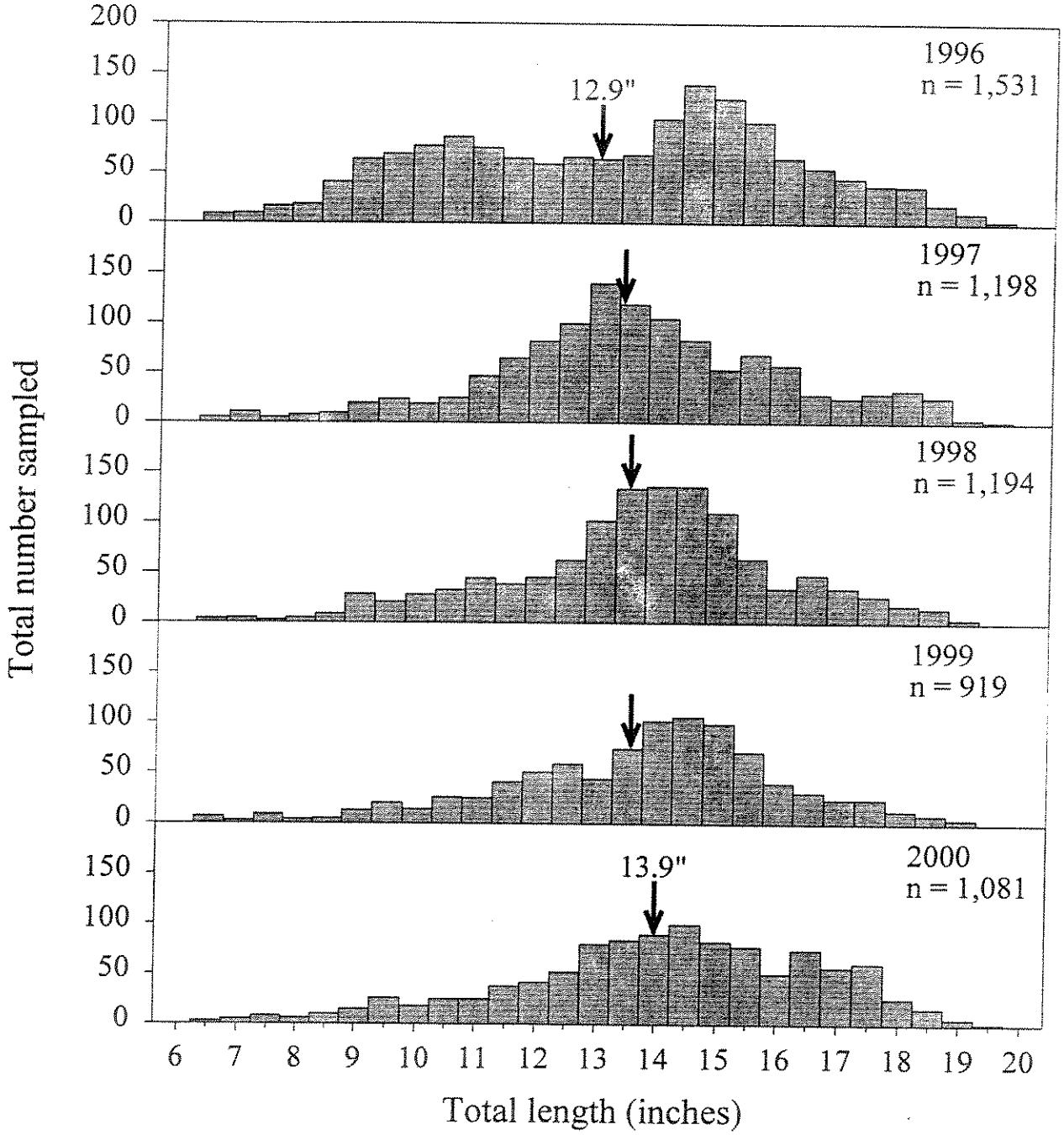




Summary

- abundance of white suckers remains relatively stable

Canyon Ferry Reservoir
White Sucker Length Frequency
Historical Sinking Net Series



↓ - mean length

Summary

- average size has increased from 12.9" in 1996 to 13.9" in 2000

CREEL CENSUS SUMMARY FOR THE PERIOD: June 1, 2000 - July 9, 2000

Walleye catch rates during the calendar year 2000 were very low throughout the year with the exception of a short period of about 3 to 5 weeks during June and early July. Considering the liberal daily limit for harvesting walleye (20 fish per day and 40 in possession) and the high catch rates observed during this hot "bite", anglers and fish managers were concerned about the potential for excessive harvest of walleye.

The standard roving creel census that has been conducted on Canyon Ferry Lake since 1986 is the primary tool available to assess angling success in general, and to determine potential problems with over-harvest of game species. Analysis of the 2000 creel census is not complete at this time, but walleye catch during the period of high catch rates was examined preliminarily to determine the potential for problems associated with the relatively liberal daily limit for walleye.

Creel Census interviews from June 1 through July 9, 2000 included 270 contacts with anglers specifically seeking to catch walleye. This summary does not include interviews with anglers seeking to catch perch, trout, or other combinations of targeted species. Therefore, the results presented below should provide higher catch rates for walleye than would have been calculated using the entire sample of interviews. The results of the 270 interviews during the period of good walleye fishing is as follows:

NUMBER OF WALLEYE CAUGHT	PERCENTAGE OF ANGLERS	
0	68%	
1	13%	
2	6%	
3	4%	
4	2%	
5	2%	(95% OF ANGLERS CAUGHT 5 OR FEWER)
6	1.5%	
7	1.5%	
8	0.5%	
9	0.0%	
10	0.5%	(99% OF ANGLERS CAUGHT 10 OR FEWER)
11	0.0%	
12	0.0%	
13	0.0%	
14	0.5%	
15	0.0%	
16	0.5%	
17	0.0%	
18	0.0%	
19	0.0%	
20	0.0%	
	100%	

SUMMARY:

- Some anglers caught their limit of 20 fish during this period, but none of these people were represented in this sample of 270 interviews.
- Only 1.5% of interviews (4 anglers in sample) caught 10 or more walleye during this period.
- Of 256 walleye checked by the creel clerk, only 18 were reported to be released (93% were harvested).
- The old saying that 10% of the anglers catch 90% of the fish seems to hold true during periods of unusually hot walleye fishing at Canyon Ferry Reservoir.
- The perception that a large number of anglers were catching and harvesting in excess of 10 fish per day does not appear to be accurate according to this survey.

FISHING TOURNAMENTS AT CANYON FERRY RESERVOIR IN 2000

- Lions Club Perch Derby on January 15 & 16, 2000 for perch and ling.
- Town Pump Winter Fishing Tournament on January 29, 2000 for walleye.
- Winston Ling Ding on February 12, 2000 for ling.
- Canyon Ferry Walleye Festival on July 15 & 16 2000 for walleye.
- Broadwater Rod and Gun Club Walleye Derby on August 12, 2000 for walleye.

The number of tournaments permitted for each species during a calendar year is as follows:

Rainbow trout	-0
Yellow Perch	- 2
Walleye	- 3
Burbot	-2
Carp	- No Limit

SUMMARY OF CANYON FERRY WALLEYE FESTIVAL – 2000

On 15 and 16 July, 264 participants fished the walleye tournament. Weather was warm and windy on 15 July with rough lake conditions. Calmer conditions produced better fishing conditions on the second day of the event. Surface water temperature was 69 degrees at 0800 at the Silos on 15 July, and 70 degrees on the surface at 1000 at Beaver Creek Bay on 16 July. Spoon helped measure fish for total length and observed for jaw tags on both days.

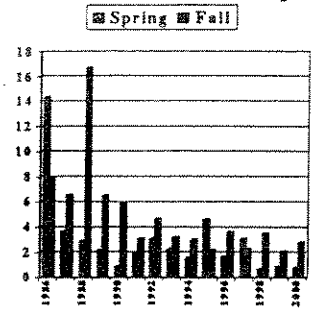
The 264 anglers caught 44 walleye on 15 July (0.17 walleye per angler day) and 109 walleye on 16 July (0.41 walleye per angler day) for a total of 153 fish caught and released. Several teams did not fish a complete day on 15 July due to rough water conditions and only 19 of 132 boats had fish during this first day of the tournament. It would not be accurate to estimate catch rates on a per hour basis.

No immediate mortality was observed, although some undocumented delayed mortality is likely to have occurred. Despite the high water temperatures, the low catch rates resulted in lower than expected stress on fish because fish were not crowded in live cars. Most fish were checked at Silos (about 119 walleye) and approximately 30 fish were checked in at White Earth. A boat check station near mid lake on 16 July makes it difficult to accurately break down Hellgate, White Earth, and Silos Stations.

Three jaw tags were observed during the 2-day event. Spoon observed two tags (see numbers below) and one other tag was observed by the tournament personnel and a number was not obtained.

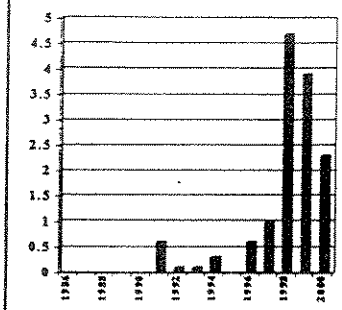
TAG #	LENGTH	LOCATION	DATE
#2030	17.5 inches	Silos Station	15 July 2000
#1061	22.0 inches	White Earth Station	16 July 2000
???	???	Silos Station	16 July 2000

Hauser Rainbow
(Catch per Net)



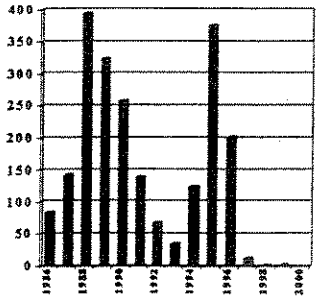
- Increased Stocking from approx. 100,000 to 200,000 in 99 & 00
- Angler catch rates increased to 0.12/hr (1999)
- Target = 5 fish per net in fall. 1999=2.6/net 2000=2.8/net

Hauser Walleye
(Catch per net – Fall sinkers)



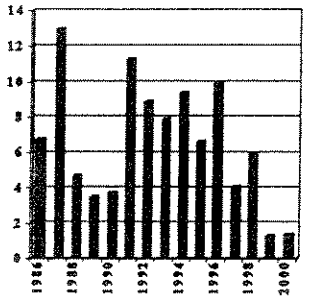
- Record angler catch rates 0.14 walleye/hr. (1999)
- Majority of catch released; 33% (1999)
- Target = Three year running average of 2-3 in fall sinkers. 1999=3.2 2000=3.6

Hauser Kokanee
(Total Catch – July thru Sept)



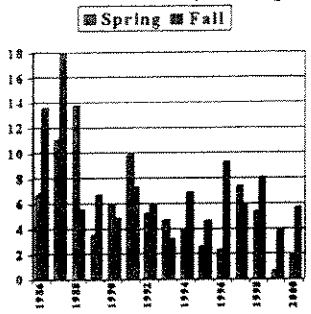
- Stocking approx. 300,000 (1999), 785,000 (2000)
- Target of 20 kokanee in summer verticals (3-yr running average) 1999=5, 2000=1
- Predation concerns-hatchery kokanee prevalent in walleye stomachs following stocking

Hauser Perch
(Catch per net – Fall sinkers)



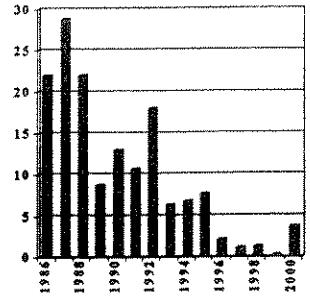
- Angler catch rates fell to 0.06 perch/hr. (1999)
- Target = Three year running average of 7 in fall sinkers. 1999=3.8 2000=2.9
- Average size remains exceptional at 11 inches
- Habitat project planned for 2001

Holter Rainbow
(Catch per Net)



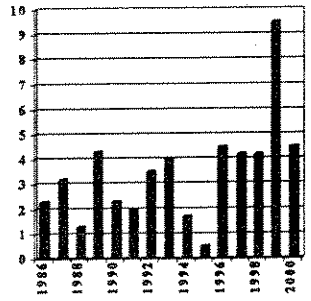
- Adaptive stocking program; 65,000 fall release Arlee rainbow to reduce predation.
- Angler catch rates remain below average 0.14 fish/hr. in 1999; average size =18"
- Target = 8 fish per net. 1999=6/net 2000=6/net

Holter Perch
(Catch per net – Fall sinkers)



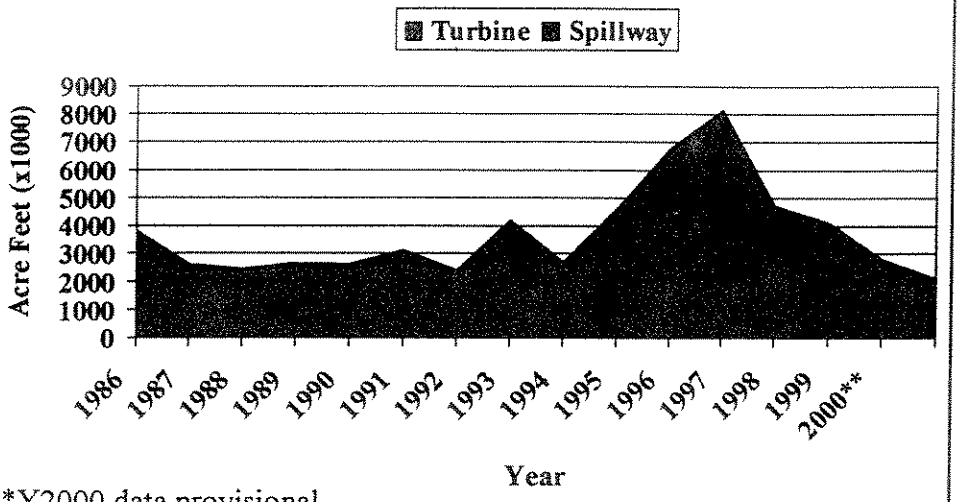
- Angler catch rate (perch/hr) improved to 0.23 (summer) and .95 (winter) in 1999
- Target = Three year running average of 10 in fall sinkers. 1999=0.9 2000=1.8
- Average size remains good at 8"

Holter Walleye
(Catch per net – Fall sinkers)



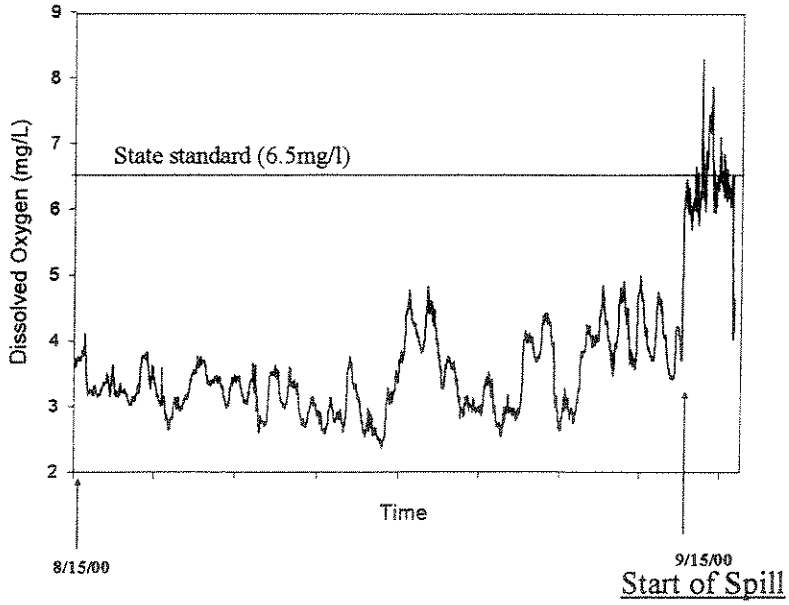
- Good angler catch rates 0.05 walleye/hr. (1999)
- Decreasing average size in creel
- Excellent compliance with slot limit.
- Target = Three year running average of 3 in fall sinkers. 1999=6.0 2000=6.1

Total Discharge from Hauser Dam 1986-2000



**Y2000 data provisional

Hauser Reservoir dissolved oxygen test-spill (Sept, 2000)



Data courtesy of Mike Horn, BOR, Denver

Montana Fish, Wildlife & Parks

Possible fishing problems at Holter lake.
Problem, fish being kept within slot limit.

Submitted by: Warden Matt Murphy
Date: 4-13-2000

The HARO Wardens work the Holter Lake area a total of five times during the peak Walleye spring season. Holter was worked from an unmarked boat with Wardens out of uniform. The weather this time of year played a large roll in the number of boats checked on a daily basis.

Date:	# of boats:	fish viewed:
3-4-00	17	4 all released (1 in slot)
3-11-00	7	0
3-14-00	9	1 released (0 in slot)
3-22-00	6	1 released (0 in slot)
3-25-00	5	1 released (0 in slot) 2 mentioned-released

Although we received numerous reports of fish being kept inside the slot limits. Our on the water observations did not reveal such to be the case, at least on a regular basis. Although there may have been instances when violations were occurring, time spent undercover did not reveal violations at the level they had been rumored.