

Memorandum

Date: October 10, 2007

To: Ivan Paulsen
Department of Fish and Game
Post Office Box 1858
Portola, California 96122

From: Department of Water Resources

Subject: 2007 Lake Davis Creel Census

This memorandum describes and documents a survey of fishing at Lake Davis, Plumas County in 2007, by the Departments of Fish and Game (DFG) and Water Resources (DWR). The survey was conducted to monitor angling use and catch following rediscovery of illegally introduced northern pike in the lake in 1999.

DFG employees Julie Cunningham, Lilla Thomason, Amber Rossi, and Molly Heneks, and DWR employees Tom Boullion and Ralph Hinton surveyed anglers at various locations around the lake (See Plumas National Forest Description and Map of Lake Davis Recreation Area). A total of 790 anglers were censused during 27 days of the 157-day period, April 1 to September 3 (Table 1). On September 4, the Lake Davis Recreation Area was closed to public use for the northern pike eradication project. Due to the scheduled eradication project, DFG did not plant trout in Lake Davis during 2007.

The 790 interviewed anglers had fished 2122.25 hours with an observed catch (fish kept) of 129 rainbow trout and 489 brown bullhead. In addition, 28 rainbow trout and 90 brown bullhead were reported to have been caught and released (Table 2). Anglers also reported catching 22 northern pike; 8 of these were measured by the census clerks. No brown trout were observed or reported during the census. About 80 percent of the shore anglers observed on the survey days were censused and about 27 percent of the boat anglers. About 53 percent of the anglers censused at Lake Davis in 2007 lived in California and 47 percent were from Nevada and a few other states.

Boat anglers totaled 194 and fished 863.5 hours with a recorded catch of 85 rainbow trout, 15 northern pike, and 30 brown bullhead. Boat anglers reported catching and releasing an additional 20 rainbow trout and 23 brown bullhead. Shore anglers totaled 581 and fished 1,224.25 hours with a recorded catch of 40 rainbow trout, 6 northern pike, and 459 brown bullhead. They also reported catching and releasing 2 additional rainbow trout and 67 brown bullhead. Fifteen float tube anglers were censused and they had fished 34.5 hours and caught 4 rainbow trout and 1 northern pike. They also reported catching and releasing an additional 6 rainbow trout.

Angler success varied among the several locations surveyed around the lake. About 75 percent of the boat anglers interviewed were at Honker Cove (Table 3). Since boat anglers can fish nearly anywhere on the lake, angler success by location is not meaningful.

Lake Davis Recreation Area

Beckwourth Ranger District

Lake Davis is located seven miles north of Portola, California. This lake was created in 1967 for recreational opportunities. The Lake Davis Recreation Area offers a wide variety of summer outdoor experiences including: camping, picnicking, fishing, hunting, boating, mountain biking, swimming and wildlife viewing. Water-skiing and jet skis are not permitted. Frequent strong winds can cause the lake to become very hazardous for small craft. In the winter, ice fishing, snowmobiling and cross-country skiing are favored activities.



Camping

A concessionaire manages three campgrounds around Lake Davis. Grizzly, Grasshopper Flat and

Lightning Tree Campgrounds have approximately 144 family camping sites, 21 double sites and 1 group site. Campsites may be reserved through Reserve USA (1-877-444-6777 or on-line at www.ReserveUSA.com).

Grizzly and Grasshopper Campgrounds have piped water and flush toilets. Coin-operated showers are available at Honker Cove Boat Ramp. Trailers of up to 35 feet can be accommodated. No hookups are provided. Facilities are usually open from late April through late October. Lightning Tree Campground has vault toilets and is open year-round except when closed by snow.



Fishing

There are twelve fishing accesses on Lake Davis. Some have toilets and picnic tables are available at Coot

Bay Fishing Access. Fishing is regulated by the California Department of Fish and Game with a five trout limit and tributary restrictions. If any of the invasive species Northern Pike are caught immediately cut off its head. Below Lake Davis, almost three miles of Big Grizzly Creek is open to fishing for day use on a public access strip. Native and stocked trout occur in the lake.

Varieties include Rainbow, German Brown and Eagle Lake Trout as well as Largemouth Bass and Brown Bullhead.



Boat Launching

Camp Five, Honker Cove, Mallard Cove, and Lightning Tree Boat Ramps all have paved launching ramps, floating boat docks, toilets and paved parking lots. Camp Five Boat Ramp also has a universally accessible Fishing Levee 100 feet long for deeper water fishing.



Hunting

Mule deer, black-tailed deer, waterfowl, quail, and some small game may be hunted in-season in the Lake Davis Recreation Area. The California Department of Fish and Game regulates hunting seasons and permits. Discharging a firearm within 150 yards of a campsite, across or on a Forest road or body of water is prohibited.



Area Interests

Smith Peak Lookout, located about seven miles southwest of the dam, provides a good view of the lake and an opportunity to learn about the job of a fire lookout. It is operated full time during fire season and visitors are welcome. Lake Davis is also home to several interesting species of birds. Eagles and osprey can be seen at different times of the year, as well as hawks and owls.



Supplies

Supplies can be purchased in the town of Portola, seven miles south of Lake Davis.



Drinking Water

Only water from developed recreation sites is maintained for safe drinking. Open water sources are easily contaminated by human or animal waste. Water from springs, lakes, and streams should be properly treated before drinking.



United States
Department of
Agriculture



Forest Service
Pacific Southwest Region
Plumas National Forest
www.fs.fed.us/r5/plumas

Beckwourth Ranger District
Box 7, Blairsden, Ca. 96103
Phone: (530) 836-2575
Revised 05/15/06

Lake Davis Recreation Area Plumas National Forest

In Case of Emergency
Fire / Medical / Sheriff:
Call 911

A pay telephone is located in
Grasshopper Flat Campground

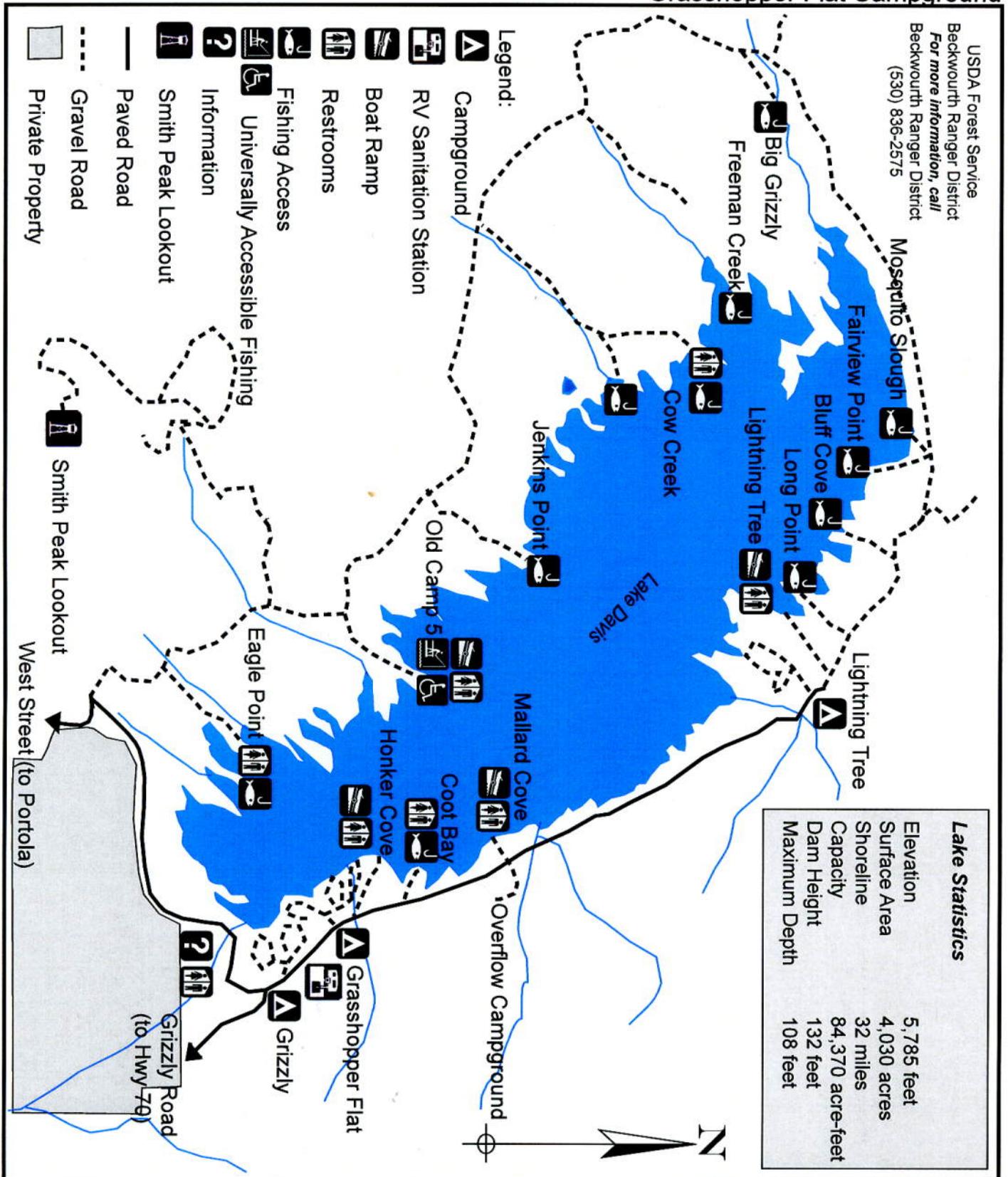


TABLE 1. 2007 LAKE DAVIS RECREATION SEASON STRATA							
Strata	Portion of Angling Season	Days in Stratum	Anglers Censused	Days Censused	Vehicle Counts		
I	April 29-30 (Opening Weekend)	2	77	2	2		
II	May 27-29 (Memorial Day Weekend)	3	131	2	2		
III	May - June Weekends	15	187	3	3		
IV	May - June Weekdays	44	88	4	4		
V	July - August Weekends	17	108	4	4		
VI	July - August Weekdays	44	66	6	6		
VII	April WE and WD (Special Pre-season Stratum)	28	56	3	3		
VIII	September-October-November WE and WD	0	0	0	0		
IX	July 4 and Labor Day Weekends	4	77	3	2		
Totals for Season		157	790	27	26		
Creel Census Clerks:							
	Tom Boullion (DWR)	8 days					
	Lilla Thomason (DFG)	7 days					
	Ralph Hinton (DWR)	5 days					
	Julie Cunningham (DFG)	3 days					
	Amber Rossi (DFG)	2 days					
	Molly Heneks (DFG)	2 days					

TABLE 2. SUMMARY OF ANGLER CENSUS AT LAKE DAVIS, 2007											
Type of Angler	Anglers Interviewed	Hours Fished	Kept Rainbow Trout	Kept RT Catch/Hr	Rainbow Trout C&R 1/	All trout Catch/Hr 2/	Kept Brown Bullhead	Kept BBH Catch/Hr	BBH C&R 1/	All BBH Catch/Hr 2/	
Boat Anglers	194	863.50	85	0.10	20	0.12	30	0.03	23	0.06	
Shore Anglers	581	1,224.25	40	0.03	2	0.03	459	0.37	67	0.43	
Float Tube Anglers	15	34.50	4	0.12	6	0.29	0	0.00	0	0.00	
All Anglers	790	2,122.25	129	0.06	28	0.07	489	0.23	90	0.27	
1/ C&R = Caught and Released.											
2/ Includes fish kept plus those caught and released.											

TABLE 3. CATCH OF TROUT BY BOAT AND FLOAT ANGLERS AT LAKE DAVIS BY LOCATION, 2007											
Location	Anglers Interviewed	Hours Fished	Kept Rainbow Trout	Kept RT Catch/Hr	Rainbow Trout C&R	All Trout Catch/Hr	Kept Brown Bullhead	Kept BBH Catch/Hr	BBH C&R 1/	All BBH Catch/Hr 2/	
Honker Cove	157	702.25	75	0.11	18	0.13	15	0.02	19	0.05	
Camp 5	32	152.75	9	0.06	3	0.08	15	0.10	4	0.12	
Miscellaneous 3/	20	43.00	5	0.12	5	0.23	0	0.00	0	0.00	
Totals	209	898.00	89	0.10	26	0.13	30	0.03	23	0.06	
3/ Mallard Cove, Jenkins Point, Mosquito Slough, and Eagle Point.											

Nearly equal numbers of the shore anglers interviewed in 2007 were at Mallard Cove, Eagle Point, and Camp 5. Coot Bay and Honker Cove were also popular shore fishing areas. None of the shore fishing access sites had high catch rates in 2007, although one shore angler at Cow Creek caught 10 rainbow trout and 2 northern pike in 8.5 hours on May 28 (Table 4).

The average total length of 113 measured rainbow trout was 429 mm (16.9 inches) with a range of 185 to 610 mm (7.3 to 24.0 inches) (Figure 1). During the 2007 season the total lengths of trout usually were measured to the nearest millimeter. The 8 measured northern pike ranged from 305 to 725 mm (12.0 to 28.5 inches).

On 26 survey days, three times each day, the census clerks also counted boat trailers, vehicles with cartop boats, other vehicles, and shore anglers at Camp 5, Honker Cove, Coot Bay, Mallard Cove, and Lightning Tree boat ramps and occasionally at other locations. This information was intended to provide estimates of boat and shore fishing and total catch for the season.

Some boat trailers and shore anglers were at locations not readily visible to the census clerks. However, virtually all boating use at Lake Davis is for fishing, since waterskiing and related boating recreation are not permitted.

About 89 percent of the observed vehicles were at Honker Cove, Camp 5, and Coot Bay in 2007 (Table 5). Mallard Cove and Lightning Tree boat ramps were not usable most of the season although vehicles belonging to shore anglers were often counted there. About 92 percent of the boats were trailered and 8 percent cartop. Nearly 66 percent of the vehicle license plates were from California with about 34 percent from Nevada and several other states.

Estimated boat and float tube fishing in 2007 totaled 20,000 hours (confidence interval $\pm 4,000$) with an estimated catch of 2,100 trout (0.11 per hour). These anglers also caught an estimated 600 brown bullhead and about 350 northern pike. Shore fishing totaled an estimated 16,000 hours (confidence interval $\pm 4,000$ hours) with an estimated catch of 500 trout (0.03 per hour). Shore anglers also caught an estimated 5,700 brown bullhead and a few northern pike (Table 6). All anglers also reported they caught and released approximately 500 additional trout and 1,400 brown bullhead.

Interviews of anglers who had finished fishing for the day provided information on the average length of a completed angler-day, which allowed calculation of angler-days and trout caught per angler-day (Table 6).

TABLE 4. CATCH OF TROUT BY SHORE ANGLERS AT LAKE DAVIS BY LOCATION, 2007

Location	Anglers Interviewed	Hours Fished	Kept Rainbow Trout	Kept RT Catch/Hr	Rainbow Trout C&R 2/	All Trout Catch/Hr 3/	Kept Brown Bullhead	Kept BBH Catch/Hr	BBH C&R 2/	All BBH Catch/Hr 3/
Mallard Cove	126	236.00	3	0.01	1	0.02	58	0.25	12	0.30
Eagle Point	126	272.25	5	0.02	0	0.02	190	0.70	14	0.75
Camp 5	120	276.25	3	0.01	1	0.01	69	0.25	20	0.32
Coot Bay	86	146.25	0	0.00	0	0.00	37	0.25	5	0.29
Honker Cove	69	163.25	14	0.09	0	0.09	18	0.11	9	0.17
Fairview Point	25	39.25	0	0.00	0	0.00	58	1.48	2	1.53
Jenkins Point	16	43.00	5	0.12	0	0.12	0	0.00	4	0.09
Miscellaneous 1/	9	47.50	10	0.21	0	0.21	29	0.61	1	0.63
Totals	577	1,223.75	40	0.03	2	0.03	459	0.38	67	0.43

1/ Bluff Cove, Cow Creek, Grizzly Campground, Mosquito Slough, and Long Point. One angler at Cow Creek Fishing Access caught 10 rainbow trout and 2 northern pike in 8.5 hours.

2/ C&R = Caught and Released.

3/ Includes fish kept plus those caught and released.

TABLE 5. VEHICLES OBSERVED AT LAKE DAVIS BOAT RAMPS, 2007

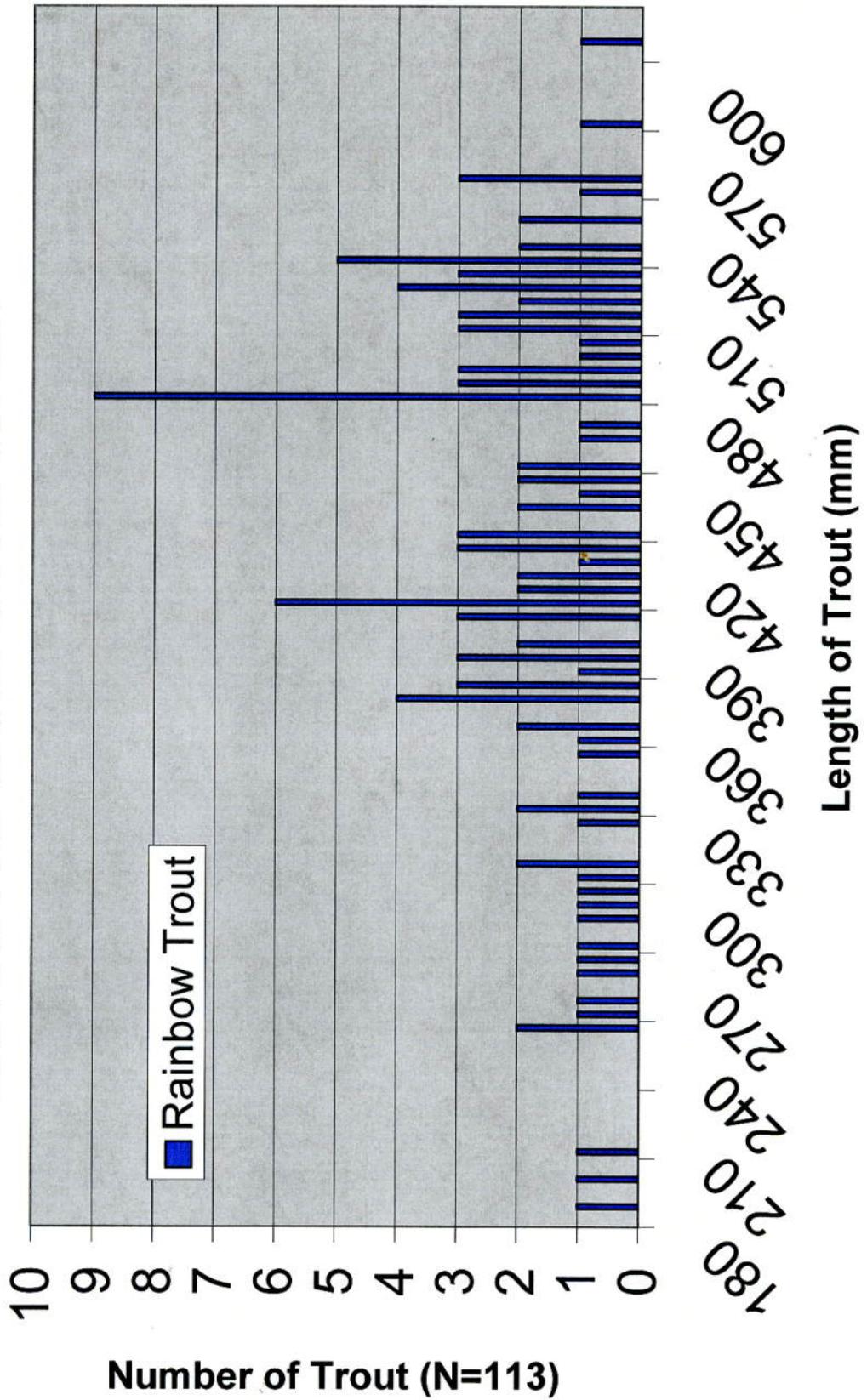
Ramp	Percent
Honker Cove	56%
Camp 5	17%
Coot Bay	16%
Mallard Cove	8%
Lightning Tree	3%
Total	100%

TABLE 6. ESTIMATED TOTAL ANGLER USE AND CATCH AT LAKE DAVIS, 2007

Type of Angler	Estimated Angler-Hrs	Est. Trout Kept	RT Kept per Angler-Hour	Length of Angler-Day	Estimated Angler-days	RT Kept per Angler-Day	Estimated Trout C&R	Est. BBH Kept	BBH Kept per Ang-Hr.	Est. NP Caught
Boat and Float Anglers	20,000	2,100	0.11	4.43	4,500	0.47	450	600	0.03	350
Shore Anglers	16,000	500	0.03	3.12	5,100	0.10	50	5,700	0.36	50
All Anglers 4/	36,000	2,600	0.07	3.99	9,600	0.27	500	6,300	0.18	400

4/ Catch per angler-hour differs from the rates in Tables 3 and 4 due to weighting in the expansion procedure used to estimate total use and catch.

**FIGURE 1. LENGTH OF RAINBOW TROUT
CAUGHT AT LAKE DAVIS IN 2007**



Angling use at Lake Davis during the abbreviated 2007 season was much lower than in any previous year when estimates of use were made by DFG or DWR, even considering the shorter season (Table 7). Angler use averaged about 131,000 angler-hours from 2000 to 2003, over 3.6 times the 36,000 angler-hours measured in 2007. Unfortunately, estimates of angler use are not available for 2004, 2005, or 2006. However, limited data available from the last four months of the 2006 season suggests that angling use that year might have been slightly higher than 2007, but still far below the earlier levels.

Angler success (trout kept per angler-hour) also declined substantially since 2000. Un-weighted catch-per-hour data for all anglers (boat and shore anglers combined) declined from 0.27 in 2000 to 0.06 in 2007 (Table 8). "Un-weighted" means the catch data are not weighted by the numbers of boat and shore anglers or amounts of angler use in each portion of the season (called strata) as they are in Table 7. The declines in angler hours and angler success are also depicted in Figure 2.

If you have any questions about these data or need additional information, please contact me at (530) 529-7393 or hintonr@water.ca.gov.



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Outgoing2587 RHinton: Lori Miles Spell Check: October 10, 2007

TABLE 7. ESTIMATED ANGLER USE AND TROUT CAUGHT AT LAKE DAVIS, 2000 TO 2007

Year	Days in Season	Boat Angler-Hrs	Confidence Interval 1/	Trout Kept	Shore Ang-Hours	Confidence Interval 1/	Trout Kept	All Anglers Ang-Hours	Confidence Interval 1/	Trout Kept	Reported C&R
2000	201	90,000	+ 21 %	27,000	31,000	+ 22 %	7,400	121,000	+ 20 %	34,400	13,600
2001	202	94,000	+ 15 %	30,000	33,000	+ 16 %	7,000	127,000	+ 15 %	37,000	14,500
2002	203	100,000	+ 63 %	18,000	46,000	+ 62 %	6,600	146,000	+ 62 %	24,600	8,000
2003	204	85,000	+ 45 %	14,600	33,000	+ 35 %	2,900	118,000	+ 41 %	17,500	3,400
2007	157	20,000	+ 20 %	2,100	16,000	+ 24 %	500	36,000	+ 18 %	2,600	500
1/ 95 percent confidence interval of estimate.											

TABLE 8. ESTIMATED CATCH PER HOUR FOR BOAT AND SHORE ANGLERS AT LAKE DAVIS, 2000-2007

Year	Boat Anglers 2/	Boat Angler-Hrs	Trout Kept	Trout Kept per Angler-Hr	Shore Anglers	Shore Angler-Hrs	Trout Kept	Trout Kept per Angler-Hr	Total Angler-Hrs	Total Trout Kept	Trout Kept per Angler-Hr
2000	698	2,958.50	885	0.30	858	2,304.50	526	0.23	5,263.00	1,411	0.27
2001	649	2,843.50	611	0.21	1,025	3,055.75	534	0.17	5,899.25	1,145	0.19
2002	220	979.75	174	0.18	283	886.75	105	0.12	1,866.50	279	0.15
2003	173	778.00	128	0.16	333	946.00	83	0.09	1,724.00	211	0.12
2004	121	480.75	118	0.25	305	841.50	87	0.10	1,322.25	205	0.16
2006	142	567.50	43	0.08	261	701.00	64	0.09	1,268.50	107	0.08
2007	209	898.00	89	0.10	581	1,224.25	40	0.03	2,122.25	129	0.06
2/ Boat Anglers include Float Tube Anglers.											

FIGURE 2. TREND OF ANGLER HOURS AND SUCCESS AT LAKE DAVIS, 2000-2007

