

NEVADA DEPARTMENT OF WILDLIFE
STATEWIDE FISHERIES MANAGEMENT



FEDERAL AID JOB PROGRESS REPORT
F-20-50
2014

Colorado River below Davis Dam
SOUTHERN REGION



**NEVADA DEPARTMENT OF WILDLIFE, FISHERIES DIVISION
JOB PROGRESS REPORT**

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**NEVADA DEPARTMENT OF WILDLIFE, FISHERIES DIVISION
JOB PROGRESS REPORT**

State: Nevada
Project Title: Statewide Fisheries Program
Job Title: Colorado River below Davis Dam
Period Covered: January 1, 2014 through December 31, 2014

SUMMARY

Angler Use and Harvest

No anglers were contacted and anglers did not utilize the volunteer creel box in 2014.

Trammel Netting

Thirty-five net-nights of trammel netting were conducted in the spring during the months of March, April, and May. One hundred eighty-nine fish representing 13 species were captured. Almost half of these fish were sport fish and the other half was comprised of 30 % native fish and 20 % nonnative, nongame fish.

Electroshocking

An electroshocking survey was attempted in the spring; however, the deep water and swift current prevented completion of the survey. The release of water experienced during surveying was related to satisfying Mexico with water.

BACKGROUND

Below Davis Dam, approximately 12 miles of the Colorado River forms the boundary between Arizona and Nevada. The river is characteristically swift, cool, and has a highly variable flow. The river bottom is composed of rubble, gravel, and sand. Several backwater lagoons were created on the Nevada side through the construction of training dikes. These dikes line almost the entire length of the river in Nevada.

The Colorado River sport fishery is supported by striped bass *Morone saxatilis*, stocked rainbow trout *Oncorhynchus mykiss*, largemouth bass *Micropterus salmoides*, smallmouth bass *Micropterus dolomieu*, redear sunfish *Lepomis microlophus*, bluegill *L. macrochirus*, green sunfish *L. cyanellus*, channel catfish *Ictalurus punctatus*, and yellow bullhead catfish *Ameiurus natalis*. Nongame species present in this section of river include threadfin shad *Dorosoma petenense*, gizzard shad *D. cepedianum*, common carp *Cyprinus carpio*, razorback sucker *Xyrauchen texanus*, and flannelmouth sucker *Catostomus latipinnis*. Although flannelmouth suckers are native to the Colorado River and its tributaries, the species is thought to have been introduced into this section of the Colorado River. Bonytail *Gila elegans* are present in Lake Havasu and have the potential to swim upstream; however, at this time they are not known to exist in this

section of the river. Black bass and rainbow trout are the most sought after species by anglers. In the spring and early summer, striped bass migrate upstream from Lake Havasu to spawn. Concentrations of striped bass can be found at that time of year in the tailrace of Davis Dam, where their upstream migration is stopped. Striped bass in excess of 20 pounds were common in the late 1970s, but are now rare. Willow Beach National Fish Hatchery raises rainbow trout that are periodically released in this section of river.

OBJECTIVES and APPROACHES

General Management

Objectives: To monitor angler use, catch rates, and population dynamics of the Colorado River fishery.

Approach:

- Install and maintain up to two volunteer angler survey boxes at access locations on the Colorado River below Davis Dam.
- Monitor fish population dynamics through a minimum of 30 net-nights of trammel net surveys in the spring.
- Monitor fish population dynamics through a minimum of six nights of electroshocking in the spring along with gill netting.
- Utilize creel survey and monitoring data to assess sport fishery performance and changes to estimate sport fish availability and condition.
- Coordinate with National Park Service, Arizona Game and Fish Department, and other cooperators on sport fish management needs and cooperative monitoring activities.
- Cooperate with other agencies on implementing long-term monitoring of quagga mussel *Dreissena bugensis* distribution.

PROCEDURES

Angler Use and Harvest

Creel survey activities were attempted opportunistically through angler contacts and volunteer, angler boxes along the Colorado River below Davis Dam. Information collected during these surveys includes hours fished, total anglers per party, angler preference, angler license origin (Nevada or Arizona), species caught, number caught, length and weight of catch, and number of successful anglers in the party.

Trammel Netting

Sampling occurred in the months of March, April, and May with assistance from the Bureau of Reclamation at three locations: Laughlin Lagoon, Big Bend Launch Ramp, and Big Bend Conservation Area. Trammel nets were used rather than gill nets

because of the high possibility of catching razorback suckers and flannelmouth suckers. A total of 35 nets were set, with mesh size ranging from 0.5 inches (in) to 1.5 in and net lengths ranging from 75 feet (ft) to 150 ft. Nets were set in the evening and then retrieved the following morning. Fish were removed from the nets, measured and weighed, and native fish were scanned for the presence of a passive integrated transponder (PIT) tag. If no PIT tag was detected, one was inserted at that time.

Electroshocking

Shoreline areas were sampled using a boat electroshocking unit. The boat was equipped with a Coffelt VVP-15B box with an electrode array. No fish were captured due to the high flow event. Total shocking time (actual time foot switch was depressed) was recorded.

FINDINGS

Angler Use and Harvest

No anglers were contacted and anglers did not utilize the volunteer creel box in 2014.

Trammel Netting

Results from thirty-five net-nights of spring sampling effort yielded 189 fish, representing 13 species (Table 1). Native fish accounted for 30% of the catch. PIT tags were detected in 40 razorback suckers and two flannelmouth suckers. Untagged fish received a tag before release. Other species included common carp, redear sunfish, green sunfish, bluegill, largemouth bass, smallmouth bass, gizzard shad, yellow bullhead, channel catfish, and goldfish. These species were comprised of 60% sport fishes. Table 1 additionally provides size ranges for all species caught and Table 2 provides percent species composition of only sport fish caught.

Electroshocking

No data was obtained from electroshocking since the river was flowing too high throughout survey to effectively electroshock.

MANAGEMENT REVIEW

The sport fishery is doing well in this section of the Colorado River. Redear sunfish and largemouth bass were the most abundant sport fish, but all fish captured were healthy and in good condition. Large striped bass were even captured despite decreased stocking of rainbow trout. Approximately 20,000 rainbow trout were stocked in the fall of 2014. Some of these stocked rainbow trout may overwinter in the river and provide angling opportunities in 2015.

Table 1. Species composition (% of total catch) and length data from March, April, and May 2014 trammel netting surveys on the Colorado River below Davis Dam, Nevada.

Species	Number	Composition	Total length (mm)		
			Min	Max	Mean
Razorback sucker	49	26%	315	610	510
Common carp	42	22%	430	840	582
Redear sunfish	37	20%	175	380	266
Largemouth bass	17	9%	291	502	419
Bluegill	11	6%	116	255	196
Green sunfish	10	5%	65	170	125
Flannelmouth sucker	6	3%	410	630	534
Striped bass	4	2%	675	1,050	841
Smallmouth bass	4	2%	210	484	381
Gizzard shad	3	2%	385	402	392
Yellow bullhead	3	2%	274	305	294
Channel catfish	2	1%	430	840	582
Goldfish	1	1%	480	480	480

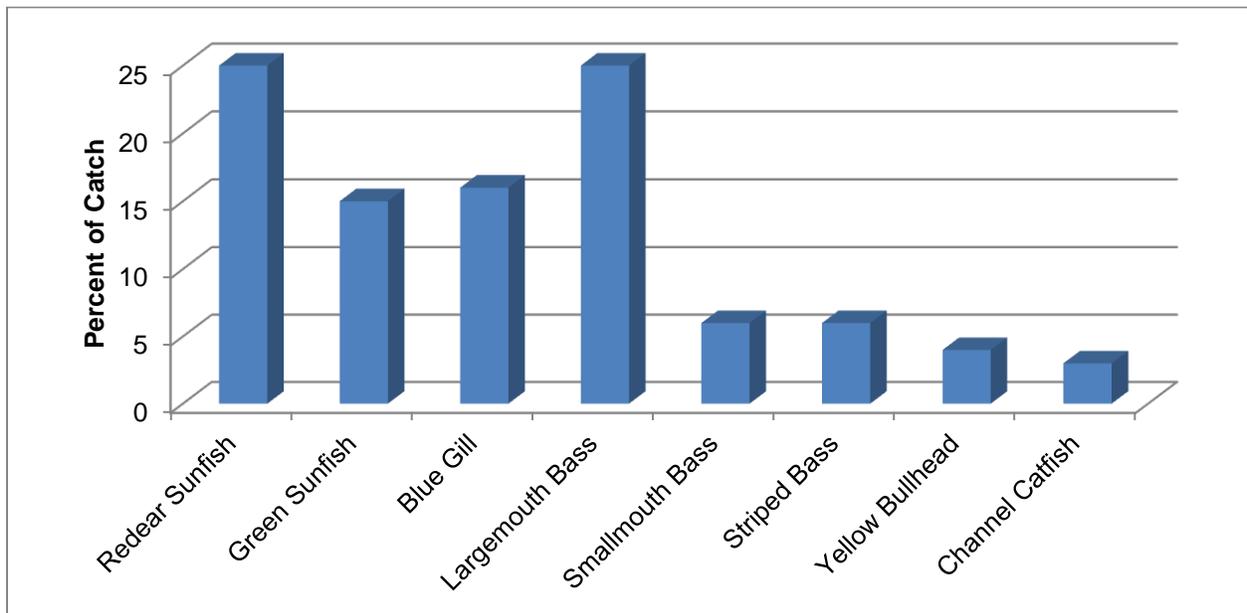


Figure 1. Species composition of sport fish captured from March, April, and May 2014 trammel netting surveys on the Colorado River below Davis Dam, Nevada.

RECOMMENDATIONS

- Maintain present regulations.
- Continue general fish population surveys through trammel netting and electroshocking to gather a long-term dataset to monitor trends in fish populations.

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