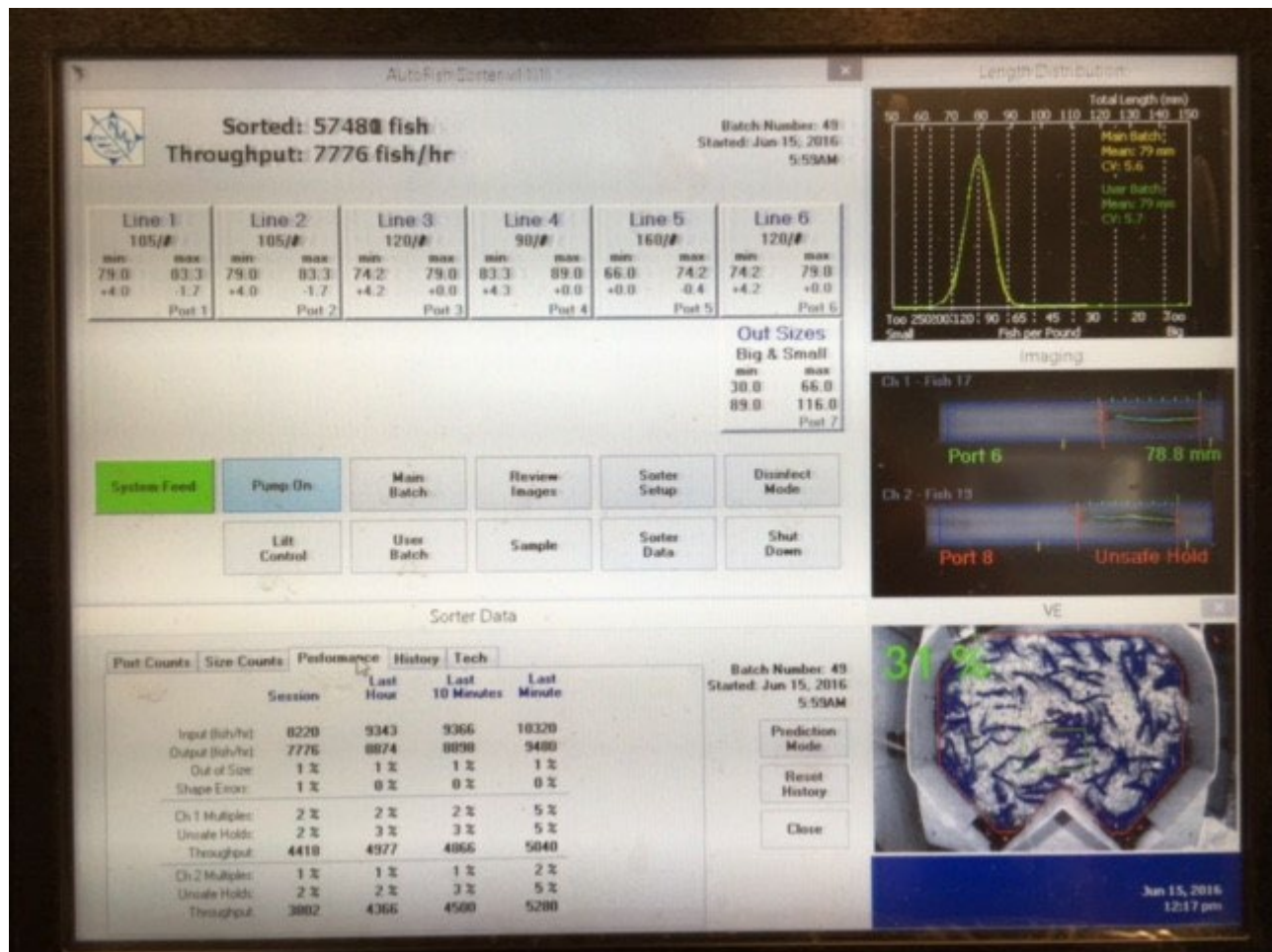


Central Valley Salmon and Steelhead Marking/Coded-wire Tagging Program

Fall-run Chinook Salmon
Spring-run Chinook Salmon
Steelhead

2024 Marking Season



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Abstract

The Central Valley Constant Fractional Marking/Tagging Program (CFM) was initiated in the spring of 2007 following the purchase of four automated fish tagging trailers (AutoFish Systems). Planning studies indicated that the optimal marking/tagging rate for the Central Valley CFM program was 25% of the fall-run Chinook salmon production releases. For each production release (fish released at the same time and location), the program therefore targeted marking with an adipose fin-clip and coded-wire tagging a representative 25% of each release of fall-run Chinook salmon from the Central Valley hatcheries in 2007 through 2024. The program was conducted at Coleman National Fish Hatchery, Feather River Fish Hatchery, Nimbus Fish Hatchery, and Mokelumne River Fish Hatchery in these years. We assisted with AutoFish Trailer operations at Warm Springs Hatchery as well as the manual tagging operations at Merced River Fish Hatchery during the 2024 tagging season.

The AutoFish Trailers were also used in the 2011 through 2024 seasons to adipose fin-clip and coded-wire tag 100% of the spring-run Chinook salmon reared at both Feather River Fish Hatchery and San Joaquin Fish Hatchery in the 2024 season. We also adipose fin-clipped 100% of the steelhead reared at Coleman National Fish Hatchery, Feather River Fish Hatchery, Mokelumne River Fish Hatchery, Nimbus Fish Hatchery, and Warm Springs Fish Hatchery.

This report includes the marking/tagging activities conducted with the AutoFish Systems and manual marking trailers at the six Central Valley hatcheries in 2024 (Brood Year 2023 fall-run Chinook salmon, spring-run Chinook salmon, and steelhead) and Warm Springs Fish Hatchery. The program successfully processed 100% of the production releases of fall-run Chinook salmon through the automated and manual marking trailers, 36,535,985 fish. Of the fall-run Chinook salmon total, approximately 26.30% were coded-wire tagged and adipose fin-clipped (9,864,430 fish). In addition, the program marked and coded-wire tagged 100% of the spring-run Chinook salmon produced at the Feather River Fish Hatchery, and San Joaquin Fish Hatchery, a total of 2,185,709 fish. The program also adipose fin-clipped 100% of the steelhead produced at Coleman National Fish Hatchery, Feather River Fish Hatchery, Mokelumne River Fish Hatchery, Nimbus Fish Hatchery, and Warm Springs Fish Hatchery, a total of 2,430,325 fish. The Coleman National Fish Hatchery late-fall-run and winter-run Chinook salmon and steelhead marking/tagging numbers are included in a separate report.

Introduction

In most years, approximately 30 million fall-run Chinook salmon are produced at five hatcheries in California's Central Valley, including Coleman National Fish Hatchery, Feather River Fish Hatchery, Nimbus Fish Hatchery, Merced River Fish Hatchery, and Mokelumne River Fish Hatchery (Figure 1). Production from these hatcheries contributes to major sport and commercial fisheries in the ocean and river systems. Until 2007, only experimental releases of fall-run Chinook were externally marked and coded-wire tagged on a regular basis.

In 2004, the CALFED Ecosystem Restoration Program (ERP) funded a study to design a constant fractional marking/coded-wire tagging program for production releases of fall-run Chinook salmon from Central Valley hatcheries, with the goal of estimating in a statistically valid manner the relative contribution of hatchery production. The study recommended the implementation of a system-wide marking/tagging program for production releases.

In 2006, the ERP Program provided the initial funding to begin implementation of the Central Valley Constant Fractional Marking (CFM) program. The initial contract provided funding to Pacific States Marine Fisheries Commission for the purchase of four automated tagging systems (AutoFish Systems) and the first two years of operating costs for marking/tagging production releases of fall-run Chinook salmon at the five major Central Valley hatcheries (in 2007 and 2008).

This program is a cooperative effort of the California Department of Fish and Wildlife, California Department of Water Resources, U.S. Fish and Wildlife Service, Pacific States Marine Fisheries Commission, U.S. Bureau of Reclamation, and East Bay Municipal Utility District. In 2009 through 2024, funding to conduct tagging operations was provided by the following entities: California Department of Water Resources and California Department of Fish and Wildlife; East Bay Municipal Utility District; and U.S. Bureau of Reclamation.

From 2002 to 2010, 100% of the spring-run Chinook salmon production at Feather River Hatchery was marked and coded-wire tagged using manual techniques. In 2011 through 2024, an AutoFish Trailer was used for the spring-run Chinook salmon marking/tagging. Funding was provided by the California Department of Water Resources.

The overall objectives of the fall and spring-run Chinook salmon tagging programs are:

1. To evaluate the contribution rates of hatchery fish to Central Valley Chinook salmon populations,
2. To evaluate the Central Valley propagation program's genetic and ecological effects on natural Chinook populations,
3. To estimate exploitation rates of hatchery and natural Central Valley Chinook salmon in ocean and inland fisheries,
4. To evaluate the success of restoration actions designed to increase natural production of Central Valley Chinook salmon,
5. To evaluate the relative impacts of water project operations on hatchery and naturally-produced Chinook salmon,
6. To evaluate the recovery of listed stocks of Chinook salmon.

All of the steelhead reared at Central Valley hatcheries were also marked using the AutoFish Trailers in 2024. Marking allows selective harvest of hatchery-reared steelhead in sport fisheries.

This report covers the eighteenth year of the CFM program's marking/tagging activities at six Central Valley hatcheries in the spring/summer of 2024 (Brood Year 2023 fall-run Chinook salmon). Also included in this report are the manual tagging operations conducted at Merced River Fish Hatchery fall-run Chinook salmon. The report also includes the marking/tagging of Brood Year 2023 spring-run Chinook salmon reared at Feather River Fish Hatchery as well as San Joaquin Fish Hatchery, and marking of steelhead reared at Feather River Fish Hatchery, Mokelumne River Fish Hatchery, Nimbus Fish Hatchery, and Warm Springs Fish Hatchery. Coleman National Fish Hatchery steelhead, late-fall run, and winter-run Chinook salmon are included in a separate report.

Methods

The coded-wire tag/adipose fin clip is the method agreed to by the Pacific Salmon Treaty (1999) to monitor Chinook salmon in ocean fisheries along the Pacific Coast. It is a cost-effective method to apply a long-term mark that gives data on hatchery origin and release group and provides for external identification of tagged fish. The coded-wire tag/adipose fin-clip marking method has been used throughout the West Coast of North America since the 1970's. Currently, over 50 million Chinook and coho salmon are coded-wire tagged each year. This Central Valley program is an integral part of this Coast-wide tagging program; tagged fish are recovered in ocean fisheries throughout the West Coast.

Four state-of-the-art automated tagging trailers were purchased for the Central Valley program in late 2006 and early 2007 from Northwest Marine Technology. The trailers incorporated the latest advanced technology for marking and coded-wire tagging fish. The AutoFish System™ has the capacity to mark and implant coded-wire tags very rapidly without any use of anesthetic or human contact. These systems have been in use for many years in the Pacific Northwest, but the Central Valley trailers were the first to be purchased for use in California.

Planning studies indicated that the optimal marking/tagging rate for the Central Valley CFM program was 25% of the fall-run Chinook production releases. For each production release (fish released at the same time and location), the program therefore targeted marking/tagging a representative 25% from 2007 through 2024. Coded-wire tags for the 2024 season were ordered from Northwest Marine Technology in November 2023. Tags used in the program were all 1.1 mm standard length tags.

The program was operated at Coleman National Fish Hatchery, Feather River Fish Hatchery, Nimbus Fish Hatchery, Mokelumne River Fish Hatchery, and San Joaquin Fish Hatchery (Figure 1). A manual tagging trailer was used for the fall-run Chinook salmon at Merced River Fish Hatchery.

The automated marking trailers have the ability to process fish that are a minimum length of 57 mm and a maximum length of 142 mm. With this in mind, timing of AutoFish Trailer operations at each facility is crucial to maximize efficiency and productivity while meeting hatchery release deadlines. Double shifts were typically used to maximize efficiency and output of the AutoFish Trailers. Trailers were moved as needed when fish at each hatchery reached the appropriate marking size. The fall-run Chinook salmon marking/tagging season began on February 20th at Coleman National Fish Hatchery and ended at Feather River Fish Hatchery on May 31st. Marking/tagging of hatchery-produced fall-run Chinook salmon in 2024 therefore spanned a 15-week period. The spring-run Chinook salmon marking/tagging season began on February 12th. at San Joaquin Fish Hatchery and was completed at Feather River Hatchery on March 25th for a total of six weeks. The Central Valley steelhead marking was conducted intermittently based on the number of fish that met the appropriate size protocols to process through the AutoFish Trailers, from June 3rd through August 12th, totaling ten weeks.

Throughout the season, fin-clipping rate and tag retention studies were conducted for fall and spring-run Chinook salmon to determine actual marking/tagging rates for each coded-wire tag code. Except as otherwise noted below, approximately 800-900 marked/tagged fish per tag code were retained and held separately for a period of approximately 21 days following the completion of each tag code. At Coleman National Fish Hatchery and Mokelumne River Fish Hatchery, approximately 400 fish were held for retention purposes for each tag code. A lower number of fish were set aside at these facilities due to the larger number of tag codes. Study fish were sampled from throughout the tagging period for each tag code. Fish were electronically tested for tag retentions and visually inspected for fin-clip quality at the end of the study period. During these quality checks, for a fish to

be counted as successfully retaining a tag, 60% or more of the adipose fin must be removed and a coded-wire tag must be present. A partial clip resulted in 10-40% of the adipose fin still present but was not counted against the successful clipping rate. If more than 40% of the adipose fin was still intact, it was classified as unclipped and therefore counts against the successful tagging rate (i.e. it likely would not be checked for a CWT since the adipose fin is intact or mostly intact). In some instances, fish were held for less than the standard 21-day time period due to specific hatchery release strategies. For some smaller tag codes, tag retention studies were not feasible; for these tag groups, retention rates were extrapolated from larger groups tagged at the same hatchery during similar time periods.

Following the tagging season, coded-wire tag data was summarized for submission to [the Regional Mark Processing Center \(RMPC\)](http://www.rmmpc.org), operated by the Pacific States Marine Fisheries Commission (<http://www.rmmpc.org>). The RMPC provides regional coordination of salmon tagging and fin marking programs, and maintenance of coastwide databases for coded-wire tag releases, recoveries, and associated catch/sample information, in the Regional Mark Information System (RMIS).

Figure 2 summarizes the annual project workflow.

Results

Daily tagging rates, tag codes, and results of retention studies for the 2024 tagging season are shown in Appendix Tables 1 – 7 for each of the hatcheries. The technology allowed an accurate count of all production fish, and the marking/tagging of an exact percentage of those fish.

The program successfully processed 100% of the 2024 production releases of fall-run Chinook salmon from the Central Valley hatcheries (totaling 36,535,985 fish). The 25% target rate for marking/tagging was achieved for Brood Year 2023 (approximately 26.30% were CWT/ad-clipped, 9,864,430 fish). The AutoFish Trailers also marked and tagged 2,185,709 Brood Year 2023 spring-run Chinook salmon reared at the Feather River Fish Hatchery and San Joaquin Fish Hatchery.

The AutoFish Trailers marked 100% of the 2,430,325 steelhead reared at Coleman National Fish Hatchery, Feather River Fish Hatchery, Mokelumne River Fish Hatchery, Nimbus Fish Hatchery, and Warm Springs Fish Hatchery.

Tag retention studies for the fall-run Chinook salmon indicated very high rates of tag/mark retention. Retention rates ranged as follows:

- Coleman National Fish Hatchery: 97.86% - 100% with an average of 99.30%
- Feather River Fish Hatchery: 95.74% - 100% with an average of 98.78%
- Mokelumne River Fish Hatchery: 98.50% - 100% with an average of 99.42%
- Nimbus Fish Hatchery: 99.63% - 100% with an average of 99.79%
- Merced River Fish Hatchery: 88.14-92.50% with an average of 90.69%

Tag retention studies for the spring-run Chinook salmon also indicated high rates of tag/mark retention. Retention rates ranged as follows:

- Feather River Hatchery: 98.40% - 99.30% with an average of 98.80%

- San Joaquin Fish Hatchery: 99.00-100.00% with an average of 99.67%

The steelhead from each facility are generally released during the winter months and clip quality will be checked just prior to release.

The numbers of fish included in this report were those processed and returned to the raceways during the tagging process. The actual numbers of fish released may differ. Please refer to the RMIS website, <http://www.rmipc.org>, for the number of fish that were successfully clipped, tagged, and then released.

Discussion

Similar to past tagging seasons, finding and retaining qualified technical personnel for program operations was extremely challenging for 2024 tagging season. After many months of having the job recruitments open and contacting every applicant that applied, we were able to hire just enough crew members to make it through the 2024 season. At the northern four hatcheries, the program had five Trailer Operators, and four Trailer Assistants employed at the start of the 2024 season. At Merced River Hatchery, three Trailer Assistants were employed for the duration of the project. Multiple crew members left prior to the end of the season for the Northern tagging crew but we were able to complete the marking/tagging with a short crew and some assistance from a couple of other programs.

This report includes all of the anadromous marking/tagging activities in the Central Valley with the exception of the Coleman National Fish Hatchery late-fall-run Chinook salmon and steelhead, and winter-run Chinook salmon at Coleman National Fish Hatchery, Livingston Stone National Fish Hatchery, and Mount Lassen Trout Farm Hatchery. These groups of fish are included in separate annual reports.

Acknowledgements

The Constant Fractional Marking Program would not have existed or successfully completed its eighteenth year of tagging without significant contributions from a number of people and agencies. I would like to thank the following individuals for their support, dedication, and cooperation in this program:

Management, administration, problem solving, and the existence of this program would not have been possible without Keri Miles and Jason Julienne, California Department of Fish and Wildlife (CDFW); Stan Allen and Amy Roberts, Pacific States Marine Fisheries Commission (PSMFC); John Hannon, Bureau of Reclamation (USBR), Michelle Workman East Bay Municipal Utility District (EBMUD); Kevin Niemela, U.S. Fish and Wildlife Service (USFWS) and Sabrina Bell, Eric See, and Jason Kindopp California Department of Water Resources (CDWR).

In particular, I want to thank the managers and staff working at the hatcheries where we conduct the marking/tagging program. Without your help, cooperation and support, this program would not be possible. Your willingness to work with us in adjusting the agendas and scheduling is critical in meeting the goals of all of the facilities. Bob Null (USFWS - Coleman National Fish Hatchery), Penny Booth-Crawshaw (CDFW - Feather River Fish Hatchery), Anna Kastner (CDFW - Feather River Fish Hatchery), Mary Noel (CDFW - Feather River Fish Hatchery), Greg Ferguson (CDFW - Nimbus Fish Hatchery), Gary Novak (CDFW - Nimbus Fish Hatchery), Darrick Baker (CDFW- Mokelumne River Hatchery), William Smith (CDFW - Mokelumne River Fish Hatchery), Matt Bigelow (CDFW- San Joaquin Fish Hatchery), Bryan Freele (CDFW- Warm Springs Fish

Hatchery), Alan Pariani (CDFW- Warm Springs Fish Hatchery), and their very professional hatchery staff did a significant amount of work to accommodate the trailers at their hatcheries, and made us feel welcome while we were on-site. I look forward to continuing to work with you all.

I also want to thank Chris Townsend and Matt Kendall (PSMFC) for their work both compiling data and conducting maintenance on the AutoFish Trailers to ensure that everything was operational. I also want to thank the rest of the professional and hardworking CFM crew that made this eighteenth season a great success. They each spent many long days away from home to accomplish the goals of this very demanding program. Trailer Operators included Korbyn Ellenwood (PSMFC), Dash Katz (PSMFC), Steven Janssen (PSMFC), Matt Kendall (PSMFC), Jesse McNeil (PSMFC), Lue Lo (PSMFC), Michaela Leyva (PSMFC), Dani Hartwigsen (PSMFC), and Chris Townsend (PSMFC). Tagging Trailer Assistants included seasonal PSMFC staff members Jackson Evans (PSMFC), Renee Goss (PSMFC), Chris Nonell (PSMFC), April Northern (PSMFC), and Amber Smith (PSMFC). Trailer Assistants that worked only at Feather River Fish Hatchery include seasonal PSMFC staff members include Brandon Huse (PSMFC), Bryce Jones (PSMFC), Kaylee Pebelier (PSMFC), Marifer Martinez (PSMFC), Hailee Richesin (PSMFC), Marisol Rosas (PSMFC), Drew Rudolph (PSMFC), and Ally Stout (PSMFC).

Schedule of Mark Events

- December 18th – February 7th Clipping/Tagging winter-run Chinook salmon at Livingston Stone National Fish Hatchery
- January 17th – March 6th Clipping/Tagging winter-run Chinook salmon at Mount Lassen Trout Farm
- February 12th – February 21st Clipping/Tagging spring-run Chinook salmon at San Joaquin Fish Hatchery
- February 20th – April 29th Clipping/Tagging fall-run Chinook salmon at Coleman National Fish Hatchery
- February 26th – March 22nd Clipping/Tagging spring-run Chinook salmon at Feather River Fish Hatchery
- March 11th – May 8th Clipping/Tagging fall-run Chinook salmon at Mokelumne River Fish Hatchery
- March 11th – May 1st Clipping/Tagging fall-run Chinook salmon at Merced Fish Hatchery
- March 26th – May 31st Clipping/Tagging fall-run Chinook salmon at Feather River Fish Hatchery
- March 28th – May 15th Clipping/Tagging fall-run Chinook salmon at Nimbus Fish Hatchery
- May 15th – June 14th Clipping steelhead at Coleman National Fish Hatchery
- May 30th – July 31st Clipping/Tagging late-fall-run Chinook salmon at Coleman National Fish Hatchery
- June 3rd - July 9th Clipping steelhead at Nimbus Fish Hatchery
- June 24th – July 12th Clipping steelhead at Mokelumne River Fish Hatchery
- July 9th – July 25th Clipping steelhead at Feather River Fish Hatchery
- July 16th – August 12th Clipping Steelhead at Warm Springs Fish Hatchery

Figure 1. Hatchery Locations: Central Valley Constant Fractional Marking Program (2024)

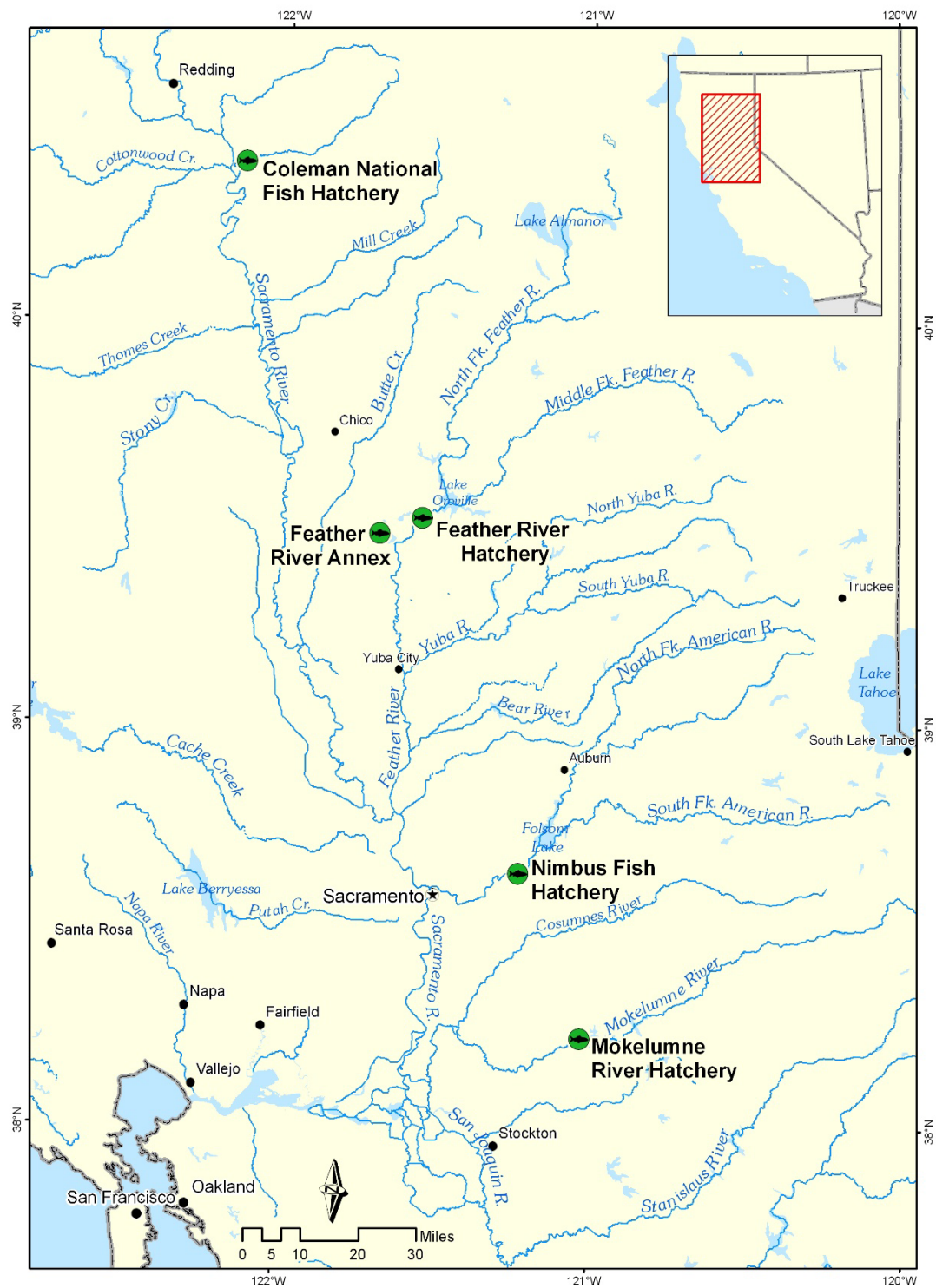
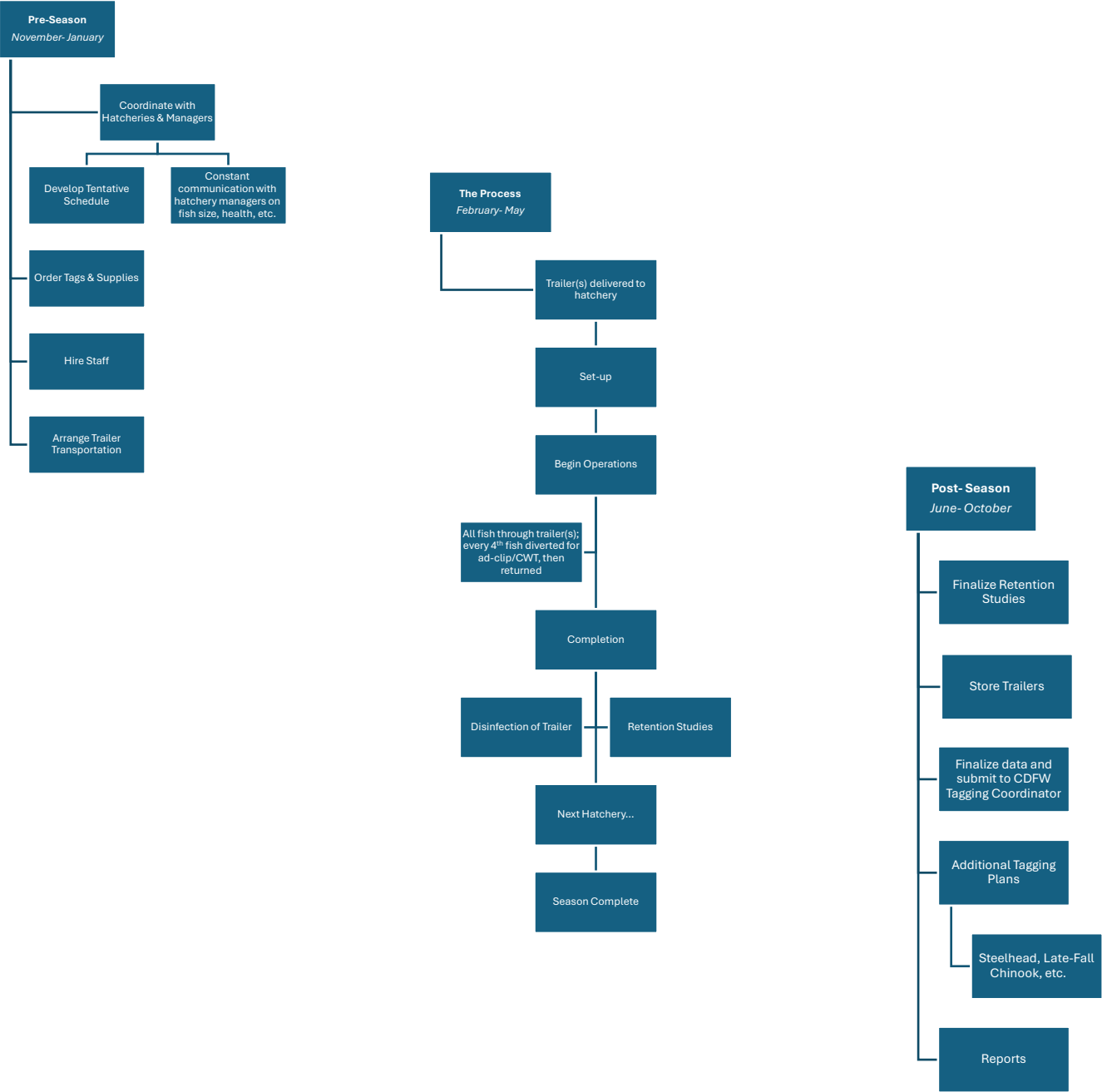


Figure 2. Constant Fractional Marking Program Annual Work Flow Summary



Appendix

Coleman National Fish Hatchery



Table 1a. Daily Tagging Rates at Coleman National Fish Hatchery

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/70			Size: 110K			Trailer # CA4	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
2/20/24	1	2	31,017	-	93,297	-	124,314
2/21/24	1	2	37,101	68,118	111,453	204,750	272,868
2/22/24	1	2	25,915	94,033	77,847	282,597	376,630
Tag Code Totals			-	94,033	-	282,597	376,630

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/71			Size: 110K			Trailer # CA4	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
2/22/24	1	1	4,005	-	12,042	-	16,047
2/23/24	1	1	22,714	26,719	68,271	80,313	107,032
2/26/24	1	1	28,223	54,942	84,746	165,059	220,001
2/26/24	1	1	21,127	76,069	63,453	228,512	304,581
Tag Code Totals			-	76,069	-	228,512	304,581

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/72			Size: 110K			Trailer # CA4	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
2/27/24	3	3	10,903	-	32,760	-	43,663
2/27/24	3	3	30,677	41,580	92,139	124,899	166,479
2/28/24	3	3	30,609	72,189	91,845	216,744	288,933
Tag Code Totals			-	72,189	-	216,744	288,933

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/77			Size: 110K			Trailer # CA4	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
2/28/24	7	8	19,297	-	57,891	-	77,188
2/29/24	7	8	28,267	47,564	84,945	142,836	190,400
2/29/24	7	8	32,559	80,123	97,677	240,513	320,636
3/1/24	7	8	26,626	106,749	79,911	320,424	427,173
Tag Code Totals				106,749	-	320,424	427,173

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/76			Size: 110K			Trailer # CA4	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/1/24	7	7	11,030	-	33,090	-	44,120
3/4/24	7	7	22,037	33,067	66,147	99,237	132,304
3/4/24	7	7	34,998	68,065	104,994	204,231	272,296
3/5/24	7	7	10,979	79,044	32,973	237,204	316,248
Tag Code Totals				79,044	-	237,204	316,248

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/83			Size: 110K			Trailer # CA4	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/5/24	13	14	30,169	-	90,507	-	120,676
3/6/24	13	14	27,502	57,671	82,554	173,061	230,732
3/6/24	13	14	25,974	83,645	77,922	250,983	334,628
3/7/24	13	14	21,594	105,239	64,806	315,789	421,028
Tag Code Totals				105,239	-	315,789	421,028

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/82			Size: 110K			Trailer # CA4	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/7/24	13	13	30,795	-	92,385	-	123,180
3/8/24	13	13	42,047	72,842	126,141	218,526	291,368
3/11/24	13	13	26,587	99,429	79,821	298,347	397,776
Tag Code Totals			-	99,429	-	298,347	397,776

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/85			Size: 110K			Trailer # CA4	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/11/24	15	16	19,303	-	57,951	-	77,254
3/12/24	15	16	23,938	43,241	71,856	129,807	173,048
3/12/24	15	16	26,028	69,269	78,096	207,903	277,172
3/13/24	15	16	31,536	100,805	94,680	302,583	403,388
Tag Code Totals				100,805	-	302,583	403,388

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/84			Size: 110K			Trailer # CA4	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/13/24	15	15	22,400	-	67,233	-	89,633
3/14/24	15	15	26,772	49,172	80,349	147,582	196,754
3/14/24	15	15	31,595	80,767	94,812	242,394	323,161
3/15/24	15	15	10,333	91,100	31,032	273,426	364,526
Tag Code Totals				91,100	-	273,426	364,526

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/87			Size: 110K			Trailer # CA4	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/20/24	18	18	7,162	-	21,510	-	28,672
3/21/24	18	18	37,248	44,410	111,795	133,305	177,715
3/21/24	18	18	28,363	72,773	85,095	218,400	291,173
3/22/24	18	18	23,203	95,976	69,663	288,063	384,039
Tag Code Totals				95,976	-	288,063	384,039

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/65/90			Size: 55K			Trailer # CA4	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/25/24	30	3	29,670	-	89,061	-	118,731
3/26/24	30	3	8,585	38,255	25,812	114,873	153,128
Tag Code Totals			-	38,255	-	114,873	153,128

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/66/74			Size: 16K			Trailer # CA4	
3/26/24	43	43	9,564	9,564	28,695	28,695	38,259
Tag Code Totals			-	9,564	-	28,695	38,259

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/37			Size: 80K			Trailer # CA4	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/27/24	42	4	16,241	-	48,747	-	64,988
3/28/24	41	4	26,492	42,733	79,518	128,265	170,998
Tag Code Totals			-	42,733	-	128,265	170,998

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/03/00			Size: 89K			Trailer # CA4	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
2/29/24	31	5	22,825	-	68,514	-	91,339
2/29/24	32	5	10,403	33,228	31,212	99,726	132,954
4/1/24	32/33	5	21,519	54,747	64,614	164,340	219,087
4/1/24	33	5	15,651	70,398	47,022	211,362	281,760
Tag Code Totals				70,398	-	211,362	281,760

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/05/00			Size: 78K			Trailer # CA4	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/2/24	34	6	21,599	-	64,839	-	86,438
4/2/24	34	6	12,001	33,600	36,051	100,890	134,490
4/3/24	34	6	8,277	41,877	24,879	125,769	167,646
Tag Code Totals			-	41,877	-	125,769	167,646

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/04/00			Size: 84K			Trailer # CA4	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/3/24	36	7	21,348	-	64,095	-	85,443
4/4/24	36/37	7	25,458	46,806	76,431	140,526	187,332
4/4/24	37	7	21,400	68,206	64,242	204,768	272,974
Tag Code Totals			-	68,206	-	204,768	272,974

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/73			Size: 110K			Trailer # CA1	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
2/20/24	4	4	7,184	-	21,666	-	28,850
2/21/24	4	4	27,872	35,056	83,763	105,429	140,485
2/21/24	4	4	33,308	68,364	100,077	205,506	273,870
2/22/24	4	4	38,733	107,097	116,277	321,783	428,880
Tag Code Totals			-	107,097	-	321,783	428,880

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/74			Size: 110K			Trailer # CA1	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
2/22/24	4	5	30,659	-	92,052	-	122,711
2/23/24	4	5	43,154	73,813	129,528	221,580	295,393
2/23/24	4	5	24,037	97,850	72,171	293,751	391,601
Tag Code Totals			-	97,850	-	293,751	391,601

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/75			Size: 110K			Trailer # CA1	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
2/26/24	6	6	29,236	-	87,819	-	117,055
2/27/24	6	6	36,401	65,637	109,311	197,130	262,767
2/27/24	6	6	27,148	92,785	81,462	278,592	371,377
2/28/24	6	6	872	93,657	2,646	281,238	374,895
Tag Code Totals			-	93,657	-	281,238	374,895

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/78			Size: 110K			Trailer # CA1	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
2/28/24	9	9	2,940	-	8,826	-	11,766
2/29/24	9	9	34,831	37,771	104,661	113,487	151,258
2/29/24	9	9	24,273	62,044	72,939	186,426	248,470
3/1/24	9	9	31,900	93,944	95,724	282,150	376,094
Tag Code Totals			-	93,944	-	282,150	376,094

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/79			Size: 110K			Trailer # CA1	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/4/24	10	11	26,965	-	80,973	-	107,938
3/4/24	10	11	32,067	59,032	96,240	177,213	236,245
3/5/24	10	11	37,568	96,600	112,851	290,064	386,664
3/5/24	10	11	8,031	104,631	24,123	314,187	418,818
Tag Code Totals			-	104,631	-	314,187	418,818

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/80			Size: 110K			Trailer # CA1	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/5/24	10	10	23,158	-	69,522	-	92,680
3/6/24	10	10	39,338	62,496	118,098	187,620	250,116
3/6/24	10	10	25,247	87,743	75,843	263,463	351,206
3/7/24	10	10	2,161	89,904	6,516	269,979	359,883
Tag Code Totals			-	89,904	-	269,979	359,883

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/81			Size: 110K			Trailer # CA1	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/7/24	12	12	16,973	-	50,985	-	67,958
3/7/24	12	12	29,566	46,539	88,797	139,782	186,321
3/8/24	12	12	29,807	76,346	89,460	229,242	305,588
3/8/24	12	12	22,990	99,336	68,970	298,212	397,548
Tag Code Totals			-	99,336	-	298,212	397,548

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/86			Size: 110K			Trailer # CA1	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/15/24	17	17	29,927	-	89,814	-	119,741
3/18/24	17	17	26,698	56,625	80,163	169,977	226,602
3/18/24	17	17	30,194	86,819	90,627	260,604	347,423
3/19/24	17	17	5,644	92,463	16,977	277,581	370,044
Tag Code Totals				92,463	-	277,581	370,044

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/88			Size: 110K			Trailer # CA1	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/19/24	18	19	20,900	-	62,739	-	83,639
3/19/24	18	19	27,175	48,075	81,585	144,324	192,399
3/20/24	18	19	39,314	87,389	118,041	262,365	349,754
3/20/24	18	19	15,077	102,466	45,309	307,674	410,140
Tag Code Totals				102,466	-	307,674	410,140

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/89			Size: 110K			Trailer # CA1	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/26/24	20	20	18,214	-	54,678	-	72,892
3/27/24	20	20	23,060	41,274	69,213	123,891	165,165
3/27/24	20	20	25,801	67,075	77,475	201,366	268,441
3/28/24	20	20	17,894	84,969	53,733	255,099	340,068
3/28/24	20	20	21,154	106,123	63,576	318,675	424,798
3/29/24	20	20	3,191	109,314	9,618	328,293	437,607
Tag Code Totals				109,314	-	328,293	437,607

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/90			Size: 110K			Trailer # CA1	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/2/24	21	21	4,819	-	14,505	-	19,324
4/3/24	21	21	20,835	25,654	62,550	77,055	102,709
4/4/24	21	21	25,779	51,433	77,382	154,437	205,870
4/5/24	21	21	18,962	70,395	56,946	211,383	281,778
4/8/24	21	21	36,536	106,931	109,644	321,027	427,958
Tag Code Totals				106,931	-	321,027	427,958

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/91			Size: 110K			Trailer # CA1	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/8/24	22	22	11,054	-	33,204	-	44,258
4/9/24	22	22	37,370	48,424	112,164	145,368	193,792
4/9/24	22	22	33,612	82,036	100,986	246,354	328,390
4/10/24	22	22	23,797	105,833	71,439	317,793	423,626
Tag Code Totals				105,833	-	317,793	423,626

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/93			Size: 110K			Trailer # CA1	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/15/24	23	24	31,068	-	93,270	-	124,338
4/15/24	23	24	35,782	66,850	107,412	200,682	267,532
4/16/24	23	24	35,963	102,813	107,937	308,619	411,432
Tag Code Totals			-	102,813	-	308,619	411,432

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/92			Size: 110K			Trailer # CA1	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/16/24	23	23	20,204	-	60,669	-	80,873
4/17/24	23	23	38,769	58,973	116,376	177,045	236,018
4/17/24	23	23	34,604	93,577	103,836	280,881	374,458
Tag Code Totals			-	93,577	-	280,881	374,458

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/94			Size: 110K			Trailer # CA1	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/18/24	25	26	33,239	-	99,792	-	133,031
4/18/24	25	26	29,471	62,710	88,437	188,229	250,939
4/19/24	25	26	19,019	81,729	57,093	245,322	327,051
4/22/24	25	26	17,790	99,519	53,442	298,764	398,283
Tag Code Totals				99,519	-	298,764	398,283

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/95			Size: 110K			Trailer # CA1	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/22/24	25	25	46,592	-	139,809	-	186,401
4/23/24	25	25	41,841	88,433	125,547	265,356	353,789
4/23/24	25	25	11,903	100,336	35,733	301,089	401,425
Tag Code Totals			-	100,336	-	301,089	401,425

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/96			Size: 110K			Trailer # CA1	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/23/24	27	27	2,990	-	9,000	-	11,990
4/24/24	27	27	38,105	41,095	114,369	123,369	164,464
4/24/24	27	27	29,286	70,381	87,885	211,254	281,635
4/25/24	27	27	28,813	99,194	86,478	297,732	396,926
Tag Code Totals				99,194	-	297,732	396,926

Coleman National Fish Hatchery - Fall Run Chinook							
Tag Code: 05/00/97			Size: 110K			Trailer # CA1	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/25/24	28	28	27,414	-	82,284	-	109,698
4/26/24	28	28	30,591	58,005	91,815	174,099	232,104
4/26/24	28	28	22,676	80,681	68,052	242,151	322,832
4/27/24	28	28	34,343	115,024	103,083	345,234	460,258
Tag Code Totals				115,024	-	345,234	460,258

Hatchery Totals	Tagged	Untagged	Total
	3,005,205	9,023,408	12,028,613
Retention Range: 97.20%-100%		Retention Average: 99.30%	

Table 1b. Summary of Hatchery Tag Codes and Tag Retention Study

Coleman National Fish Hatchery - Fall Run Chinook										
Tag Code Size and Location			Tag Code Totals			Retention Calculations				
Tag Code	Size	Raceway	Total Tagged	Number Untagged	Total Processed	# of Fish Held	Days Held	% Retention	# Retaining Tags	Calculated Untagged
05/00/70	110K	2	94,033	282,597	376,630	400	21	99.50%	93,563	283,067
05/00/71	110K	1	76,069	228,512	304,581	400	21	98.65%	75,042	229,539
05/00/72	110K	3	72,189	216,744	288,933	400	21	99.73%	71,994	216,939
05/00/73	110K	4	107,097	321,783	428,880	400	21	99.48%	106,540	322,340
05/00/74	110K	5	97,850	293,751	391,601	400	21	99.26%	97,126	294,475
05/00/75	110K	6	93,657	281,238	374,895	400	21	99.24%	92,945	281,950
05/00/76	110K	7	79,044	237,204	316,248	407	21	98.79%	78,088	238,160
05/00/77	110K	8	106,749	320,424	427,173	400	21	99.21%	105,906	321,267
05/00/78	110K	9	93,944	282,150	376,094	400	21	99.49%	93,465	282,629
05/00/79	110K	11	104,631	314,187	418,818	361	21	99.43%	104,035	314,783
05/00/80	110K	10	89,904	269,979	359,883	400	21	99.48%	89,436	270,447
05/00/81	110K	12	99,336	298,212	397,548	400	21	97.20%	96,555	300,993
05/00/82	110K	13	99,429	298,347	397,776	400	21	100.00%	99,429	298,347
05/00/83	110K	14	105,239	315,789	421,028	400	21	99.75%	104,976	316,052
05/00/84	110K	15	91,100	273,426	364,526	400	21	98.98%	90,171	274,355
05/00/85	110K	16	100,805	302,583	403,388	400	21	98.98%	99,777	303,611
05/00/86	110K	17	92,463	277,581	370,044	407	21	99.74%	92,223	277,821
05/00/87	110K	18	95,976	288,063	384,039	409	21	99.51%	95,506	288,533
05/00/88	110K	19	102,466	307,674	410,140	402	21	99.73%	102,189	307,951
05/00/89	110K	20	109,314	328,293	437,607	400	21	99.25%	108,494	329,113
05/00/90	110K	21	106,931	321,027	427,958	450	21	99.35%	106,236	321,722
05/00/91	110K	22	105,833	317,793	423,626	400	21	99.74%	105,558	318,068
05/00/92	110K	23	93,577	280,881	374,458	400	21	99.58%	93,184	281,274
05/00/93	110K	24	102,963	308,619	411,582	406	21	99.75%	102,706	308,876
05/00/94	110K	26	99,019	298,764	397,783	402	21	99.20%	98,227	299,556
05/00/95	110K	25	100,336	301,089	401,425	400	21	100.00%	100,336	301,089
05/00/96	110K	27	99,194	297,732	396,926	400	21	98.66%	97,865	299,061
05/00/97	110K	28	115,024	345,234	460,258	407	21	100.00%	115,024	345,234
05/03/00	89K	5	70,398	211,362	281,760	400	21	97.86%	68,891	212,869
05/04/00	84K	7	68,206	204,768	272,974	400	21	99.58%	67,920	205,054
05/05/00	78K	6	41,877	125,769	167,646	300	21	98.58%	41,282	126,364
05/00/37	80K	4	42,733	128,265	170,998	300	21	100.00%	42,733	128,265
05/65/90	55K	3	38,255	114,873	153,128	400	21	99.30%	37,987	115,141
05/66/74	16K	43	9,564	28,695	38,259	400	21	99.30%	9,497	28,762
Hatchery Totals			3,005,205	9,023,408	12,028,613	Retention Average		99.30%	2,984,904	9,043,709

Feather River Fish Hatchery



Table 2a. Daily Spring-Run Tagging Rates at Feather River Hatchery

Feather River Fish Hatchery - Spring Run Chinook 100% Mark/Tag					
Tag Code: 06/00/78			Size: 310K		Trailer # CA-3
Marking Date	Raceway Prior to Marking	Raceway Following Marking	Daily Marked/Tagged Total	Cumulative Marked Total	Raceway Total
2/26/24	H2	H6	20,467	20,467	-
2/26/24	H2	H6	42,155	62,622	-
2/27/24	H2	H6	46,712	109,334	-
2/27/24	H2	H6	41,287	150,621	-
2/28/24	H2	H6	54,749	205,370	-
2/28/24	H2	H6	54,075	259,445	-
2/29/24	H2	H6	63,049	322,494	-
2/29/24	H2	H6	26,815	349,309	349,309

Feather River Fish Hatchery - Spring Run Chinook 100% Mark/Tag					
Tag Code: 06/00/79			Size: 310K		Trailer # CA-3
Marking Date	Raceway Prior to Marking	Raceway Following Marking	Daily Marked/Tagged Total	Cumulative Marked Total	Raceway Total
2/29/24	H2	H6	9,800	9,800	-
3/1/24	H2	H6	59,206	69,006	-
3/1/24	H2	H6	37,232	106,238	-
3/4/24	H2	H6	55,570	161,808	-
3/4/24	H2/H4	H6	33,916	195,724	-
3/5/24	H4	H6	53,958	249,682	-
3/5/24	H4	H6	22,866	272,548	-
3/6/24	H4	H6	59,985	332,533	-
3/6/24	H4	H6	18,041	350,574	350,574

Feather River Fish Hatchery - Spring Run Chinook 100% Mark/Tag					
Tag Code: 06/00/80			Size: 310K		Trailer # CA-3
Marking Date	Raceway Prior to Marking	Raceway Following Marking	Daily Marked/Tagged Total	Cumulative Marked Total	Raceway Total
3/7/24	H4	H4	48,321	48,321	-
3/7/24	H4	H4	25,448	73,769	-
3/8/24	H4	H4	50,359	124,128	-
3/8/24	H4	H4	23,866	147,994	-
3/11/24	H4/G2	H4	46,132	194,126	-
3/11/24	G2	H4	45,249	239,375	-
3/12/24	G2	H4	56,897	296,272	-
3/12/24	G2	H4	54,273	350,545	350,545

Feather River Fish Hatchery - Spring Run Chinook 100% Mark/Tag					
Tag Code: 06/00/81			Size: 310K		Trailer # CA-3
Marking Date	Raceway Prior to Marking	Raceway Following Marking	Daily Marked/Tagged Total	Cumulative Marked Total	Raceway Total
3/13/24	G2	G2	59,746	59,746	-
3/13/24	G2	G2	51,069	110,815	-
3/14/24	G2	G2	60,174	170,989	-
3/14/24	G2	G2	49,233	220,222	-
3/15/24	G2	G2	63,343	283,565	-
3/15/24	G2	G2	40,336	323,901	-
3/18/24	G2	G2	26,154	350,055	350,055

Feather River Fish Hatchery - Spring Run Chinook 100% Mark/Tag					
Tag Code: 06/00/82			Size: 310K		Trailer # CA-3
Marking Date	Raceway Prior to Marking	Raceway Following Marking	Daily Marked/Tagged Total	Cumulative Marked Total	Raceway Total
3/18/24	G2	G4	27,121	27,121	-
3/18/24	G2/G4	G4	56,079	83,200	-
3/19/24	G4	G4	63,024	146,224	-
3/19/24	G4	G4	53,831	200,055	-
3/20/24	G4	G4	56,413	256,468	-
3/20/24	G4	G4	32,630	289,098	-
3/21/24	G4	G4	49,589	338,687	-
3/21/24	G4	G4	11,620	350,307	350,307

Feather River Fish Hatchery - Spring Run Chinook 100% Mark/Tag					
Tag Code: 06/06/79			Size: 90K		Trailer # CA-3
Marking Date	Raceway Prior to Marking	Raceway Following Marking	Daily Marked/Tagged Total	Cumulative Marked Total	Raceway Total
3/21/24	G4	G6	28,462	28,462	-
3/22/24	G4	G6	56,531	84,993	-
3/22/24	G4	G6	13,887	98,880	98,880

Feather River Fish Hatchery - Spring Run Chinook 100% Mark/Tag					
Tag Code: 06/30/55			Size: 80K		Trailer # CA-3
Marking Date	Raceway Prior to Marking	Raceway Following Marking	Daily Marked/Tagged Total	Cumulative Marked Total	Raceway Total
3/22/24	G4	G6	23,506	23,506	-
3/25/24	G4	G6	48,268	71,774	-
3/25/24	G4	G6	17,014	88,788	88,788

Feather River Fish Hatchery - Spring Run Chinook 100% Mark/Tag					
Tag Code: 06/30/53			Size: 40K		Trailer # CA-3
Marking Date	Raceway Prior to Marking	Raceway Following Marking	Daily Marked/Tagged Total	Cumulative Marked Total	Raceway Total
3/25/24	G4	G6	22,326	22,326	22,326

Hatchery Totals	Tagged	Untagged	Total
	1,960,784	0	1,960,784
Retention Range: 98.40%-99.30%		Retention Average: 98.80%	

Table 2b. Summary of Hatchery Spring-Run Tag Codes and Tag Retention Study

Feather River Fish Hatchery - Spring Run Chinook										
Tag Code Size and Location			Tag Code Totals			Retention Calculations				
Tag Code	Size	Raceway	Total Tagged	Number Untagged	Total Processed	# of Fish Held	Days Held	% Retention	# Retaining Tags	Calculated Untagged
06/00/78	310K	H6	349,309	0	349,309	416	21	99.30%	346,864	2,445
06/00/79	310K	H2	350,574	0	350,574	457	21	99.30%	348,120	2,454
06/00/80	310K	H4	350,545	0	350,545	450	21	99.10%	347,390	3,155
06/00/81	310K	G2	350,055	0	350,055	450	21	98.90%	346,204	3,851
06/00/82	310K	G4	350,307	0	350,307	450	21	98.60%	345,403	4,904
06/06/79	90K	G6	98,880	0	98,880	450	21	98.40%	97,298	1,582
06/30/55	80K	G6	88,788	0	88,788	450	21	98.40%	87,367	1,421
06/30/53	40K	G6	22,326	0	22,326	450	21	98.40%	21,969	357
Hatchery Totals			1,960,784	0	1,960,784	Retention Average		98.80%	1,940,615	20,169

Table 2c. Daily Fall-Run Tagging Rates at Feather River Hatchery

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/00/99			Size: 225K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/27/24	F2	CHN4	3,307	-	9,975	-	13,282
3/27/24	F2	CHN4	34,666	37,973	104,004	113,979	151,952
3/27/24	F2	CHN4	29,462	67,435	88,467	202,446	269,881
3/28/24	F2	CHN4	39,979	107,414	119,985	322,431	429,845
3/28/24	F2	CHN4	32,726	140,140	98,211	420,642	560,782
3/29/24	F2/F4	CHN4	35,816	175,956	107,487	528,129	704,085
3/29/24	F4	CHN4	18,474	194,430	55,497	583,626	778,056
4/1/24	F4	CHN4	32,978	227,408	99,075	682,701	910,109
4/1/24	F4	CHN4	25,090	252,498	75,330	758,031	1,010,529
Tag Code Totals			-	252,498	-	758,031	1,010,529

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/01/00			Size: 225K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/1/24	F4	CHN3	6,953	-	20,862	-	27,815
4/2/24	F4	CHN3	33,350	40,303	100,116	120,978	161,281
4/2/24	F4/F6	CHN3	28,956	69,259	86,901	207,879	277,138
4/3/24	F6	CHN3	34,971	104,230	105,024	312,903	417,133
4/3/24	F6	CHN3	35,870	140,100	107,652	420,555	560,655
4/4/24	F6	CHN3	36,655	176,755	110,067	530,622	707,377
4/4/24	F6/E2	CHN3	39,432	216,187	118,344	648,966	865,153
4/5/24	E2	CHN3	37,886	254,073	113,748	762,714	1,016,787
Tag Code Totals			-	254,073	-	762,714	1,016,787

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/02/00			Size: 225K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/8/24	E2	CHN2	37,536	-	112,665	-	150,201
4/8/24	E2	CHN2	39,081	76,617	117,270	229,935	306,552
4/9/24	E2	CHN2	24,677	101,294	74,091	304,026	405,320
4/9/24	E2/E4	CHN2	35,114	136,408	105,363	409,389	545,797
4/10/24	E4	CHN2	20,440	156,848	61,371	470,760	627,608
4/10/24	E4	CHN2	32,119	188,967	96,408	567,168	756,135
4/11/24	E4	CHN2	39,819	228,786	119,517	686,685	915,471
4/11/24	E4	CHN2	23,897	252,683	71,748	758,433	1,011,116
Tag Code Totals			-	252,683	-	758,433	1,011,116

Feather River Fish Hatchery - Fall Run Chinook - PBT							
Tag Code: 06/00/84			Size: 114K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/12/24	C2	H2	41,385	-	124,215	-	165,600
4/12/24	C2	H2	39,293	80,678	117,930	242,145	322,823
4/15/24	C2	H2	29,886	110,564	89,910	332,055	442,619
4/16/24	C2	H2	17,795	128,359	53,430	385,485	513,844
Tag Code Totals			-	128,359	-	385,485	513,844

Feather River Fish Hatchery - Fall Run Chinook - PBT							
Tag Code: 06/30/46			Size: 15K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/12/24	C2	H2	10,707	-	32,121	-	42,828
Tag Code Totals			-	10,707	-	32,121	42,828

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/03/00			Size: 225K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/16/24	E4/E6	CHN1	30,917	-	92,838	-	123,755
4/17/24	E4/E6	CHN1	37,016	67,933	111,105	203,943	271,876
4/17/24	E4/E6	CHN1	32,833	100,766	98,595	302,538	403,304
4/18/24	E4/E6	CHN1	36,736	137,502	110,265	412,803	550,305
4/18/24	E4/E6	CHN1	38,374	175,876	115,197	528,000	703,876
4/19/24	E4/E6/D2	CHN1	38,261	214,137	114,834	642,834	856,971
4/19/24	D2	CHN1	37,286	251,423	111,894	754,728	1,006,151
Tag Code Totals			-	251,423	-	754,728	1,006,151

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/00/85			Size: 114K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/22/24	C4	H2	28,786	-	86,391	-	115,177
4/22/24	C4	H2	30,634	59,420	92,040	178,431	237,851
4/23/24	C4	H2	29,612	89,032	88,893	267,324	356,356
4/23/24	C4	H2	33,017	122,049	99,123	366,447	488,496
4/24/24	C4	H2	10,621	132,670	31,911	398,358	531,028
Tag Code Totals			-	132,670	-	398,358	531,028

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/30/41			Size: 10K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/24/24	C2	H2	7,005	-	21,015	-	28,020
Tag Code Totals			-	7,005	-	21,015	28,020

Feather River Fish Hatchery - Fall Run Chinook - PBT							
Tag Code: 06/20/83			Size: N/A			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/24/24	C2	H2	1,911	-	5,733	-	7,644
Tag Code Totals			-	1,911	-	5,733	7,644

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/00/86			Size: 114K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/24/24	C6	G2	49,210	-	147,972	-	197,182
4/25/24	C6	G2	12,165	61,375	36,495	184,467	245,842
4/25/24	C6	G2	32,577	93,952	97,776	282,243	376,195
4/25/24	C6	G2	37,558	131,510	113,013	395,256	526,766
4/26/24	C6	G2	4,533	136,043	13,641	408,897	544,940
Tag Code Totals			-	136,043	-	408,897	544,940

Feather River Fish Hatchery - Fall Run Chinook - PBT							
Tag Code: 06/15/66			Size: 25K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/26/24	C6	G2	11,375	-	34,125	-	45,500
Tag Code Totals			-	11,375	-	34,125	45,500

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/00/87			Size: 76K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/26/24	D2	C2	30,339	-	91,254	-	121,593
4/29/24	D2	C2	18,424	48,763	55,323	146,577	195,340
4/29/24	D2	C2	31,964	80,727	96,069	242,646	323,373
4/30/24	D2	C2	2,492	83,219	7,533	250,179	333,398
Tag Code Totals			-	83,219	-	250,179	333,398

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/00/88			Size: 76K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/30/24	D2	C4	15,861	-	47,661	-	63,522
4/30/24	D2/D4	C4	25,376	41,237	76,230	123,891	165,128
5/1/24	D4	C4	28,673	69,910	86,043	209,934	279,844
5/1/24	D4	C4	16,651	86,561	50,031	259,965	346,526
Tag Code Totals			-	86,561	-	259,965	346,526

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/00/89			Size: 76K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
5/2/24	D4	C6	15,579	-	46,860	-	62,439
5/2/24	D4	C6	26,900	42,479	80,793	127,653	170,132
5/3/24	D4/D6	C6	19,294	61,773	58,080	185,733	247,506
5/3/24	D4/D6	C6	24,363	86,136	73,194	258,927	345,063
Tag Code Totals			-	86,136	-	258,927	345,063

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/00/90			Size: 76K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
5/6/24	D4/D6	D2	36,693	-	110,256	-	146,949
5/6/24	D4/D6	D2	34,718	71,411	104,217	214,473	285,884
5/7/24	D4/D6	D2	12,671	84,082	38,106	252,579	336,661
Tag Code Totals			-	84,082	-	252,579	336,661

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/00/91			Size: 76K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
5/7/24	D4/D6	D6	11,498	-	34,494	-	45,992
5/7/24	D4/D6	D6	21,337	32,835	64,296	98,790	131,625
5/8/24	B4	D6	27,710	60,545	83,427	182,217	242,762
5/8/24	B4	D6	25,394	85,939	76,431	258,648	344,587
Tag Code Totals			-	85,939	-	258,648	344,587

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/00/92			Size: 76K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
5/9/24	B4	D4	9,594	-	28,881	-	38,475
5/10/24	B4	D4	32,203	41,797	96,906	125,787	167,584
5/10/24	B4	D4	12,066	53,863	36,429	162,216	216,079
5/13/24	B2	D4	28,069	81,932	84,705	246,921	328,853
Tag Code Totals			-	81,932	-	246,921	328,853

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/00/93			Size: 76K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
5/13/24	B2	G2	27,211	-	82,023	-	109,234
5/14/24	B2	G2	41,074	68,285	123,681	205,704	273,989
5/14/24	B2	G2	18,557	86,842	55,878	261,582	348,424
Tag Code Totals			-	86,842	-	261,582	348,424

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/00/94			Size: 76K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
5/14/24	B2	G4	11,329	-	34,170	-	45,499
5/15/24	B2/A4	G4	38,086	49,415	114,588	148,758	198,173
5/15/24	A4	G4	37,666	87,081	111,644	260,402	347,483
Tag Code Totals			-	87,081	-	260,402	347,483

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/28/44			Size: 10K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
5/15/24	A4	G4	1,600	-	6,400	-	8,000
Tag Code Totals			-	1,600	-	6,400	8,000

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/00/95			Size: 76K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
5/16/24	A4	H2	34,921	-	105,144	-	140,065
5/16/24	A4	H2	40,969	75,890	122,982	228,126	304,016
5/17/24	B6	H2	7,097	82,987	21,660	249,786	332,773
Tag Code Totals			-	82,987	-	249,786	332,773

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/00/96			Size: 76K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
5/17/24	B6	H4	15,119	-	45,438	-	60,557
5/17/24	B6	H4	36,717	51,836	110,304	155,742	207,578
5/20/24	B6	H4	31,081	82,917	93,558	249,300	332,217
5/20/24	B6	H4	1,360	84,277	4,107	253,407	337,684
Tag Code Totals			-	84,277	-	253,407	337,684

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/00/97			Size: 76K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
5/20/24	B6	H6	26,152	-	78,549	-	104,701
5/21/24	B6	H6	28,968	55,120	87,195	165,744	220,864
5/21/24	B6	H6	28,735	83,855	86,292	252,036	335,891
Tag Code Totals			-	83,855	-	252,036	335,891

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/00/98			Size: 76K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
5/22/24	B6/A2	G6	29,451	-	88,533	-	117,984
5/22/24	A2	G6	7,807	37,258	23,454	111,987	149,245
5/23/24	A2	G6	29,825	67,083	89,568	201,555	268,638
5/23/24	A2	G6	16,890	83,973	50,883	252,438	336,411
Tag Code Totals			-	83,973	-	252,438	336,411

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/30/56			Size: 80K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
5/23/24	A2	B2	3,771	-	11,322	-	15,093
5/24/24	A2	B2	30,038	33,809	90,381	101,703	135,512
5/24/24	A2	B2	20,436	54,245	61,407	163,110	217,355
5/28/24	A2	B2	19,289	73,534	57,963	221,073	294,607
5/28/24	A2	B2	13,607	87,141	40,965	262,038	349,179
Tag Code Totals			-	87,141	-	262,038	349,179

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/28/82			Size: 100K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
5/29/24	A6	B4	29,455	-	88,464	-	117,919
5/29/24	A6	B4	28,617	58,072	85,974	174,438	232,510
5/30/24	A6	B4	30,588	88,660	91,833	266,271	354,931
5/30/24	A6	B4	20,397	109,057	61,221	327,492	436,549
Tag Code Totals			-	109,057	-	327,492	436,549

Feather River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/30/51			Size: 30K			Trailer # CA3	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
5/30/24	A6	A2	2,682	-	8,046	-	10,728
5/31/24	A6	A2	25,332	28,014	76,074	84,120	112,134
Tag Code Totals			-	28,014	-	84,120	112,134

Hatchery Totals	Tagged	Untagged	Total
	2,681,443	7,597,973	10,279,416
Retention Range: 95.74% - 100%	Retention Average: 98.78%		

Table 2d. Summary of Hatchery Fall-Run Tag Codes and Retention Study

Feather River Fish Hatchery - Fall Run Chinook										
Tag Code Size and Location			Tag Code Totals			Retention Calculations				
Tag Code	Size	Raceway	Total Tagged	Number Untagged	Total Processed	# of Fish Held	Days Held	% Retention	# Retaining Tags	Calculated Untagged
06/00/99	225K	CHN4	252,498	758,031	1,010,529	900	21	99.20%	250,478	760,051
06/01/00	225K	CH3	254,073	762,714	1,016,787	950	21	99.60%	253,057	763,730
06/02/00	225K	CHN2	252,683	758,433	1,011,116	900	21	99.10%	250,409	760,707
06/00/84	114K	H2	128,359	385,485	513,844	413	21	99.50%	127,717	386,127
06/30/46	15K	H2	10,707	32,121	42,828	413	21	99.50%	10,653	32,175
06/03/00	225K	CHN1	251,423	754,728	1,006,151	902	21	99.40%	249,914	756,237
06/00/85	114K	H2	132,670	398,358	531,028	450	21	100.00%	132,670	398,358
06/30/41	10K	H2	7,005	21,015	28,020	450	21	100.00%	7,005	21,015
06/20/83	5K	H2	1,911	5,733	7,644	450	21	100.00%	1,911	5,733
06/00/86	114K	G2	136,043	136,043	272,086	557	21	96.22%	130,901	141,185
06/15/66	25K	G2	11,375	34,125	45,500	557	21	96.22%	10,945	34,555
06/00/87	76K	C2	83,219	250,179	333,398	253	21	99.20%	82,553	250,845
06/00/88	76K	C4	86,561	259,965	346,526	450	21	99.80%	86,388	260,138
06/00/89	76K	C6	86,136	73,194	159,330	440	21	96.20%	82,863	76,467
06/00/90	76K	D2	84,082	252,579	336,661	450	21	99.00%	83,241	253,420
06/00/91	76K	D6	85,939	258,648	344,587	509	21	99.40%	85,423	259,164
06/00/92	76K	D4	81,932	246,921	328,853	492	21	98.80%	80,949	247,904
06/00/93	76K	G2	86,842	261,582	348,424	450	21	99.20%	86,147	262,277
06/00/94	76K	G4	87,081	260,402	347,483	445	21	97.75%	85,122	262,361
06/28/24	10K	G4	1,600	6,400	8,000	445	21	97.75%	1,564	6,436
06/00/95	76K	H2	82,987	249,786	332,773	446	21	95.74%	79,452	253,321
06/00/96	76K	H4	84,277	253,407	337,684	557	21	98.93%	83,375	254,309
06/00/97	76K	H6	83,855	252,036	335,891	460	21	99.05%	83,058	252,833
06/00/98	76K	G6	83,973	252,438	336,411	483	21	99.59%	83,629	252,782
06/30/56	80K	B2	87,141	262,038	349,179	544	21	98.71%	86,017	263,162
06/28/82	100K	B4	109,057	327,492	436,549	553	21	99.64%	108,664	327,885
06/30/51	30K	A2	28,014	84,120	112,134	200	21	99.50%	27,874	84,260
Hatchery Totals			2,681,443	7,597,973	10,279,416	Retention Average		98.78%	2,651,980	7,627,436

Feather River Hatchery - Steelhead - 100% Mark Only					
Trailer # CA3					
Marking Date	Raceway Prior to Marking	Raceway Following Marking	Daily Marked Total	Cumulative Marked Total	Raceway Total
7/9/24	E2	E4	34908	-	34908
7/10/24	E2	E4	47,274	82,182	82,182
7/11/24	E2	E4	47,577	129,759	129,759
7/12/24	E2	E4	42,922	172,681	172,681
7/15/24	E2	E4	29,612	202,293	202,293

Feather River Hatchery - Steelhead - 100% Mark Only					
Trailer # CA3					
Marking Date	Raceway Prior to Marking	Raceway Following Marking	Daily Marked Total	Cumulative Marked Total	Raceway Total
7/15/24	E2	F4	23,700	-	23,700
7/16/24	E2	F4	47,211	70,911	70,911
7/17/24	F2	F4	43,973	114,884	114,884
7/18/24	F2	F4	44,939	159,823	159,823
7/18/24	F2	F4	42,469	202,292	202,292

Feather River Hatchery - Steelhead - 100% Mark Only					
Trailer # CA3					
Marking Date	Raceway Prior to Marking	Raceway Following Marking	Daily Marked Total	Cumulative Marked Total	Raceway Total
7/22/24	F2	E4	48,118	-	48,118
7/23/24	F2	E4	44,763	92,881	92,881
7/24/24	F2	E4	48,561	141,442	141,442
7/18/24	F2	E4	37,013	178,455	178,455

Merced Hatchery



Table 3a. Daily Tagging Rates at Merced Hatchery

Merced River Fish Hatchery - Fall Run Chinook - 25% Mark/Tag					
Tag Code: 06/15/53		Size: 100K		Trailer # Manual	
Tagging Date	Lot Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Raceway Total
3/11/24	1	1	2,664	-	-
3/12/24	1	1	2,106	4,770	-
3/12/24	2	1	2,402	7,172	-
3/13/24	2	1	865	8,037	-
3/13/24	3	1	4,808	12,845	-
3/14/24	3	1	8,196	21,041	-
3/15/24	3	1	7,774	28,815	-
3/18/24	3	1	,7179	35,994	-
3/19/24	3	1	19	36,013	-
3/19/24	4	1	6,759	42,772	-
3/20/24	4	1	7,915	50,687	-
3/21/24	4	1	7,671	58,358	-
3/22/24	4	1	7,527	65,885	-
3/25/24	4	1	6,189	72,074	-
3/26/24	4	1	6,457	78,531	-
3/27/24	5	1	6,945	85,476	-
3/28/24	5	1	7,907	93,383	-
3/29/24	5	1	7,146	100,529	-
Totals					100,529

Merced River Fish Hatchery - Fall Run Chinook - 25% Mark/Tag					
Tag Code: 06/30/33		Size: 100K		Trailer # Manual	
Tagging Date	Lot Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Raceway Total
4/2/24	5	2	7,151	-	-
4/3/24	5	2	6,760	13,911	-
4/4/24	5	2	6,816	20,727	-
4/5/24	6	2	2,670	23,397	-
4/8/24	6	2	9,459	32,856	-
4/9/24	6	2	8,334	41,190	-
4/10/24	6	2	9,156	50,346	-
4/11/24	6	2	3,755	54,101	-
4/11/24	7	2	3,126	57,227	-
4/12/24	7	2	6,042	63,269	-
4/15/24	7	2	7,551	70,820	-
4/16/24	7	2	8,325	79,145	-
4/17/24	7	2	8,253	87,398	-
4/18/24	8	2	9,760	97,158	-
4/19/24	8	2	7,770	104,928	-
Totals					104,928

Merced River Fish Hatchery - Fall Run Chinook - 25% Mark/Tag					
Tag Code: 06/28/98		Size: 50K		Trailer # Manual	
Tagging Date	Lot Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Raceway Total
4/22/24	9	3	5,813	-	-
4/23/24	10	3	7,888	13,701	-
4/24/24	11	3	7,382	21,083	-
4/25/24	11	3	4,317	25,400	-
4/25/24	12	3	2,891	28,291	-
4/26/24	13	3	6,100	34,391	-
4/29/24	13	3	5,445	39,836	-
4/30/24	15	3	5,071	44,907	-
5/1/24	14	3	2,301	47,208	-
Totals					47,208

Hatchery Totals	Tagged	Untagged	Total
	252,665	0	252,665
Retention Range: 88.14% - 92.50%	Retention Average: 90.69%		

Table 3b. Summary of Merced River Fish Hatchery Fall-Run Tag Codes and Retention Study

Merced River Fish Hatchery - 25% Fall Run Chinook										
Tag Code Size and Location			Tag Code Totals			Retention Calculations				
Tag Code	Size	Raceway	Total Tagged	Number Untagged	Total Processed	# of Fish Held	Days Held	% Retention	# Retaining Tags	Calculated Untagged
06/15/54	100 K	1	100,529	0	100,529	1285	21	91.44%	91,924	8,605
06/30/33	100 K	2	104,928	0	104,928	953	21	88.14%	92,484	12,444
06/28/98	50K	3	47,208	0	47,208	520	21	92.50%	43,667	3,541
Hatchery Totals			252,665		252,665	Retention Average		90.69%	228,075	24,590

Mokelumne River Hatchery



Table 4a. Daily Tagging Rates at Mokelumne River Hatchery

Mokelumne River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/18/60			Size: 130K			Trailer # CA6	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/11/24	C	A	35,897	-	107,739	-	143,636
3/12/24	C	A	39,021	74,918	117,063	224,802	299,720
3/12/24	C	A	32,754	107,672	98,304	323,106	430,778
3/13/24	C/D	A	22,324	129,996	66,972	390,078	520,074
Tag Code Totals			-	129,996	-	390,078	520,074

Mokelumne River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/20/00			Size: 130K			Trailer # CA6	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/13/24	D	B	33,329	-	100,035	-	133,364
3/14/24	D	B	34,477	67,806	103,431	203,466	271,272
3/14/24	D	B	28,572	96,378	86,103	289,569	385,947
3/15/24	D/E	B	22,885	119,263	68,679	358,248	477,511
3/15/24	E	B	10,867	130,130	32,619	390,867	520,997
Tag Code Totals			-	130,130	-	390,867	520,997

Mokelumne River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/21/60			Size: 130K			Trailer # CA6	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/15/24	E	C	797	-	2,391	-	3,188
3/18/24	E	C	25,538	26,335	76,668	79,059	105,394
3/18/24	E	C	24,084	50,419	72,267	151,326	201,745
3/19/24	E	C	31,299	81,718	93,930	245,256	326,974
3/19/24	E	C	32,698	114,416	98,154	343,410	457,826
3/20/24	F	C	15,433	129,849	46,332	389,742	519,591
Tag Code Totals			-	129,849	-	389,742	519,591

Mokelumne River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/16/70			Size: 115K			Trailer # CA6	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/20/24	F	D	39,363	-	118,137	-	157,500
3/20/24	F	D	33,444	72,807	100,383	218,520	291,327
3/21/24	F	D	35,971	108,778	107,970	326,490	435,268
3/22/24	F/G	D	16,268	125,046	48,837	375,327	500,373
Tag Code Totals			-	125,046	-	375,327	500,373

Mokelumne River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/16/80			Size: 115K			Trailer # CA6	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/22/24	G	E	18,510	-	55,554	-	74,064
3/25/24	G	E	21,482	39,992	64,470	120,024	160,016
3/25/24	G	E	35,123	75,115	105,420	225,444	300,559
3/26/24	G	E	37,784	112,899	113,397	338,841	451,740
3/26/24	G/H	E	12,445	125,344	37,350	376,191	501,535
Tag Code Totals			-	125,344	-	376,191	501,535

Mokelumne River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/21/70			Size: 130K			Trailer # CA6	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/26/24	H	F	21,215	-	63,693	-	84,908
3/27/24	H	F	34,969	56,184	104,931	168,624	224,808
3/27/24	H	F	35,166	91,350	105,537	274,161	365,511
3/28/24	H	F	38,641	129,991	115,980	390,141	520,132
Tag Code Totals			-	129,991	-	390,141	520,132

Mokelumne River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/21/80			Size: 130K			Trailer # CA6	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/28/24	H/I	G	37,001	-	111,024	-	148,025
3/29/24	I	G	25,361	62,362	76,107	187,131	249,493
3/29/24	I	G	23,497	85,859	70,512	257,643	343,502
4/1/24	I	G	44,060	129,919	132,207	389,850	519,769
Tag Code Totals			-	129,919	-	389,850	519,769

Mokelumne River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/21/90			Size: 130K			Trailer # CA6	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/1/24	I/J	H	20,419	-	61,302	-	81,721
4/2/24	J	H	39,407	59,826	118,263	179,565	239,391
4/2/24	J	H	36,264	96,090	108,792	288,357	384,447
4/3/24	J/K	H	41,548	137,638	124,668	413,025	550,663
Tag Code Totals			-	137,638	-	413,025	550,663

Mokelumne River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/21/94			Size: 130K			Trailer # CA6	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/3/24	K	I	37,184	-	111,558	-	148,742
4/4/24	K	I	43,917	81,101	131,796	243,354	324,455
4/4/24	K	I	35,543	116,644	106,650	350,004	466,648
4/5/24	L	I	21,030	137,674	63,090	413,094	550,768
Tag Code Totals			-	137,674	-	413,094	550,768

Mokelumne River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/18/40			Size: 170K			Trailer # CA6	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/5/24	L	J	23,504	-	70,512	-	94,016
4/8/24	L	J	29,806	53,310	89,442	159,954	213,264
4/8/24	L	J	26,667	79,977	80,055	240,009	319,986
4/9/24	L	J	13,792	93,769	41,400	281,409	375,178
4/9/24	L	K	24,234	118,003	72,741	354,150	472,153
4/10/24	M	K	25,784	143,787	77,376	431,526	575,313
4/10/24	M	K	34,799	178,586	104,430	535,956	714,542
4/11/24	M	K	9,094	187,680	27,282	563,238	750,918
Tag Code Totals			-	187,680	-	563,238	750,918

Mokelumne River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/16/30			Size: 100K			Trailer # CA6	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/11/24	M	L	29,028	-	87,084	-	116,112
4/11/24	M	L	33,422	62,450	100,296	187,380	249,830
4/12/24	M/N	L	26,064	88,514	78,228	265,608	354,122
4/12/24	N	L	20,682	109,196	62,079	327,687	436,883
Tag Code Totals			-	109,196	-	327,687	436,883

Mokelumne River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/04/50			Size: 20K			Trailer # CA6	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/19/24	O	L	16,460	16,460	49,398	49,398	65,858
Tag Code Totals			-	16,460	-	49,398	65,858

Mokelumne River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/16/40			Size: 100K			Trailer # CA6	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/11/24	N	M	34,718	-	104,178	-	138,896
4/11/24	N	M	40,813	75,531	122,439	226,617	302,148
4/12/24	N/O	M	33,858	109,389	101,592	328,209	437,598
Tag Code Totals			-	109,389	-	328,209	437,598

Mokelumne River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/15/07			Size: 25K			Trailer # CA6	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/19/24	O/P	M	16,043	16,043	48,129	48,129	64,172
Tag Code Totals			-	16,043	-	48,129	64,172

Mokelumne River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/18/00			Size: 115K			Trailer # CA6	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/22/24	P	O	22,492	-	67,509	-	90,001
4/22/24	P	O	33,226	55,718	99,732	167,241	222,959
4/23/24	P	O	40,787	96,505	122,406	289,647	386,152
4/23/24	P/Q	O	16,610	113,115	49,899	339,546	452,661
4/24/24	Q	O	12,460	125,575	37,380	376,926	502,501
Tag Code Totals			-	125,575	-	376,926	502,501

Mokelumne River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/16/90			Size: 115K			Trailer # CA6	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/24/24	Q	P	20,729	-	62,187	-	82,916
4/24/24	Q	P	26,307	47,036	78,960	141,147	188,183
4/25/24	Q	P	37,803	84,839	113,451	254,598	339,437
4/25/24	Q/S	P	28,139	112,978	84,498	339,096	452,074
4/26/24	S	P	11,855	124,833	35,583	374,679	499,512
Tag Code Totals			-	124,833	-	374,679	499,512

Mokelumne River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/16/60			Size: 100K			Trailer # CA6	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/30/24	S	R	2,477	-	7,431	-	9,908
5/1/24	S	R	35,196	37,673	105,654	113,085	150,758
5/1/24	S	R	25,476	63,149	76,509	189,594	252,743
5/2/24	T	R	34,582	97,731	103,824	293,418	391,149
5/2/24	T	R	14,786	112,517	44,433	337,851	450,368
Tag Code Totals			-	112,517	-	337,851	450,368

Mokelumne River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/23/70			Size: 20K			Trailer # CA6	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/2/24	T	R	13,551	13,551	40,653	40,653	54,204
Tag Code Totals			-	13,551	-	40,653	54,204

Mokelumne River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/16/50			Size: 100K			Trailer # CA6	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
5/3/24	T	S	31,297	-	93,933	-	125,230
5/3/24	T	S	16,583	47,880	49,809	143,742	191,622
5/6/24	T	S	19,478	67,358	58,509	202,251	269,609
5/7/24	T	S	21,473	88,831	64,464	266,715	355,546
5/8/24	T	S	22,429	111,260	67,314	334,029	445,289
Tag Code Totals			-	111,260	-	334,029	445,289

Mokelumne River Fish Hatchery - Fall Run Chinook							
Tag Code: 06/07/95			Size: 20K			Trailer # CA6	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
5/8/24	T	R	13,267	13,267	39,833	39,833	53,100
Tag Code Totals			-	13,267	-	39,833	53,100

Mokelumne River Fish Hatchery - Fall Run Chinook 100% Mark/Tag					
Tag Code: 06/18/20			Size: 145K	Trailer # CA6	
Marking Date	Raceway Prior to Marking	Raceway Following Marking	Daily Marked/Tagged Total	Cumulative Marked Total	Raceway Total
4/16/24	O	N1	63,129	63,129	-
4/17/24	O	N1	66,003	129,132	
4/17/24	O	N1	33,885	163,017	163,017

Mokelumne River Fish Hatchery - Fall Run Chinook 100% Mark/Tag					
Tag Code: 06/18/30			Size: 145K	Trailer # CA6	
Marking Date	Raceway Prior to Marking	Raceway Following Marking	Daily Marked/Tagged Total	Cumulative Marked Total	Raceway Total
4/17/24	O	N2	28,205	28,205	-
4/18/24	O	N2	70,260	98,465	
4/18/24	O	N2	64,196	162,661	162,661

Mokelumne River Fish Hatchery - Fall Run Chinook 100% Mark/Tag					
Tag Code: 06/18/50			Size: 182K	Trailer # CA6	
Tagging Date	Raceway Prior to Marking	Raceway Following Marking	Daily Marked/Tagged Total	Cumulative MarkedTotal	Raceway Total
4/26/24	S	Q	33,229	33,229	-
4/29/24	S	Q	27,133	60,362	
4/29/24	S	Q	46,880	107,242	
4/30/24	S	Q	55,901	163,143	
4/30/24	S	Q	38,168	201,311	201,311

Hatchery Totals	Tagged	Untagged	Total
	2,736,111	6,536,532	9,272,643
Retention Range: 98.5% - 100%	Retention Average: 99.42%		

Table 4b. Summary of Hatchery Tag Codes and Tag Retention Studies

Mokelumne River Fish Hatchery - Fall Run Chinook										
Tag Code Size and Location			Tag Code Totals			Retention Calculations				
Tag Code	Size	Raceway	Total Tagged	Number Untagged	Total Processed	# of Fish Held	Days Held	% Retention	# Retaining Tags	Calculated Untagged
06/18/60	130K	A	129,996	390,078	520,074	400	21	99.50%	129,346	390,728
06/20/00	130K	B	130,130	390,867	520,997	400	21	99.25%	129,154	391,843
06/21/60	130K	C	129,849	389,742	519,591	400	21	99.00%	128,551	391,040
06/16/70	115K	D	125,046	375,327	500,373	416	21	98.50%	123,170	377,203
06/16/80	115K	E	125,339	376,191	501,530	400	21	99.00%	124,086	377,444
06/21/70	130K	F	129,991	390,141	520,132	400	21	100.00%	129,991	390,141
06/21/80	130K	G	129,919	389,850	519,769	400	21	99.25%	128,945	390,824
06/21/90	130K	H	137,638	413,025	550,663	400	21	99.00%	136,262	414,401
06/21/94	130K	I	137,674	413,094	550,768	421	21	100.00%	137,674	413,094
06/18/40	170K	J	93,769	375,178	468,947	481	21	100.00%	93,769	375,178
06/18/40	170K	K	187,680	375,660	563,340	400	21	99.50%	186,742	376,598
06/16/30	100K	L	109,196	327,687	436,883	400	21	99.50%	108,650	328,233
06/04/50	20K	L	16,460	49,398	65,858	400	21	99.50%	16,378	49,480
06/18/20	145K	N1	163,017	0	163,017	400	21	99.00%	161,387	1,630
06/18/30	145K	N2	162,661	0	162,661	400	21	98.75%	160,628	2,033
06/16/40	100K	M	109,389	328,209	437,598	400	21	99.75%	109,116	328,482
06/15/07	25K	M	16,043	48,129	64,172	400	21	99.75%	16,003	48,169
06/18/00	115K	O	125,575	376,926	502,501	400	21	99.50%	124,947	377,554
06/16/90	115K	P	124,833	374,679	499,512	400	21	99.50%	124,209	375,303
06/18/50	182K	Q	201,311	0	201,311	400	21	99.75%	200,808	503
06/16/60	100K	R	112,517	337,851	450,368	400	21	99.50%	111,954	338,414
06/23/70	20K	R	13,551	40,653	54,204	400	21	99.50%	13,483	40,721
06/16/50	100K	S	111,260	334,024	445,284	400	21	99.50%	110,704	334,580
06/07/95	15K	S	13,267	39,823	53,090	400	21	99.50%	13,201	39,889
Hatchery Totals			2,736,111	6,536,532	9,272,643	Retention Average		99.42%	2,719,155	6,553,488

Mokelumne River Fish Hatchery- 100% Mark and Tag Steehead					
Tag Code: 6/20/89			Size: 70K		
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Raceway Total
6/24/24	K	O	3,302	-	3,302
6/25/24	K	O	31,429	34,731	34,731
6/26/24	K	O	845	35,576	35,576

6/26/24	Hatchery Building	P	28,110	63,686	28,110
6/27/24	Hatchery Building	P	9,764	73,450	37,874
Tag Code Totals			-	73,450	

Mokelumne River Fish Hatchery - Steelhead - 100% Mark Only					
Trailer # CA7					
Marking Date	Location Prior to Marking	Raceway Following Marking	Daily Marked Total	Cumulative Marked Total	Raceway Total
7/8/24	Hatchery Building	Q	17,812	17,812	-
7/9/24	Hatchery Building	Q	17,397	35,209	35,209
7/9/24	Hatchery Building	R	14,513	49,722	-
7/10/24	Hatchery Building	R	20,583	70,305	35,096
7/10/24	Hatchery Building	S	12,610	82,915	-
7/11/24	Hatchery Building	S	12,587	95,502	25,197
7/11/24	Hatchery Building	T	17,681	113,183	-
7/12/24	Hatchery Building	T	8,287	121,470	25,968
Hatchery Total			-	-	121,470

Nimbus Hatchery



Table 5a. Daily Tagging Rates at Nimbus Hatchery

Nimbus Fish Hatchery - Fall Run Chinook							
Tag Code: 06/15/00			Size: 188K			Trailer # CA2	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/18/24	A3	A1	4,097	-	12,309	-	16,406
3/19/24	A3	A1	34,732	38,829	104,205	116,514	155,343
3/20/24	A3	A1	28,819	67,648	86,481	202,995	270,643
3/21/24	A3	A1	37,107	104,755	111,345	314,340	419,095
3/22/24	A3	A1	16,012	120,767	48,036	362,376	483,143
3/25/24	A3	A1	30,092	150,859	90,342	452,718	603,577
3/26/24	A3	A1	29,505	180,364	88,554	541,272	721,636
3/27/24	A3	A1	25,470	205,834	76,440	617,712	823,546
3/28/24	A3	A1	4,517	210,351	13,581	631,293	841,644
Tag Code Totals			-	210,351	-	631,293	841,644

Nimbus Fish Hatchery - Fall Run Chinook							
Tag Code: 06/12/00			Size: 142K			Trailer # CA2	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
3/28/24	B3	B1	21,880	-	65,646	-	87,526
3/29/24	B3	B1	19,889	41,769	59,706	125,352	167,121
4/1/24	B3	B1	19,643	61,412	59,013	184,365	245,777
4/2/24	B3	B1	34,466	95,878	103,494	287,859	383,737
4/3/24	B3	B1	30,579	126,457	91,761	379,620	506,077
4/4/24	B3	B1	23,131	149,588	71,964	451,584	601,172
4/5/24	B3	B1	7,846	157,434	27,000	478,584	636,018
Tag Code Totals			-	157,434	-	478,584	636,018

Nimbus Fish Hatchery - Fall Run Chinook							
Tag Code: 06/30/48			Size: 20K			Trailer # CA2	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
5/5/24	C3	B1	15,025	-	41,643	-	56,668
Tag Code Totals			-	15,025	-	41,643	56,668

Nimbus Fish Hatchery - Fall Run Chinook

Tag Code: 06/16/00			Size: 188K			Trailer # CA2	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/8/24	C3	C1	16,239	-	48,783	-	65,022
4/9/24	C3	C1	28,771	45,010	86,337	135,120	180,130
4/10/24	C3	C1	29,254	74,264	87,816	222,936	297,200
4/11/24	C3	C1	26,756	101,020	80,307	303,243	404,263
4/12/24	C3	C1	21,521	122,541	64,608	367,851	490,392
4/15/24	C3	C1	20,637	143,178	61,974	429,825	573,003
4/16/24	C3	C1	34,478	177,656	103,491	533,316	710,972
4/17/24	C3/D3	C1	26,190	203,846	78,657	611,973	815,819
4/18/24	D3	C1	6,376	210,222	19,152	631,125	841,347
Tag Code Totals			-	210,222	-	631,125	841,347

Nimbus Fish Hatchery - Fall Run Chinook

Tag Code: 06/12/20			Size: 142K			Trailer # CA2	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/18/24	D3	D1	19,432	-	58,329	-	77,761
4/19/24	D3	D1	19,641	39,073	58,989	117,318	156,391
4/22/24	D3	D1	18,549	57,622	55,674	172,992	230,614
4/23/24	D3	D1	29,394	87,016	88,215	261,207	348,223
4/24/24	D3	D1	27,673	114,689	83,067	344,274	458,963
4/25/24	D3	D1	33,227	147,916	99,729	444,003	591,919
4/26/24	D3	D1	5,586	153,502	16,782	460,785	614,287
4/29/24	E3	D1	5,101	158,603	15,357	476,142	634,745
Tag Code Totals			-	158,603	-	476,142	634,745

Nimbus Fish Hatchery - Fall Run Chinook

Tag Code: 06/30/47			Size: 20K			Trailer # CA2	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/29/24	E3	D1	8,921	-	26,754	-	35,675
Tag Code Totals			-	8,921	-	26,754	35,675

Nimbus Fish Hatchery - Fall Run Chinook

Tag Code: 06/16/20			Size: 188K			Trailer # CA2	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
4/30/24	E3	E1	25,141	-	75,465	-	100,606
5/1/24	E3	E1	28,743	53,884	86,274	161,739	215,623
5/2/24	E3	E1	29,620	83,504	88,899	250,638	334,142
5/3/24	E3	E1	18,007	101,511	54,060	304,698	406,209
5/6/24	E3	E1	11,432	112,943	34,359	339,057	452,000
5/6/24	E3	E1	22,880	135,823	68,691	407,748	543,571
5/7/24	E3	E1	23,460	159,283	70,437	478,185	637,468
5/7/24	E3	E1	16,671	175,954	50,088	528,273	704,227
5/8/24	E3	E1	19,092	195,046	57,339	585,612	780,658
Tag Code Totals			-	195,046	-	585,612	780,658

Nimbus Fish Hatchery - Fall Run Chinook

Tag Code: 06/12/30			Size: 142K			Trailer # CA2	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
5/8/24	F3	F1	28,256	-	84,873	-	113,129
5/9/24	F3	F1	26,715	54,971	80,202	165,075	220,046
5/9/24	F3	F1	26,592	81,563	79,842	244,917	326,480
5/10/24	F3	F1	27,685	109,248	83,142	328,059	437,307
5/13/24	F3	F1	17,321	126,569	52,002	380,061	506,630
5/14/24	F3	F1	28,823	155,392	86,502	466,563	621,955
5/15/24	F3	F1	6,153	161,545	18,492	485,055	646,600
Tag Code Totals			-	161,545	-	485,055	646,600

Nimbus Fish Hatchery - Fall Run Chinook

Tag Code: 06/30/40			Size: 10K			Trailer # CA2	
Tagging Date	Raceway Prior to Tagging	Raceway Following Tagging	Daily Tagged Total	Cumulative Tagged Total	Daily Untagged Total	Cumulative Untagged Total	Raceway Total
5/15/24	F3	F1	5,175	-	15,525	-	20,700
Tag Code Totals			-	5,175	-	15,525	20,700

Hatchery Totals	Tagged	Untagged	Total
	1,117,147	3,513,642	4,630,789
Retention Range: 99.63% - 100%	Retention Average: 99.79%		

Table 5b. Summary of Fall-Run Tag Codes and Tag Retention Studies

Nimbus Fish Hatchery - Fall Run Chinook										
Tag Code Size and Location			Tag Code Totals			Retention Calculations				
Tag Code	Size	Raceway	Total Tagged	Number Untagged	Total Processed	# of Fish Held	Days Held	% Retention	# Retaining Tags	Calculated Untagged
06/14/00	188 K	A	210,351	631,293	841,644	800	21	100.00%	210,351	631,293
06/12/00	142 K	B	157,434	636,018	793,452	620	21	99.68%	156,930	636,522
06/30/48	20K	B	15,025	41,643	56,668	620	21	99.68%	14,977	41,691
06/16/00	188 K	C	210,222	631,125	841,347	800	21	99.63%	209,444	631,903
06/12/20	142 K	D	158,603	476,142	634,745	625	21	99.84%	158,349	476,396
06/30/47	20K	D	8,921	26,754	35,675	625	21	99.84%	8,907	26,768
06/16/20	188 K	E	195,046	585,612	780,658	840	21	99.76%	194,578	586,080
06/12/30	142 K	F	161,545	485,055	646,600	625	21	99.84%	161,287	485,313
06/30/40	10K	F	5,175	15,525	20,700	625	21	99.84%	5,167	15,533
Hatchery Totals			1,117,147	3,513,642	4,630,789	Retention Average		99.79%	1,119,989	3,531,500

San Joaquin Fish Hatchery



Table 6a. Daily Tagging Rates at San Joaquin Fish Hatchery

San Joaquin Fish Hatchery - Spring Run Chinook - 100% Mark/Tag					
Tag Code: 06/19/39			Size: 50K		Trailer # CA6
Marking Date	Raceway Prior to Marking	Raceway Following Marking	Daily Marked/Tagged Total	Cumulative Tagged Total	Raceway Total
2/12/24	016-1	016-2	16,535	16,535	-
2/13/24	016-1	016-2	24,849	41,384	-
2/14/24	016-1	016-2	12,062	53,446	53,446

San Joaquin Fish Hatchery - Spring Run Chinook - 100% Mark/Tag					
Tag Code: 06/28/70			Size: 30K		Trailer # CA6
Marking Date	Raceway Prior to Marking	Raceway Following Marking	Daily Marked/Tagged Total	Cumulative Tagged Total	Raceway Total
2/14/24	016-1	016-2	7,622	7,622	-
2/14/24	016-1	21-2	12,064	19,686	19,686

San Joaquin Fish Hatchery - Spring Run Chinook - 100% Mark/Tag					
Tag Code: 06/30/60			Size: 150K		Trailer # CA6
Marking Date	Raceway Prior to Marking	Raceway Following Marking	Daily Marked/Tagged Total	Cumulative Tagged Total	Raceway Total
2/15/24	021-1	021-2	60,475	60,475	-
2/16/24	021-1	021-2	21,692	82,167	-
2/20/24	021-1	021-2	29,702	111,869	-
2/21/24	021-1	021-2	19,414	131,283	131,283
2/21/24	ST-1	ST-2	11,599	142,882	11,599

Hatchery Totals	Tagged	Untagged	Total
	224,925	0	224,925
Retention Range: 99.00% - 100%		Retention Average: 99.67%	

Table 6b. Summary of Spring-Run Tag Codes and Tag Retention Studies

San Joaquin Fish Hatchery - Spring Run Chinook - 100% Mark/Tag										
Tag Code Size and Location			Tag Code Totals			Retention Calculations				
Tag Code	Size	Raceway	Total Tagged	Number Untagged	Total Processed	# of Fish Held	Days Held	% Retention	# Retaining Tags	Calculated Untagged
06/19/39	50K	016-2	53,446	0	53,446	300	21	100.00%	53,446	0
06/28/70	150K	016-2	28,597	0	28,597	300	21	100.00%	28,597	0
06/30/60	150K	021-2	142,882	0	142,882	300	21	99.00%	141,453	1,429
Hatchery Totals			224,925	0	224,925	Retention Average		99.67%	223,496	1,429

Warm Springs Fish Hatchery



Table 7a. Daily Tagging Rates at Warm Springs Fish Hatchery

Warm Springs Fish Hatchery - Steelhead - 100% Mark Only					
Trailer # - CA 1					
Marking Date	Pond Prior to Marking	Pond Following Marking	Daily Marked Total	Cumulative Marked Total	Pond Total
7/16/24	2	1	25,725	-	25,725
7/16/24	3	2	18,195	43,920	
7/17/24	3	2	8,662	52,582	26,857
7/17/24	4	3	28,102	80,684	28,102
7/18/24	6	5	23,364	104,048	23,364
7/18/24	7	6	26,406	130,454	26,406
7/19/24	8	7	25,433	155,887	25,433
7/22/24	10	9	25,256	181,143	25,256
7/22/24	11	10	2,970	184,113	
7/23/24	11	10	20,589	204,702	23,559
7/23/24	12	11	26,079	230,781	26,079
7/24/24	13	12	25,918	256,699	25,918
7/24/24	14	13	16,558	273,257	
7/25/24	14	13	17,546	290,803	34,104
7/25/24	15	14	24,688	315,491	
8/1/24	15	14	5,533	321,024	30,221
8/1/24	16	15	32,960	353,984	32,960
8/2/24	17	16	32,611	386,595	32,611
8/7/24	18	17	27,324	413,919	27,324
8/7/24	19	18	3,961	417,880	
8/8/24	19	18	27,690	445,570	31,651
8/8/24	20	19	12,743	458,313	
8/9/24	20	19	16,796	475,109	29,539
8/9/24	8	8	21,481	496,590	21,481
8/12/24	4	20	21209	517,799	21,209
Hatchery Total				517,799	