

State of California
The Resources Agency
DEPARTMENT OF FISH AND GAME

**CENTRAL VALLEY SALMON AND STEELHEAD
HARVEST MONITORING PROJECT**

2001 ANGLER SURVEY

December 2002

State of California
The Resources Agency
DEPARTMENT OF FISH AND GAME

**CENTRAL VALLEY SALMON AND STEELHEAD
HARVEST MONITORING PROJECT**

2001 ANGLER SURVEY ^{1/}

Prepared by

Tom Schroyer, Biologist (Marine/Fisheries)
Duane Massa, Biologist (Marine/Fisheries)

and

Kyle Murphy, Associate Biologist (Marine/Fisheries)

1701 Nimbus Road, Suite A
Rancho Cordova, California 95670

^{1/} This work was supported by funds provided by the U.S. Fish and Wildlife Service, Comprehensive Assessment & Monitoring Program (CAMP), as part of a cooperative agreement with the California Department of Fish and Game pursuant to the Central Valley Project Improvement Act (PL. 102-575).

SUMMARY

In October 1992, the Central Valley Project Improvement Act (CVPIA) was signed into law. One objective of the CVPIA is to restore the abundance of natural fish stocks in Central Valley Rivers and streams. To achieve this objective, the CVPIA requires the development of restoration actions that ensure sustainable, long-term populations of native anadromous fish stocks. Section 3406(b)(16) of the CVPIA specifies the development of a monitoring and assessment program to evaluate the effectiveness of implemented restoration actions. The Comprehensive Assessment and Monitoring Program (CAMP) was established for this purpose. The CAMP program recommends monitoring of both adult and juvenile fish populations. It was recommended that adult monitoring include spawner returns (escapement) as well as in-river recreational, ocean recreational and commercial harvest estimates.

In 1998, the California Department of Fish and Game (DFG) began the Central Valley Salmon and Steelhead Harvest Monitoring Project to help enumerate the number of adult Chinook salmon and steelhead resulting from natural production in Central Valley Rivers and streams. The harvest monitoring project was initiated to determine annual estimates of the total in-river harvest. In addition, this project will provide limited harvest data of other anadromous and resident sport fish species.

In 2001, the fourth year of the project, the Department conducted an angler survey on the Sacramento River and six major tributaries between January 1st and December 31st, 2001. Due to budget constraints, the Angler Survey Project focused on rivers that had significant angler effort for salmon and steelhead. A total of 21,597 anglers was surveyed who spent an estimated 1,604,546 angler hours sport fishing. Chinook salmon was the target of most anglers surveyed with striped bass being the second most sought after species. Anglers fishing for salmon expended an estimated 1,028,450 hours during the season. Striped bass fishermen expended an estimated 199,866 hours. Angling hours for steelhead were estimated at 53,951 for the areas surveyed.

Anglers fishing for Chinook salmon harvested an estimated 46,068 salmon for the season. Striped bass anglers caught and estimated 5,757 striped bass. Most steelhead anglers practice catch and release, the total harvest for steelhead was 639. There were 6,163 steelhead released.

TABLE OF CONTENTS

Introduction	1
Study Area	1
Procedures	3
Statistical Design	3
Data Collection	4
Estimate Calculations	7
Findings	8
References	10
Appendix A: Description of the River Sections Surveyed	11
Appendix B: Estimated Angler-Hours and Number of Days Sampled	13
Appendix C: Estimated Harvest, Released, and Angler-Hours by Target Species.....	15

INTRODUCTION

Native anadromous fish stocks in many Central Valley Rivers and streams have declined to such a critical level that many stocks are currently listed or are candidates for listing under the State or Federal Endangered Species acts. In an effort to restore the abundance of natural stocks, those salmon and steelhead produced outside of fish hatcheries, the Central Valley Project Improvement Act (CVPIA) was enacted in October, 1992. The CVPIA calls for the development of restoration actions that ensure long-term sustainable populations of native anadromous fish stocks. To evaluate the effectiveness of restoration actions, the Comprehensive Assessment and Monitoring Program (CAMP) was developed under Section 3406(b)(16) of the CVPIA.

To assist in the CAMP monitoring program, the California Department of Fish and Game (DFG) developed the Central Valley Salmon and Steelhead Harvest Monitoring Project. The DFG has used angler surveys in the past to monitor the harvest of anadromous fish within Central Valley Rivers and streams. Unfortunately, no comprehensive or long-term (more than 5 years) surveys have been made on a consistent basis. This project is designed as a long-term monitoring program to determine annual estimates of total in-river harvest of sport fish from the Sacramento River and major tributaries. Also, the data will complement and enhance other ongoing DFG harvest monitoring programs such as Department's adult striped bass, adult sturgeon, and ocean salmon harvest. This project originated in April, 1998 and is into its fourth year.

STUDY AREA

The study area consists of 554 miles of the Sacramento River and major tributaries which were divided into 20 sampling sections. The rivers comprising the study area are: Sacramento River from Carquinez Bridge upstream to the Anderson-Cottonwood Irrigation District (ACID) Dam in Redding (eight sections); Feather River from its confluence with the Sacramento River at Verona upstream to the Oroville Project Fish Barrier Dam in Oroville (three sections); Yuba River from the confluence with the Feather River near Marysville to one mile upstream of the Highway 20 bridge crossing (two sections); American River from its confluence with the Sacramento River at Discovery Park upstream to Nimbus Dam (three sections); San Joaquin River from its confluence with the Sacramento River upstream to Mossdale Crossing near Tracy (one section); South Fork Mokelumne River from its confluence with the San Joaquin River upstream to Interstate 5 bridge crossing including the North Fork Mokelumne River (two sections); Stanislaus River from McHenry Avenue bridge near Meyers upstream to Goodwin Dam (one section) (Figure 1).

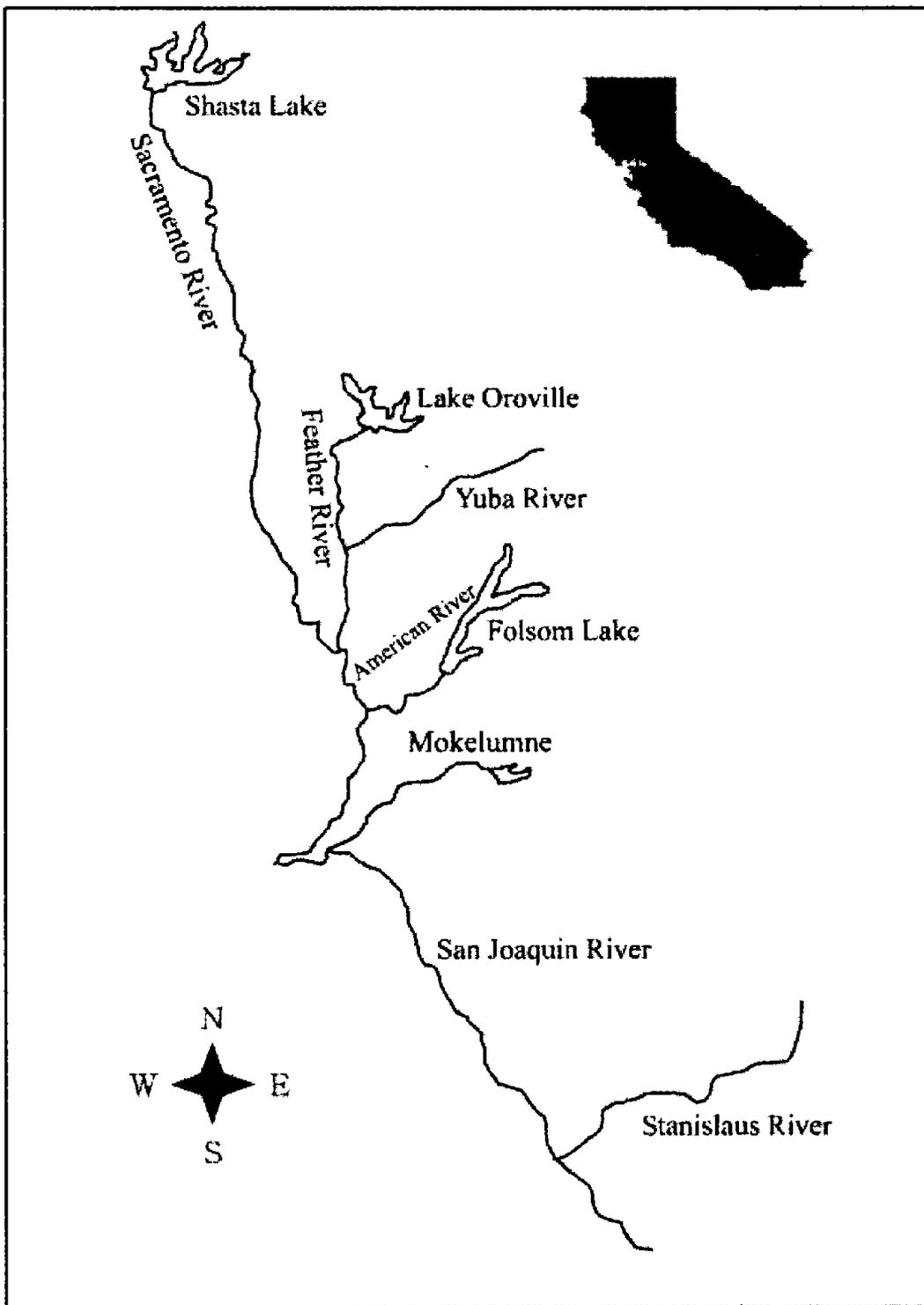


Figure 1. Angler Survey Rivers

PROCEDURES

Statistical Design

A stratified random sample design, based on the design used by the Sacramento River System Sport Fish Inventory (Wixom et al. 1995), was used to estimate the in-river harvest during the daytime sport fishery. While a night fishery exists in the Central Valley Rivers, no effort was made by this survey to evaluate the harvest by night time sport anglers.

A total of twenty sections was sampled. Sixteen of these sample sections ranged in length from 4 to 58 river miles. Two sample sections, that represented unique fisheries, were approximately one river mile in length. Sampling schedules and data summaries were compiled on a monthly basis. Months were arbitrarily chosen as sample periods.

All sample sections were surveyed eight randomly selected times each month – four weekdays and four weekend days. Weekdays and weekend days were placed in separate strata because more angling effort is commonly associated with weekend days.

Sample sections were surveyed by kayaks, drift boats or power boats with the exception of the Stanislaus River. Kayaks were used in shallow upstream reaches while power boats were used in rivers where tides, wind, and waves demanded the use of more seaworthy boats. The Stanislaus River was sampled by visiting designated access points between McHenry Avenue Bridge and Goodwin Dam. If vehicle(s) are present at an access point, then the creel clerk tries to locate the angler(s) by hiking along the stream bank until found. Sampling below McHenry Avenue Bridge was not feasible because of the limited public access and difficulty in locating anglers.

For each section surveyed, a random start time and launch location were chosen. Start times were classified as either early or late. An early start time was scheduled to begin ½ hour after sunrise, while a late start time would vary depending on length of section and time of year. Typically, a late start time was scheduled so that the survey would end at or near sunset. Launch locations would either be at the upstream or downstream end of the sections to be surveyed. In those sections where kayaks were used, the launch location was always at the upstream end of the section.

All data collected were linked by river mile. Actual river miles were used for the Sacramento River sections. Each tributary was given a unique number series to identify it from other rivers in the database. The number series assigned to each tributary were as follows: Feather River, 400 series; American River, 500 series; Yuba River, 600 series; San Joaquin River, 700 series; South Fork Mokelumne River, 800 series; North Fork Mokelumne River, 900 series; Stanislaus River, 1000 series. River mile designations were marked in ascending order from downstream to upstream.

Data Collection

Three field data sets were required to calculate use and catch: hourly counts, angler counts, and angler interviews. Hourly counts determined the portion of the whole represented by the sample day angler count. For this survey, hourly counts collected by Wixom (1995) were used. Where hourly count data were unavailable, data sets were developed by using the hourly counts of representative rivers.

On each sampling day, the procedure was to make a high speed pass to the end of the section. This first pass was called the angler count. Data collected during the angler count included: time of observation, location by river mile, number of boats, number of boat anglers, and the number of shore anglers. At the end of the angler count, a second pass was made traveling back through the section to conduct angler interviews. Prior to beginning the interviews, the survey crew determined the feasibility of interviewing all anglers counted during the angler count. If it was determined that this was not feasible, then they randomly chose an N^{th} angler to be interviewed. Once an N^{th} angler interval was chosen, that interval was maintained through the entire section for that survey date. Data collected during each interview included: location by river mile, fishing method, number of hours fished, number of anglers in group, target species, zip code, whether the trip was completed, and the number of fish kept and released by species.

Nine sport fish species found in the Central Valley rivers were considered "Target Species." Those species were: Chinook salmon, steelhead, Rainbow trout, striped bass, sturgeon (all species), American shad, catfish (all species), sunfish (all species), and black bass (all species) (Table 1). If anglers did not indicate they were fishing for one of the target species, the code "ANY" was used.

The number of fish kept and released was recorded separately for each of the nine target species. All other fish species caught were recorded separately by species in a column labeled "Other" (Table 2).

A length measurement was used to differentiate between steelhead and rainbow trout. All rainbow trout 18 inches or greater were considered to be steelhead. Rainbow trout less than 18 inches were recorded as rainbow trout (McEwan, personal contact 1998)¹.

Additional data were collected from five of the nine target species when kept by anglers. The five species were: Chinook salmon, steelhead, rainbow trout, striped bass and sturgeon. Each fish was measured to the nearest 0.5 centimeter fork length and inspected for any marks or tags. A total length measurement was taken on sturgeon. All Chinook salmon and steelhead caught were inspected for the presence of an adipose fin. A salmon missing an adipose fin indicated the fish was of hatchery origin and likely contained a coded-wire tag (CWT) in its head. The head was removed from adipose fin clipped fish and sent to the DFG Ocean Salmon Project laboratory in Healdsburg for later analysis.

¹D. McEwan, 1998, Senior Biologist, California Department of Fish and Game.

Table 1. Species symbols, common and scientific names of target species observed in the 2001 Angler Survey, January 1 through December 31, 2001.

Family	Target Species	Species Symbol	Common Name	Scientific Name
Salmonidae:	Chinook Salmon	KS	King Salmon	<i>Oncorhynchus tshawytscha</i>
	Steelhead	SH	Steelhead Trout	<i>Oncorhynchus mykiss</i>
	Rainbow Trout	RT	Rainbow Trout	<i>Oncorhynchus mykiss</i>
Moronidae:	Striped Bass	SB	Striped Bass	<i>Morone saxatilis</i>
Acipenseridae:	Sturgeon	ST	White Sturgeon	<i>Acipenser transmontanus</i>
Clupeidae:	American Shad	AS	American Shad	<i>Alosa sapidissima</i>
Ictaluridae:	Catfish	CF	Channel Catfish	<i>Ictalurus punctatus</i>
			White Catfish	<i>Ameiurus catus</i>
			Brown Bullhead	<i>Ameiurus nebulosus</i>
			Black Bullhead	<i>Ameiurus melas</i>
Centrarchidae:	Sunfish	SF	Bluegill	<i>Lepomis macrochirus</i>
			Redear Sunfish	<i>Lepomis microlophus</i>
			Black Crappie	<i>Pomoxis nigromaculatus</i>
	Black Bass	BB	Largemouth	<i>Micropterus salmoides</i>
Other:	Any Species	ANY	The "ANY" designations was used for anglers who indicated they were not fishing for a specific species.	

Table 2. Non-target species symbols, common and scientific names of species observed in the 2001 Angler Survey, January 1 through December 31, 2001.

Family	Common Name	Species Symbol	Scientific Name
Salmonidae:	Brown Trout	BN	<i>Salmo trutta</i>
Cyprinidae:	Common Carp	CP	<i>Cyprinus carpio</i>
	Splittail	SPT	<i>Pogonichthys macrolepidotus</i>
	Squawfish	SQ	<i>Ptychocheilus grandis</i>
Catostomidae:	Sacramento Sucker	SKR	<i>Catostomus occidentalis</i>
Pleuronectidae:	Starry Flounder	STR	<i>Platichthys stellatus</i>

Estimate Calculations

Sample day estimates for angler-hours were created by dividing the observed angler count by the average hourly count within the respective hour interval. The mean of the sample days within a stratum was expanded by the number of days available in the month to obtain the total for the stratum. For each month and section, weekend and weekday strata were combined for total estimated angler-hours as follows:

$$\text{TOTALAH}_i = ((\text{ALLWD}_i * \text{WDAVG}_i) + (\text{ALLWE}_i * \text{WEAVG}_i))$$

TOTALAH_i = total angler-hours (the subscript i denotes the stratum containing a particular combination of section and month).

ALLWD_i and ALLWE_i = number of weekdays and weekend days, respectively available in the month.

WDAVG_i and WEAVG_i = mean of expanded sample-day angler-hours for weekdays and weekend days, respectively.

Hourly count data were not available for all rivers surveyed. For example, Feather River hourly counts were used with Yuba River angler count data; Sacramento River counts were used with San Joaquin River and Mokelumne River angler count data; and American River hourly counts were used with Stanislaus River angler count data.

Angler hour estimates were scaled down to each species by multiplying the total angler-hours by the observed percent distribution of effort for each target species:

$$\text{TOTALAHSP}_{ij} = \text{TOTALAH}_i * \text{FISHHRS}_{ij}$$

TOTALAHSP_{ij} = estimated angler-hours (subscript i denotes the stratum containing a particular combination of section and month, j denotes target species)

TOTALAH_i = total angler-hours (the subscript i denotes the stratum containing a particular combination of section and month).

FISHHRS_{ij} = the ratio of the sample total angler-hours for species "j" divided by the sample total angler-hours for all species in section and month "i".

Catch per unit effort,(CPUE) was calculated from the sample total number of fish caught divided by the sample total hours fished for each target species within the selected month and

section "i". It was assumed that the catch rate was the same for all days of the week. Separate values were calculated for harvested and released fish. Therefore:

$$CPUE_{ij} = \text{SUMFISH}_{ij} / \text{SUMHRS}_{ij}$$

$CPUE_{ij}$ = catch-per-unit-effort for harvested or released target species.

SUMFISH_{ij} = total observed number of fish harvested or released.

SUMHRS_{ij} = total observed angler-hours expended to catch and release a target species.

Catch is the product of the estimated angler-hours and CPUE for target species, section, and month selected, where:

$$\text{CATCH}_{ij} = \text{TOTALAHSP}_{ij} * CPUE_{ij}$$

CATCH_{ij} = Estimated catch for a harvested or released target species.

TOTALAHSP_{ij} = estimated angler-hours (subscript i denotes the stratum containing a particular combination of section and month, j denotes target species)

$CPUE_{ij}$ = catch-per-unit-effort for harvested or released target species.

FINDINGS

This is the fourth year of a multi-year project designed to estimate angler effort and harvest. Angler surveys were conducted on the Sacramento, Feather, Yuba, American, San Joaquin, Mokelumne, and Stanislaus rivers at various times between January 1 and December 31, 2001. All rivers were not sampled for the entire year. These data represents estimates for the various rivers only for the portion of the year that sampling occurred. Limited sampling was due to budget reductions which did not allow all rivers to be sampled for the entire year or open season. Hence, the project focused on rivers that had significant angler effort for salmon and steelhead which was based on past survey results (Murphy et al., 1998, 1999, and 2000). A total of 21,597 anglers was interviewed, and these data form the basis for the angling effort and harvest estimates. Sport anglers spent an estimated 1,604,546 angler-hours fishing in the Central Valley Rivers surveyed. Chinook salmon was the species targeted by most anglers followed by striped bass.

The salmon season opened July 15, 2001 on the Sacramento River and closed January 13, 2002. Steady angling continued through the season with the peak in angling effort occurring in September and October. In 2001, anglers spent an estimated total of 1,003,818 hours fishing for Chinook salmon in the Sacramento River. Anglers harvested an estimated 45,063 salmon for their efforts. Striped bass was the second most targeted species. Striped bass and steelhead were also encountered during this time. In 2001, an estimated total of 105,860 hours was spent targeting striped bass with an estimated total of 2,836 striped bass harvested during the sample period. Hours spent fishing for steelhead was estimated at 3,369. Most anglers practice catch and release, thus many steelhead are not counted in the harvest estimates. An estimated total of 89 steelhead were retained with 681 estimated released.

Angler surveys for the American River were conducted during January 2001 and from March 1 through June 30, 2001. During the sampling period steelhead was the primary target of most anglers followed by striped bass and then Chinook salmon. A total of 38,128 hours, 20,648 hours, and 5,667 hours were expended in pursuit of steelhead, striped bass and Chinook salmon, respectively. Anglers harvested an estimated 479 steelhead (3,120 released), 432 striped bass (1,369 released), and 304 Chinook salmon (247 released) during the sampling period.

The Feather River was surveyed in January 2001 and then again from March 1, through June 30, 2001. Water levels on the Feather River were very low throughout the year resulting in decreased angler effort and harvest. The greatest angling effort was for striped bass with significantly less effort for Chinook salmon and steelhead, during the sampling period. An estimated total of 60,206 angler hours was spent fishing for striped bass with 18,965 and 12,087 angler hours spent fishing for Chinook salmon and steelhead, respectively. Harvest estimates for striped bass, Chinook salmon and steelhead was 1,993 (1,865 released), 700 (114 released), and 70 (2,296 released) fish, respectively.

The Yuba, San Joaquin, Stanislaus and Mokelumne rivers were not sampled for most of the 2001 season due to inadequate funding. The project only surveyed in January for the rivers mentioned above.

REFERENCES

- American Fisheries Society. 1991. Common and scientific names of fishes from United States and Canada. Fifth Edition. Special Publication 20, 183 pp.
- AQUAMAPS. 1988. Complete Atlas & Anglers Guide to the Sacramento River, Shasta Dam to San Pablo Bay. First Edition. Edited and Published by Northern California Angler Publications, Inc., Elk Grove, CA, 128 pp.
- Murphy, K, L. Hanson, M. Harris, and T. Schroyer. 1999. Central Valley Salmon and Steelhead Harvest Monitoring Project - 1998 Angler Survey. Unpublished annual report.
- _____. 2000. Central Valley Salmon and Steelhead Harvest Monitoring Project - 1999 Angler Survey. Unpublished annual report.
- Murphy, K, T Schroyer, and D. Massa. 2000. Central Valley Salmon and Steelhead Harvest Monitoring Project - 2000 Angler Survey. Unpublished annual report
- Wixom, L. H., J. Pisciotto, and C. Lake. 1995. Final Performance Report - Sacramento River System Sport Fish Catch Inventory. California Department of Fish and Game, Inland Fisheries Division, 76 p.

APPENDIX A

Description of the River Sections Surveyed

River Miles	Section Number	Description	Distance (Miles)
Sacramento River/Delta			
-22 to 12	1.0	Carquinez Bridge to Rio Vista Bridge	35
13 to 59	2.0	Rio Vista Bridge to mouth of American River	48
60 to 89	3.0	American River to Knights Landing (Hwy. 113 Bridge)	29
90 to 143	4.0	Knights Landing to Colusa (River Rd. Bridge)	54
144 to 199	5.0	Colusa to Hamilton City (Hwy. 32 Bridge)	56
200 to 242	6.0	Hamilton City to Red Bluff Diversion Dam	43
243 to 280	7.0	Red Bluff Diversion Dam to Deschutes Road Bridge	38
281 to 298	8.0	Deschutes Road Bridge to ACID Dam at Redding	18
American River			
500 to 504	9.0	Discovery Park to Interstate 80 Bridge	4
505 to 522	10.0	Interstate 80 Bridge to Hazel Avenue Bridge	18
523	10.1	Hazel Avenue Bridge to Nimbus Dam	1
Feather River			
400 to 438	11.0	Verona to Sunset Pumps	39
439 to 458 460 to 467	12.0	Sunset Pumps to Feather River Fish Hatchery (excluding Thermalito River outlet)	28
459	12.1	Thermalito River Outlet (only)	1
Yuba River			
600 to 612	13.0	Marysville to Daguerre Point Dam	13
613 to 622	14.0	Daguerre Point to 1 mile upstream Hwy. 20 Bridge	8
San Joaquin River/Delta			
700 to 757	15.0	Mossdale Crossing to the confluence with the Sacramento River	58
Mokelumne River			
800 to 822	16.0	South Fork - from mouth to Interstate 5 Bridge Crossing	23
900 to 910	17.0	North Fork - from mouth to confluence with South Fork at New Hope Landing	11
Stanislaus River			
1029 to 1058	18.0	Stanislaus River from McHenry Avenue to Goodwin Dam	29

APPENDIX B

Estimated Angler-Hours and Number of Days Sampled

TOTAL NUMBER OF ANGLER-HOURS

River	Section No.	1	2	3	4	5	6	7	8	9	10	10.1	11	12	12.1	13	14	15	16	17	18	TOTAL							
		Sacramento				American				Feather				Yuba				San Joaquin				Mokelumne				Stanislaus			
January		48,265	11,813	4,587	4,510	3,892	4,112	4,788	4,715	6,741	22,432	8,240	1,135	5,853	204	681	3,242	11,843	2,316	853	3,238	143,427							
February										4,082	12,022	1,231	47,273	3,898	405							88,882							
March									10,250	6,033	504	14,884	3,413	453								34,513							
April									8,398	12,186	604	12,828	3,751	3,048								40,825							
May									2,885	14,014	7,134	4,891	6,260	10,888								80,064							
June			41,719	23,301	15,260	28,872	80,228	5,548	5,779													188,705							
July																						224,533							
August			53,020	31,888	43,122	34,484	44,476	9,732	7,892													351,882							
September			151,486	52,801	33,005	32,038	41,277	35,439	5,937													341,184							
October			178,802	61,035	11,709	16,723	22,478	27,778	18,538													103,915							
November			35,897	18,401	7,873	10,220	8,745	14,048	9,838													46,424							
December			21,817	1,768	3,483	2,637	5,607	3,803	7,300																				
TOTAL		48,255	495,458	191,595	118,082	128,866	207,921	101,134	61,105	26,510	88,896	15,713	78,108	23,015	14,838	2,821	5,396	11,845	2,316	853	3,238	1,604,548							

TOTAL NUMBER OF SAMPLE-DAYS

River	Section No.	1	2	3	4	5	6	7	8	9	10	10.1	11	12	12.1	13	14	15	16	17	18	TOTAL							
		Sacramento				American				Feather				Yuba				San Joaquin				Mokelumne				Stanislaus			
January		5	7	8	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	138							
February																						0							
March										7	7	7	6	6	6							30							
April										6	6	6	6	6	6							42							
May										6	6	6	6	7	7							48							
June										6	6	6	6	6	6							50							
July																						56							
August																						48							
September																						48							
October																						51							
November																						63							
December																						6							
TOTAL		5	52	54	50	48	50	52	55	37	37	37	30	33	33	12	12	5	6	6	6	632							

APPENDIX C

Estimated Harvest, Released and Angler-Hours by Target Species

ESTIMATED ANGLER-HOURS

River	Section No.	River											
		1	2	3	4	5	6	7	8	9	10	11	12
TOTAL		0	0	0	0	0	0	0	0	0	0	0	0
January		0	0	0	0	0	0	0	0	0	0	0	0
February		0	0	0	0	0	0	0	0	0	0	0	0
March		0	0	0	0	0	0	0	0	0	0	0	0
April		0	0	0	0	0	0	0	0	0	0	0	0
May		0	0	0	0	0	0	0	0	0	0	0	0
June		0	0	0	0	0	0	0	0	0	0	0	0
July		0	0	0	0	0	0	0	0	0	0	0	0
August		0	0	0	0	0	0	0	0	0	0	0	0
September		0	0	0	0	0	0	0	0	0	0	0	0
October		0	0	0	0	0	0	0	0	0	0	0	0
November		0	0	0	0	0	0	0	0	0	0	0	0
December		0	0	0	0	0	0	0	0	0	0	0	0
TOTAL		0	0	0	0	0	0	0	0	0	0	0	0

TOTAL ESTIMATED RELEASED

River	Section No.	River											
		1	2	3	4	5	6	7	8	9	10	11	12
TOTAL		0	0	0	0	0	0	0	0	0	0	0	0
January		0	0	0	0	0	0	0	0	0	0	0	0
February		0	0	0	0	0	0	0	0	0	0	0	0
March		0	0	0	0	0	0	0	0	0	0	0	0
April		0	0	0	0	0	0	0	0	0	0	0	0
May		0	0	0	0	0	0	0	0	0	0	0	0
June		0	0	0	0	0	0	0	0	0	0	0	0
July		0	0	0	0	0	0	0	0	0	0	0	0
August		0	0	0	0	0	0	0	0	0	0	0	0
September		0	0	0	0	0	0	0	0	0	0	0	0
October		0	0	0	0	0	0	0	0	0	0	0	0
November		0	0	0	0	0	0	0	0	0	0	0	0
December		0	0	0	0	0	0	0	0	0	0	0	0
TOTAL		0	0	0	0	0	0	0	0	0	0	0	0

TOTAL ESTIMATED HARVEST

River	Section No.	River											
		1	2	3	4	5	6	7	8	9	10	11	12
TOTAL		0	0	0	0	0	0	0	0	0	0	0	0
January		0	0	0	0	0	0	0	0	0	0	0	0
February		0	0	0	0	0	0	0	0	0	0	0	0
March		0	0	0	0	0	0	0	0	0	0	0	0
April		0	0	0	0	0	0	0	0	0	0	0	0
May		0	0	0	0	0	0	0	0	0	0	0	0
June		0	0	0	0	0	0	0	0	0	0	0	0
July		0	0	0	0	0	0	0	0	0	0	0	0
August		0	0	0	0	0	0	0	0	0	0	0	0
September		0	0	0	0	0	0	0	0	0	0	0	0
October		0	0	0	0	0	0	0	0	0	0	0	0
November		0	0	0	0	0	0	0	0	0	0	0	0
December		0	0	0	0	0	0	0	0	0	0	0	0
TOTAL		0	0	0	0	0	0	0	0	0	0	0	0

CHINOOK SALMON

Month	Section No. 1	Section No. 2	Section No. 3	Section No. 4	River	Sacramento	American	Feather	Yuba	San Joaquin	Mokelumne	Stanislaus	TOTAL
January	0	206	111	0	74	269	330	0	0	0	0	0	34,580
February	0	0	0	0	0	0	8,020	1,085	0	3,116	329	0	12,551
March	0	0	0	0	0	0	1,983	0	18	1,220	113	0	2,945
April	0	0	0	0	0	0	0	0	0	663	0	0	669
May	0	0	0	0	0	0	0	0	0	0	0	0	827
June	0	0	0	0	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	0	0	0	0	0	299
September	0	0	0	0	0	0	0	0	0	0	0	0	27
October	0	0	0	0	0	0	0	0	0	0	0	0	1,074
November	0	0	0	0	0	0	0	0	0	0	0	0	599
December	0	0	0	0	0	0	0	0	0	0	0	0	379
TOTAL	0	206	111	0	74	269	330	0	0	0	0	0	53,951

Month	Section No. 1	Section No. 2	Section No. 3	Section No. 4	River	Sacramento	American	Feather	Yuba	San Joaquin	Mokelumne	Stanislaus	TOTAL
January	0	16	0	0	0	0	0	0	0	0	0	0	2,818
February	0	0	0	0	0	0	0	0	0	0	0	0	1,603
March	0	0	0	0	0	0	0	0	0	0	0	0	908
April	0	0	0	0	0	0	0	0	0	0	0	0	191
May	0	0	0	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	0	0	0	0	0	30
September	0	0	0	0	0	0	0	0	0	0	0	0	41
October	0	0	0	0	0	0	0	0	0	0	0	0	381
November	0	0	0	0	0	0	0	0	0	0	0	0	68
December	0	0	0	0	0	0	0	0	0	0	0	0	43
TOTAL	0	16	0	0	0	0	0	0	0	0	0	0	6,183

Month	Section No. 1	Section No. 2	Section No. 3	Section No. 4	River	Sacramento	American	Feather	Yuba	San Joaquin	Mokelumne	Stanislaus	TOTAL
January	0	0	0	0	0	0	0	0	0	0	0	0	243
February	0	0	0	0	0	0	0	0	0	0	0	0	0
March	0	0	0	0	0	0	0	0	0	0	0	0	260
April	0	0	0	0	0	0	0	0	0	0	0	0	54
May	0	0	0	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	0	0	0	0	0	0
September	0	0	0	0	0	0	0	0	0	0	0	0	0
October	0	0	0	0	0	0	0	0	0	0	0	0	0
November	0	0	0	0	0	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	639

STEELHEAD

TOTAL ESTIMATED HARVEST

TOTAL ESTIMATED RELEASED

ESTIMATED ANOLER-HOURS

AMERICAN SHAD

TOTAL ESTIMATED HARVEST

River	Section No	1	2	3	4	5	6	7	8*	9	10	10.1	11	12	12.1	12.2	13	14	15	16	17	18	TOTAL	
	January	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	February	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	March	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	April	0	0	0	0	0	0	0	0	117	0	0	0	0	0	0	0	0	0	0	0	0	0	117
	May	0	0	0	0	0	0	0	0	226	0	0	6,840	0	0	0	0	0	0	0	0	0	0	7,109
	June	0	0	0	0	0	0	0	0	71	2,862	0	114	0	0	0	0	0	0	0	0	0	0	2,752
	July	0	0	0	0	104	483	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	587
	August	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	September	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	October	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	November	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	December	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	104	483	0	0	423	2,862	0	6,954	0	0	0	0	0	0	0	0	0	0	10,566

TOTAL ESTIMATED RELEASED

River	Section No	1	2	3	4	5	6	7	8*	8	10	10.1	11	12	12.1	12.2	13	14	15	16	17	18	TOTAL	
	January	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	February	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	March	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	April	0	0	0	0	0	0	0	0	176	183	0	0	0	0	0	0	0	0	0	0	0	0	319
	May	0	0	0	0	0	0	0	0	2,783	0	0	6,777	414	0	0	0	0	0	0	0	0	0	9,975
	June	0	0	0	0	0	0	0	0	61	10,656	0	767	248	144	0	0	0	0	0	0	0	0	12,019
	July	0	0	0	0	191	2,104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,295
	August	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	September	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	October	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	November	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	December	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	191	2,104	0	0	3,011	11,023	0	7,534	622	144	0	0	0	0	0	0	0	0	24,629

ESTIMATED ANGLER-HOURS

River	Section No	1	2	3	4	5	6	7	8*	8	10	10.1	11	12	12.1	12.2	13	14	15	16	17	18	TOTAL	
	January	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	February	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	March	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	April	0	0	0	0	0	0	0	0	1,203	313	0	0	0	0	0	0	0	0	0	0	0	0	1,516
	May	0	0	0	0	0	0	0	0	3,422	8,311	0	9,011	1,656	0	0	0	0	0	0	0	0	0	22,420
	June	0	0	0	0	0	0	0	0	377	10,361	1,237	1,362	332	90	0	0	0	0	0	0	0	0	13,731
	July	0	0	0	0	317	1,895	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,212
	August	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	September	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	October	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	November	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	December	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	317	1,895	0	0	4,993	19,026	1,237	10,373	1,988	90	0	0	0	0	0	0	0	0	39,873

STRIPED BASS

TOTAL ESTIMATED HARVEST

Section No	River												TOTAL									
	Sacramento			American			Feather			Yuba				San Joaquin			Mokelumne			Stambles		
	1	2	3	4	5	6	7	8	9	10	10.1	11	12	12.1	13	14	15	16	17	18	19	20
January	519	111	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	131	0	0	0	0
February																						
March									85	0	0	1,218	0	0	0	0	0	367	0	0	0	0
April									178	0	0	497	0	0	0	0	0	0	0	0	0	0
May									38	31	0	51	0	0	0	0	0	0	0	0	0	0
June									77	0	0	277	0	0	0	0	0	0	0	0	0	0
July																						
August									24	156	207	0	0	0	0	0	0	0	0	0	0	
September									35	119	0	0	0	0	0	0	0	0	0	0	0	
October									390	0	0	0	0	0	0	0	0	0	0	0	0	
November									13	24	41	0	0	0	0	0	0	0	0	0	0	
December									76.5	22	13	0	0	0	0	0	0	0	0	0	0	
TOTAL	519	1,449	77	40	474	278	0	0	401	31	0	1,993	0	0	0	0	0	131	367	0	0	5,757

TOTAL ESTIMATED RELEASE

Section No	River												TOTAL									
	Sacramento			American			Feather			Yuba				San Joaquin			Mokelumne			Stambles		
	1	2	3	4	5	6	7	8	9	10	10.1	11	12	12.1	13	14	15	16	17	18	19	20
January	1135	301	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	392	0	0	0	0
February																						
March									235	272	362	0	0	0	0	0	0	0	0	0	0	
April									153	184	154	0	0	0	0	0	0	0	0	0	0	
May									489	36	114	0	0	0	0	0	0	0	0	0	0	
June																						
July									817	1,171	68	0	0	0	0	0	0	0	0	0	0	
August									5,406	1,081	202	60	0	0	0	0	0	0	0	0	0	
September									1,784	290	888	711	0	0	0	0	0	0	0	0	0	
October									1,240	52	310	0	0	0	0	0	0	0	0	0	0	
November									1,711	162	12	0	0	0	0	0	0	0	0	0	0	
December									0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	1135	16,710	2,854	3,335	1,811	129	0	0	876	404	0	1,868	0	0	0	0	0	392	2,44	0	0	28,959

ESTIMATED ANGLER-HOURS

Section No	River												TOTAL									
	Sacramento			American			Feather			Yuba				San Joaquin			Mokelumne			Stambles		
	1	2	3	4	5	6	7	8	9	10	10.1	11	12	12.1	13	14	15	16	17	18	19	20
January	13856	7,895	1,011	60	155	111	0	0	432	55	0	442	0	0	0	0	0	6,447	808	0	0	0
February																						
March									3,283	1,005	0	44,283	388	0	0	0	0	0	0	0	0	0
April									5,355	2,674	0	10,508	0	0	0	0	0	0	0	0	0	0
May									1,598	2,682	0	1,848	111	39	0	0	0	0	0	0	0	0
June									1,436	2,285	0	2,472	83	72	24	0	0	0	0	0	0	0
July																						
August									13,379	3,401	1,605	2,234	0	0	0	0	0	0	0	0	0	
September									12,419	2,357	1,123	2,424	596	0	0	0	0	0	0	0	0	
October									8,801	335	1,042	1,507	854	0	0	0	0	0	0	0	0	
November									8,299	615	940	481	59	0	0	0	0	0	0	0	0	
December									11,849	824	223	121	0	0	0	0	0	0	0	0	0	
TOTAL	13856	65,543	8,845	4,752	9,019	3,818	27	0	11,994	6,654	0	59,514	561	111	24	0	0	6,447	2,304	808	1,670	199,866

CATFISH (all species)

TOTAL ESTIMATED HARVEST

River	Section No.	1	2	3	4	5	6	7	8	9	10	11	12	12.1	13	14	15	16	17	18	TOTAL
		Sacramento			Feather			American			San Joaquin			Mokelumne			Stanislaus				
January		0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
February		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
March		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
April		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
June		0	1,379	166	195	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,674
July		0	1,678	272	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,021
August		0	857	179	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	786
September		0	459	17	149	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	676
October		0	370	775	37	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,183
November		0	30	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61
December		0	4,374	1,391	568	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,499
TOTAL		0	12,225	7,233	2,676	654	222	0	0	0	493	739	0	0	0	0	65	0	0	0	30,841

TOTAL ESTIMATED RELEASED

River	Section No.	1	2	3	4	5	6	7	8	9	10	11	12	12.1	13	14	15	16	17	18	TOTAL
		Sacramento			Feather			American			San Joaquin			Mokelumne			Stanislaus				
January		0	0	134	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134
February		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
March		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
April		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
June		0	368	200	49	0	34	0	0	0	0	0	0	0	0	0	0	0	0	0	671
July		0	497	30	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	667
August		0	111	89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	201
September		0	0	0	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
October		0	228	711	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	964
November		0	124	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	137
December		0	1,225	1,292	140	34	0	0	0	0	0	38	0	0	0	0	65	0	0	0	2,786
TOTAL		0	12,225	7,233	2,676	654	222	0	0	0	493	739	0	0	0	0	65	0	0	0	30,841

ESTIMATED ANGLER-HOURS

River	Section No.	1	2	3	4	5	6	7	8	9	10	11	12	12.1	13	14	15	16	17	18	TOTAL
		Sacramento			Feather			American			San Joaquin			Mokelumne			Stanislaus				
January		0	47	519	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	646
February		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
March		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
April		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
June		0	8,182	1,658	515	297	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,652
July		0	7,933	772	947	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,797
August		0	4,208	1,821	251	173	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,453
September		0	1,401	518	529	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,448
October		0	1,369	1,263	496	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,212
November		0	385	642	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,053
December		0	21,556	7,233	2,676	654	222	0	0	0	342	739	0	0	0	0	64	0	0	0	30,841
TOTAL		0	21,556	7,233	2,676	654	222	0	0	0	342	739	0	0	0	0	64	0	0	0	30,841

SUNFISH (all species)

TOTAL ESTIMATED HARVEST

River:		Sacramento		American		Feather		Yuba		San Joaquin		Mokelumne		Stanislaus		TOTAL									
Section No.	1	2	3	4	5	6	7	8	9	10	10.1	11	12	12.1	13	14	15	16	17	18	19	20			
January	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
February	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
March	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
April	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
September	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
October	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
November	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TOTAL ESTIMATED RELEASED

River:		Sacramento		American		Feather		Yuba		San Joaquin		Mokelumne		Stanislaus		TOTAL									
Section No.	1	2	3	4	5	6	7	8	9	10	10.1	11	12	12.1	13	14	15	16	17	18	19	20			
January	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
February	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
March	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
April	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
September	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
October	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
November	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ESTIMATED ANGLER-HOURS

River:		Sacramento		American		Feather		Yuba		San Joaquin		Mokelumne		Stanislaus		TOTAL										
Section No.	1	2	3	4	5	6	7	8	9	10	10.1	11	12	12.1	13	14	15	16	17	18	19	20				
January	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
February	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
March	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
April	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
June	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
July	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
August	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
September	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
October	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
November	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
December	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	0

STURGEON (all species)

TOTAL ESTIMATED HARVEST

River	1	2	3	4	5	6	7	8	9	10	10.1	11	12	12.1	13	14	15	16	17	18	TOTAL							
Section No.	Sacramento				American				Feather				Yuba				San Joaquin				Mokelumne				Stanislaus			
January	195	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	33	0	0	0	243							
February	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
March	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
April	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
June	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
July	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
August	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
September	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
October	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
November	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
December	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	0	0	0	19							
TOTAL	195	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	33	0	0	0	270							

TOTAL ESTIMATED RELEASED

River	1	2	3	4	5	6	7	8	9	10	10.1	11	12	12.1	13	14	15	16	17	18	TOTAL							
Section No.	Sacramento				American				Feather				Yuba				San Joaquin				Mokelumne				Stanislaus			
January	1038	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	0	0	0	1078							
February	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
March	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
April	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
June	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
July	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
August	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
September	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
October	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
November	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
December	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	0	0	0	60							
TOTAL	1038	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	0	0	0	1135							

ESTIMATED ANGLER-HOURS

River	1	2	3	4	5	6	7	8	9	10	10.1	11	12	12.1	13	14	15	16	17	18	TOTAL							
Section No.	Sacramento				American				Feather				Yuba				San Joaquin				Mokelumne				Stanislaus			
January	32188	2769	863	0	0	403	0	0	0	0	0	0	0	0	0	0	1487	0	0	0	41500							
February	0	0	0	0	109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
March	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
April	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
May	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
June	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
July	194	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	194							
August	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
September	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
October	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
November	3100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	207							
December	19209	648	0	0	248	0	0	0	0	0	0	0	0	0	0	0	1487	0	0	0	23321							
TOTAL	32188	28271	1705	7389	355	403	0	0	0	0	0	0	0	0	0	0	1487	0	0	0	61396							

ANY (Anglers fishing for any species)

TOTAL ESTIMATED HARVEST		Sacramento		Yuba		San Joaquin		Mokelumne		Stensilus											
River	Section No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	TOTAL	
January		0	346	74	0	0	0	139	0	0	0	0	0	0	0	0	0	0	0	0	891
February		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
March		0	0	0	0	0	0	0	0	72	158	0	35	0	0	0	0	0	0	0	265
April		0	0	0	0	0	0	0	0	235	54	0	76	0	0	0	0	0	0	0	366
May		0	0	0	0	0	0	0	0	76	31	0	0	0	0	0	0	0	0	0	107
June		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
July		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	555
August		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,029
September		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	501
October		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	179
November		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
December		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	240
TOTAL		0	2,423	334	118	24	0	184	0	363	243	0	114	35	0	0	0	0	0	0	3,880

TOTAL ESTIMATED RELEASED		Sacramento		Yuba		San Joaquin		Mokelumne		Stensilus											
River	Section No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	TOTAL	
January		0	0	0	0	0	0	0	0	0	41	0	0	0	0	0	0	0	0	0	74
February		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
March		0	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0	0	0	0	119
April		0	0	0	0	0	0	0	0	29	0	0	0	0	0	0	0	0	0	0	29
May		0	0	0	0	0	0	0	0	5,846	0	0	32	0	0	0	0	0	0	0	5,818
June		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
July		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,834
August		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,640
September		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,155
October		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	414
November		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	142
December		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL		0	3,235	1,443	1,104	107	178	109	0	53	6,022	0	32	0	49	0	0	0	0	0	12,372

ESTIMATED ANGLER-HOURS		Sacramento		Yuba		San Joaquin		Mokelumne		Stensilus											
River	Section No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	TOTAL	
January		211	336	730	142	180	71	400	0	308	443	221	0	31	7	65	0	0	0	3,253	
February		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
March		0	0	0	0	0	0	0	0	0	1,701	145	2,806	255	51	0	0	0	0	0	5,632
April		0	0	0	0	0	0	0	0	3,572	2,387	0	707	915	340	0	0	0	0	0	8,471
May		0	0	0	0	0	0	0	0	3,338	797	604	1,900	56	0	0	0	0	0	0	6,664
June		0	0	0	0	0	0	0	0	1,066	612	1,421	785	540	234	0	0	0	0	0	5,664
July		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12,620
August		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,973
September		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,200
October		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,919
November		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,214
December		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,480
TOTAL		211	25,588	7,631	5,843	2,014	1,451	1,192	344	8,928	6,139	2,481	6,285	1,955	625	953	7	65	0	0	71,961