

Creel Census Appendix 1.

LORP FISHING CREEL CENSUS GUIDE



**LOS ANGELES DEPARTMENT OF WATER AND POWER
LOWER OWENS RIVER PROJECT**

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Introduction

The purpose of this handbook is to aid volunteer fisherpersons in conducting the creel census. It includes methods, a fishing areas map, species description, and data sheets.

Monitoring Purpose

The creel census is not a fishing tournament or competition! The census helps track the development and health of the warm-water/game fishery (ponds, lakes, and slow moving streams) as the Lower Owens River Project (LORP) is implemented. The main purpose of the creel census is to evaluate the response of game fish to managed stream flows over time.

Protocol

Each volunteer fishes twice in the spring (during May) and twice in the fall (during September). The first spring fishing period is from May 1 through May 15, with each volunteer fishing one day during this period. The second spring fishing period is from May 16 to May 31, with each volunteer fishing one day during this period. The first fall fishing period occurs between September 1 and September 15, with each volunteer fishing one day during this period. The second fall fishing period occurs between September 16 and September 30 with each volunteer fishing one day during this period. No census fishing can occur during any period outside of May and September.

Your data collecting is limited to a 3.5 hours fishing day. This 3.5 fishing time period does not have to be done all at one time, but must be done in the same day. During the census, volunteers can fish only within his or her assigned area. They can, however, fish anywhere within that assigned area. If you desire to keep fishing after the 3.5 hour time limit, do not enter any of this information on the form. (3.5 hour time limit is about the average time a fisherperson in the west fishes on an average fishing day.) Volunteers must abide by all applicable State of California fishing rules and regulations.

Remember this is not a fishing tournament!!! We are expecting an honest effort with accurate records of what you catch -- plain and simple. To provide the most accurate data please fill out the data sheet after each fish is caught. When filling out the data sheet, the number column represents each fish caught. You will need to determine the species, estimate the total length to the nearest inch, and determine the condition of the fish. If the fish looks good and shows no signs of sickness or damage, and has no lesions, list the fish in good condition (GC). If the fish looks unhealthy or shows signs of damage or has lesions, list the fish as being in poor condition (PC). Please, write this information legibly in the space provided and do not leave anything blank. We would also like you to keep track of the number of fish (by species) you observe while fishing. This information should be written in the total number of fish observed section on the data sheet.

At the end of the second fishing period place your two completed data sheets in the self address stamped envelope and send it back. Make sure you write your return address on the envelope. Once we receive your completed and legible data sheet we will send you a check for \$50.

Sites

The LORP area was stratified into five separate fishing areas for the creel census (See Figure 1). Four of the fishing areas are located on the Lower Owens River while the fifth covers designated off-channel lakes and ponds. Figure 1 illustrates and describes in detail the location of these fishing areas. Volunteer identification numbers for each of the five fishing areas are as follows:

Area #1 --- (From the pump station dam upstream to the Lone Pine Station Road)

Fisherperson #1 – Fish with any type of fishing gear

Fisherperson #2 – Fish with any type of fishing gear

Fisherperson #3 – Fish with any type of fishing gear

Fisherperson #4 – Fish with any type of fishing gear

Fisherperson #5 – Fish with any type of fishing gear

Area #2 --- (Owens River from the Lone Pine Station Road upstream to the Manzanar Reward Road)

Fisherperson #6 – Fish with any type of fishing gear

Fisherperson #7 – Fish with any type of fishing gear

Fisherperson #8 – Fish with any type of fishing gear

Fisherperson #9 – Fish with any type of fishing gear

Fisherperson #10 – Fish with any type of fishing gear

Area #3 --- (Owens River form Manzanar Reward Road upstream to the Mazourka Canyon Road)

Fisherperson #11 – Fish with any type of fishing gear

Fisherperson #12 – Fish with any type of fishing gear

Fisherperson #13 – Fish with any type of fishing gear

Fisherperson #14 – Fish with any type of fishing gear

Fisherperson #15 – Fish with any type of fishing gear

Area #4 --- (Owens River from Mazourka Canyon Road upstream to the LAA Intake)

Fisherperson #16 – Fish with any type of fishing gear

Fisherperson #17 – Fish with any type of fishing gear

Fisherperson #18 – Fish with any type of fishing gear

Fisherperson #19 – Fish with any type of fishing gear

Fisherperson #20 – Fish with any type of fishing gear

Area #5 --- (Upper and Lower Twin, Billy and Goose Lakes)

Fisherperson #21 – Fish Upper Twin Lake with any type of fishing gear

Fisherperson #22 – Fish Lower Twin Lake with any type of fishing gear

Fisherperson #23 – Fish Goose Lake with any type of fishing gear

Fisherperson #24 – Fish Billy Lake with any type of fishing gear

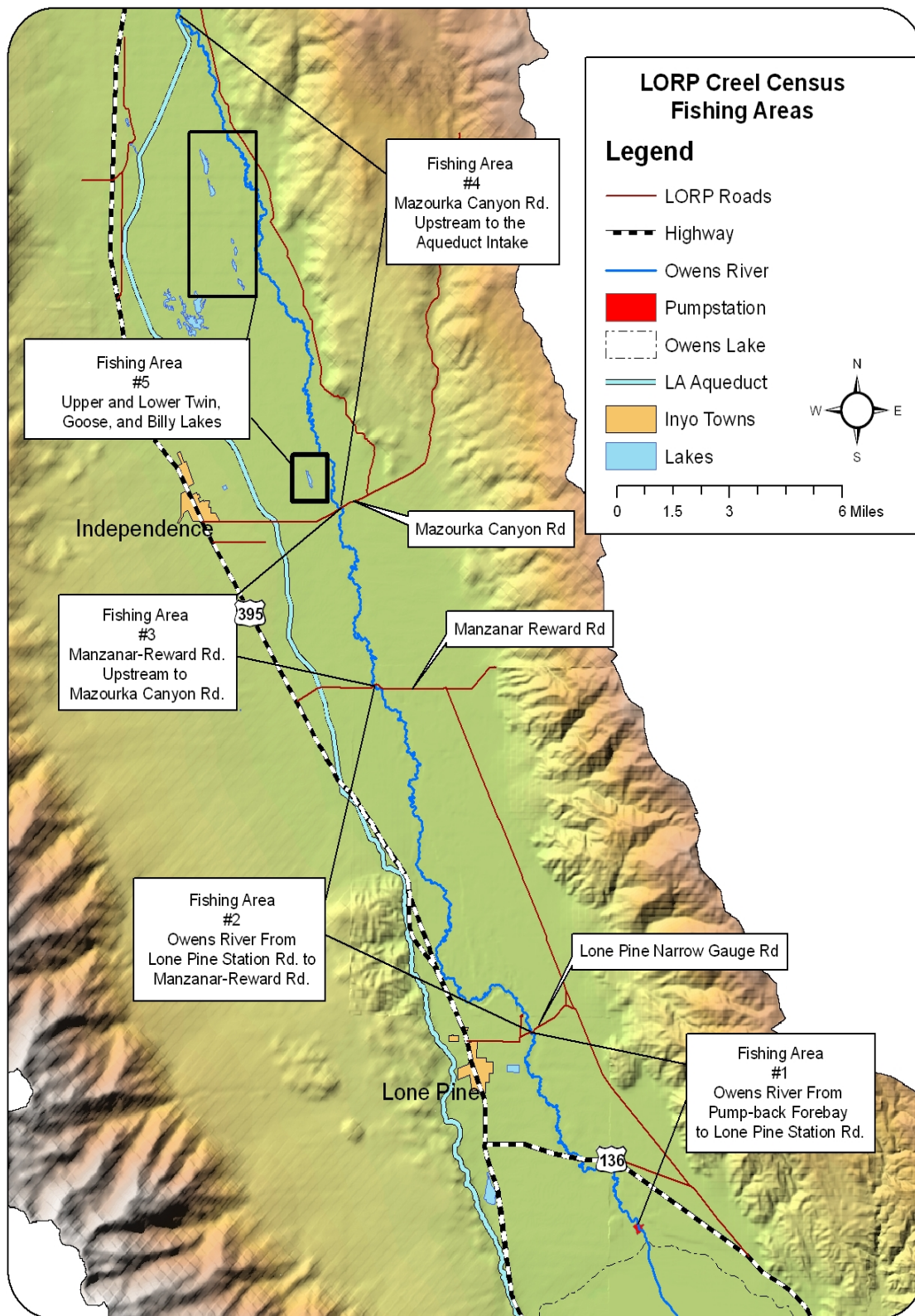


Figure 1. Fishing Areas

FISH IDENTIFICATION

Largemouth Bass

Micropterus salmoides

Non-Native



Largemouth bass approximately 30 cm (12") long. Location: Deer Creek, California Date 6/22/2007.



*Largemouth bass (showing maxilla) caught in Lake Berryessa Reservoir in March 2009 by Teejay O'Rear.
Photo by Amber Manfree.*

- Heavy but elongate body with a large mouth
- 2 dorsal fin portions are nearly separate
- Black lateral stripe
- 12-14 dorsal, 11-12 anal, and 13-17 pectoral fin rays
- 9 dorsal and 3 anal spines
- 58-72 scales on the lateral line
- Scales absent from the base of dorsal and anal fin
- Olive gray to shiny green back and sides, white on the belly, with a stripe separating the two colors
- Brown eyes

Smallmouth Bass
Micropterus dolomieu
Non-Native



Smallmouth bass (horizontal). Photo courtesy of Drew Gregory.



*Smallmouth bass (showing maxilla) caught in Lake Berryessa Reservoir in March 2009 by Teejay O'Rear.
Photo by Amber Manfree.*

- Streamlined body
- Mouth does not reach hind margin of the eye
- Greenish brown to bronze body, occasionally with faint vertical bars of dark mottling and a white belly
- 3 dark, faintly iridescent bands radiate from the eye
- Young are darker with a tricolor tail
- 3-15 dorsal, 10-12 anal, and 16-18 pectoral fin rays
- 9-10 dorsal and 3 anal fin spines
- 66-78 scales on the lateral line
- Small scales on cheek in 14 or more rows and near the base of the dorsal and anal fins

Channel Catfish

Ictalurus punctatus

Non-Native



Channel catfish, caught in Nacimiento Reservoir in May 2008 by Teejay O'Rear. Photo by Amber Manfree.

- Elongate body with a small head
- Deeply forked tail with pointed lobes
- Terminal mouth with 1 black barbel on either side and 4 dusky to white chin barbels
- Maxillary barbels are longer than the head
- Upper jaw protrudes past lower jaw
- Grey-blue on the sides, often with a olive green tinge, fading to white on the belly covered in scattered black spots
- Young have black tipped fins
- Spawning males become dark with enlarged heads, thickened lips, fatty pads behind the eyes, and thickened fin membranes
- Males also have a urogenital papilla extending towards the tail leaving one opening behind the vent compared to the 2 openings on females
- 5-6 soft rays in the dorsal fin
- 24-29 rays in anal fin
- 4-5 soft rays in pectoral fins

Brown Bullhead
Ameiurus nebulosus
Non-Native



Brown bullhead. Caught in Seneca County, New York. Photo by Arthur Masloski, January 2009.

- Heavy body
- Blunt snouts with a terminal mouth and 8 dark barbels: 6 on the chin and 1 on each side of the mouth
- Short anal fin with same color on both membranes and the 21-24 rays
- Dorsal and pectoral fins have 5-9 sawlike teeth on the posterior edge
- 6-7 dorsal fin rays
- 11-15 gill rakers on first arch
- Plain yellow-brown with dark molting on the side and white to yellow on the belly

Bluegill

Lepomis macrochirus

Non-Native



Bluegill approximately 15 cm (6") long. Location: Leonard Lake, California Date: 8/6/2008 Photo: Lisa Thompson

- Deep, compressed body
- Flexible blue or black flap on the rear of each operculum
- Long pointed pectoral fins
- Black spot on the rear of the dorsal fin
- Narrow vertical black bars on the side
- 11-12 anal, 13-14 pectoral, 10-12 dorsal, and 5 pelvic rays
- 3 anal and 10 dorsal spines
- 38-48 scales on the lateral line
- Iridescent purple shine
- Breeding males turn dark olive to bronze on their backs and sides, orange on their breast, iridescent black on the pelvic and anal fins, while a dark spot develops on the soft portion of the dorsal fin

Brown Trout

Salmo trutta

Non-Native



Brown trout, approximately 20 cm (8") long. Location: Deer Creek, California Date: 6/21/2007.



Brown trout. Photo by Dan Worth, California Department of Fish and Game.

- Heavy bodied with a large mouth often extending beyond the rear margin of the eye
- Well developed teeth on both jaws
- 12-14 dorsal, 10-12 anal, 9-10 pelvic, and 13-14 pectoral fin rays
- Thick caudal peduncle with a straight tail in adults and a slightly forked tail in juveniles
- Males have a rounded anal fin while that of females is slightly indented
- 120-130 small scales on the lateral line
- Dark to olive brown on the back, yellow brown on the sides, white to yellow on the belly, and red or orange adipose fin
- Black spots on the gill covers, head, sides (usually with a pale halo), tail, and the adipose and dorsal fin
- Red spots on the lower sides (only trout with both red and black spots)

Rainbow Trout

Oncorhynchus mykiss

Non-Native



Rainbow trout, 18 cm (7") long. Location: Deer Creek, California (Yuba River basin). Date: 6/21/2007.

- Commonly 35-65 cm FL and 1.4-5.4 kg, largest in CA 12.4 kg steelhead
- Large mouth with teeth on both upper and lower jaws
- Silvery body, black spots on the adipose, dorsal, and caudal fins, pink to red lateral band
- Juvenile fish have similar appearance, possess 5-13 dark spots called parr marks that run laterally along fish's body, parr marks are smaller than the gaps between them
- Young fish also have 5-10 dark dorsal spots between the head and dorsal fin
- Fin rays: dorsal 10-12, anal 8-12, pelvic 9-10, pectoral 11-17

Common Carp

Cyprinus carpio

Non-Native



Common carp approximately 18 cm (7") long. Location: Suisun Marsh California Date: 8/8/2008

- Heavy bodied
- Large scales
- Sub terminal mouth with two pairs of barbels on the upper lip
- Juveniles have terminal mouths and smaller barbels
- Rear barbells are longer than the front pair
- Dorsal and Anal fins have 1 large and 2 smaller serrated spines
- Adults- gold-green to bronze in color with pectoral, pelvic, and anal fins tinged in red
- Juveniles- brown to grey in color
- Fin rays: dorsal 17-21 (after spines), anal 5-6 (after spines), pelvic 5-7, caudal 19
- Lateral line scales: 32-38 (may be much less in some varieties)

Owens Sucker

Catostomus fumeiventris

Native Species



Owens sucker. Location: Hot Creek, CA. Photo by Joe Ferreira, California Department of Fish and Game.



Owens sucker, ventral view. Location: Hot Creek, CA. Photo by Joe Ferreira, California Department of Fish and Game. Note: the scientific name of this species, *fumeiventris*, means "smoky belly".

- Usually < 50 cm SL
- Large head, long snout, thick caudal peduncle, coarse scales
- Subterminal mouth: lower lip with deep median cleft and prominent papillae
- Coloration: dusky to smoky underside, may have blue iridescence on sides, slate-colored back
- Breeding adults: reddish stripe on sides, reddish-amber color may be present on paired fins
- Fin rays: pectoral 16-19, dorsal 10, pelvic 9-10
- Lateral line scales: 66-85, 13-16 rows above line, 9-11 rows below line

Tui Chub
Gila bicolor
Native Species



Tui chub, approximately 10 cm (4") long. Date: 7/10/2007.



Tui chub (Owens tui chub). Location: University of California White Mountain Research Station. Photo by Joe Ferreira, California Department of Fish and Game.

- Heavy bodied, up to 40 cm SL or more
- Large scales, head is large relative to body, short rounded fins
- Small terminal mouth, slightly oblique
- Gap between gill rakers greater than width of raker bases
- Olive, brown, to brassy back, white to silver underside
- Young fish silvery, progressively less with age
- Fin rays: dorsal 7-9, anal 7-9
- Lateral line scales: 41-64 (decurved)

Creel Census Survey Form

LORP Creel Census
Return to: Jason Morgan
300 Mandich Street
Bishop, CA 93514
Office (760) 873-0429
Cell (760) 878-8954

Reach Number:	Date:	Name:	Fisherperson's Number:
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Total Number of Fish Observed

Largemouth Bass:	Smallmouth Bass:	Bluegill:	Brown Trout:
Common Carp:	Channel Catfish:	Brown Bullhead:	Other Species (Name/Number):

Fish Caught (Fishing Time 3.5 hours)

Number	Species	Length (Inches)	Condition (Good or Poor)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			

Number	Species	Length (Inches)	Condition (Good or Poor)
14			
15			
16			
17			
18			
19			
20			
21			
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24			
25			
26			
27			
28			
29			
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32			
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34			

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Number	Species	Length (Inches)	Condition (Good or Poor)
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