

NEVADA DEPARTMENT OF WILDLIFE STATEWIDE FISHERIES MANAGEMENT



FEDERAL AID JOB PROGRESS REPORTS

F-20-53
2017

DUFURRENA PONDS
WESTERN REGION



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

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

State: *Nevada*
Project Title: *Statewide Fisheries Program*
Job Title: *Dufurrena Ponds*
Period Covered: *January 1, 2017 through December 31, 2017*

SUMMARY

Historically, NDOW has managed Dufurrena Ponds on an “as needed” basis. With the completion of the Comprehensive Conservation Plan (CCP) for the Sheldon National Wildlife Refuge, NDOW took the opportunity to implement a more comprehensive management approach with Dufurrena Ponds in 2014.

An angler drop-box was installed at Dufurrena Ponds in 2014 to start gathering angler use and success data. Coordination occurred with staff at the Sheldon National Wildlife Refuge for ponds to be managed more consistently. Angler use data has been collected since 1980 through the Mail-in Angler Questionnaire Survey and limited opportunistic angler contacts were made in 2017.

BACKGROUND

Dufurrena Ponds are located on the Sheldon National Wildlife Refuge approximately 130 miles northwest of Winnemucca. There are nine ponds in the complex; however, Ponds 19 and 20 contain the primary sport fisheries. The ponds were originally built to deliver irrigation water to agricultural lands in Virgin Valley, but they are no longer used for irrigation as the USFWS owns the ponds and maintains them for fish and wildlife values. The ponds receive water from a series of warm and cold springs and the USFWS maintains a series of ditches and water control structures throughout the pond complex. Ponds 19 and 20 are on the upper end of the complex and typically have consistent water levels, even in drought years.

Ponds vary in size and depth with Pond 20 being the largest at 50 surface acres at a maximum depth of 14 ft. It has produced the most consistent angling use and best results of all the ponds. Fish species in Ponds 19 and 20 include largemouth bass, yellow perch, bluegill, crappie, redear sunfish, and green sunfish. Dufurrena Ponds are managed as general warm water fisheries. The state record yellow perch of one pound and eight ounces was caught from Dufurrena Ponds in 1987.

OBJECTIVES

- Conduct a general fisheries assessment through opportunistic angler contacts and mail-in angler questionnaire data.

- Obtain a special use permit or a cooperative agreement with the Sheldon National Wildlife Refuge to monitor fish populations by conducting two net-nights of gill netting, two net-nights of frame netting, and beach seining three transects.
- Coordinate with Sheldon National Wildlife Refuge staff to draft a plan to clean out and dredge Ponds 19 and 20.

PROCEDURES

Conduct a general fisheries assessment through opportunistic angler contacts, and mail-in angler questionnaire data. A limited number of opportunistic angler contacts were made in 2017. Mail-in angler question data was received for 2016. The angler drop-box was maintained and angler surveys were collected in 2017.

Obtain a special use permit or a cooperative agreement with the Sheldon National Wildlife Refuge to monitor the populations of fish species by conducting 1 night of electroshocking. A special use permit was obtained from the USFWS to conduct fish monitoring surveys.

Coordinate with Sheldon National Wildlife refuge staff to draft a plan to clean out and dredge ponds 19 and 20. During the annual coordination meeting on March 21, NDOW and USFWS discussed a plan for dredging and managing vegetation at Ponds 19 and 20.

FINDINGS

Conduct a general fisheries assessment through opportunistic angler contacts, and mail-in angler questionnaire data. Opportunistic angler surveys were conducted during seven visits to Dufurrena Ponds and only three anglers were contacted. Survey results for 2017 resulted in anglers catching 8.33 fish per angler and 3.28 fish per hour (Table 1) compared to 2016 of 2.75 fish per angler and 1.38 fish per hour. Yellow perch was the dominant sport fish caught and all fish were small, measuring less than 8.0 inches (Table 2).

Table 1. Angler Contact Summary, 2017.

Month	Survey Days	Anglers	Angler Hours	Fish	Fish/Angler	Fish/Hour
March	1	1	3	19	19	6.33
May	1	1	6	3	3	0.5
June	1	0				
July	1	0				
August	1	1	1	3	3	3
September	1					
November	1					
Summary	7	3	10	25	8.33	3.28

Angler success estimated from the 2016 Mail-in Angler Questionnaire Survey was 8.7 fish per day and 21.21 fish per angler, which was above the 5-year average of

6.32 fish per day and 14.49 fish per angler. Historical data are summarized in Table 3 and Figures 1 and 2.

Table 2. Length Frequency and Species Composition Opportunistic Surveys, 2017.

Species	# Caught	Size Class						
		<6"	6-7.9"	8-9.9"	10-11.9"	12-13.9"	14-15.9"	>16"
Largemouth bass	1	0	1	0	0	0	0	0
Yellow perch	21	2	19	0	0	0	0	0
Bluegill	3	3	0	0	0	0	0	0

Table 3. Historical Angler Questionnaire Results, 2012-2016.

Year	Anglers	Days	Fish	Fish/Day	Fish/Angler	Days/Angler
2012	138	416	1,883	4.53	13.64	3.01
2013	78	151	598	3.96	7.64	1.93
2014	86	162	1,323	8.13	15.46	1.9
2015	193	446	2,794	6.27	14.48	2.3
2016	109	265	2,307	8.7	21.21	2.44
5 Year Average	120.8	288	1,781	6.318	14.486	2.316

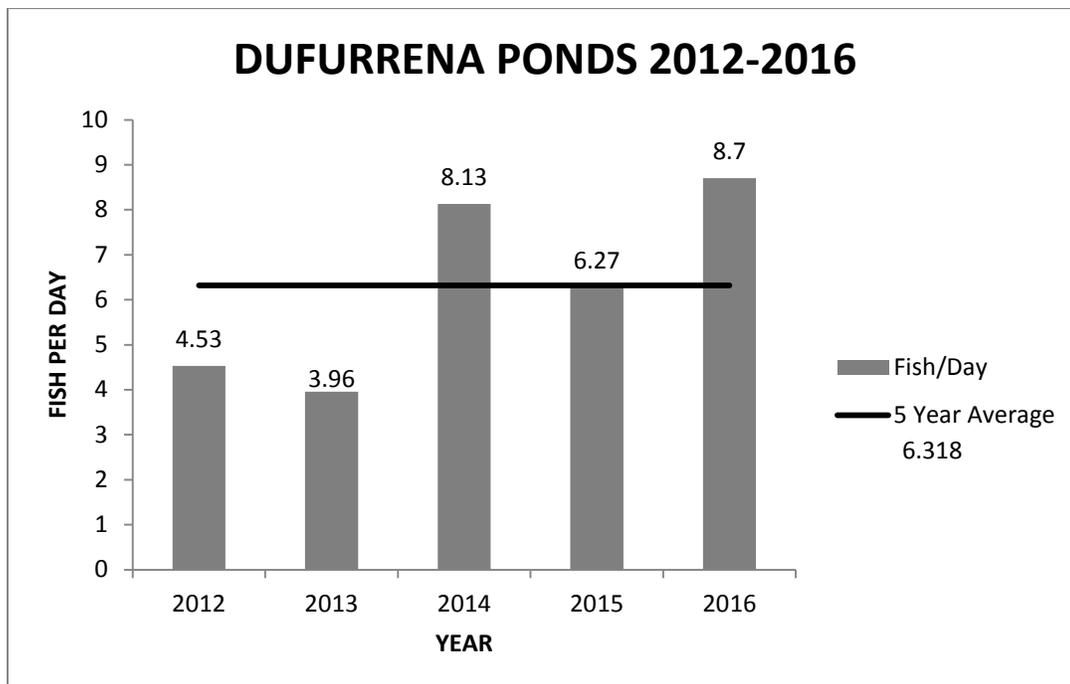


FIGURE 1. Fish per day and 5-Year average from the Mail-in Angler Questionnaire Survey, 2012-2016.

The angler drop-box was maintained at Dufurrena Pond 20 in 2017. The survey asked participants to rate three aspects of their fishing day on a scale of -2.0 (highly dissatisfied) to +2.0 (highly satisfied). Angler satisfaction scores averaged +0.90 for “overall experience,” +0.88 for “size of fish,” and +1.27 for “number of fish caught.” The 29 anglers who participated in the survey reported catching 286 fish in 89.5 hours or

angling. Monthly angler use, success, length frequency, and species composition data from the drop-box survey are summarized in Tables 4 and 5.

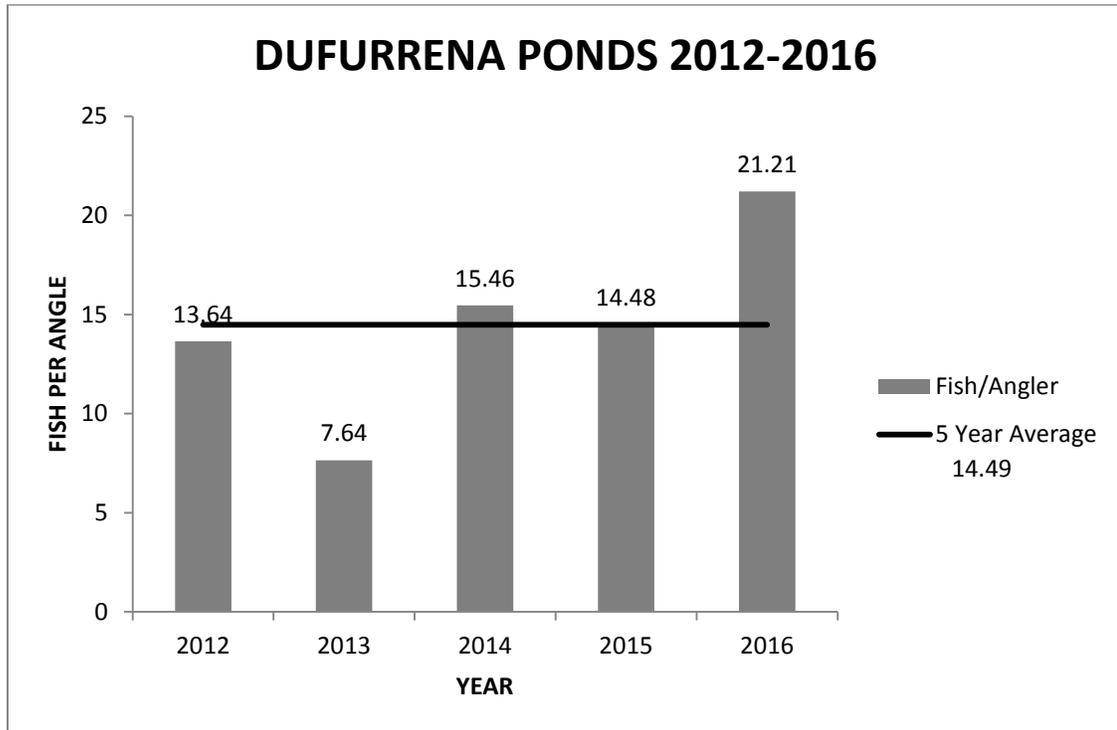


FIGURE 2. Fish per Angler and 5-Year Average from the Mail-in Angler Questionnaire Survey, 2012-2016.

Table 4. Monthly Angler Use and Success Data from the Drop-Box, 2017.

Month	# of Anglers	# of Angler Hours	Angler Satisfaction			# of Fish Caught	# of Fish Harvested	Fish/Angler	Fish/Hour
			Angling Experience	Size of Fish	# of Fish				
March	2	6	2	2	2	26	19	13	4.33
May	1	6	-2	-2	1	3	0	3	0.50
June	3	11	0.67	0.67	0	18	1	6	1.64
July	15	46	1.8	1.6	1.73	177	52	11.8	3.84
August	3	5	0.33	0.66	0.66	6	2	3	1.2
September	4	9.5	1.5	1.25	1.5	36	21	9	3.79
December	1	6	2	2	2	20	15	20	3.33
Annual Summary	29	89.5	0.9	0.88	1.27	286	110	8.23	2.33

Table 5. Length Frequency and Species Composition Data from the Drop-Box, 2017.

Species	# Caught	Size Class						
		<6"	6-7.9"	8-9.9"	10-11.9"	12-13.9"	14-15.9"	>16"
Largemouth bass	61	10	7	25	1	18	0	0
Yellow perch	204	4	72	58	66	4	0	0
Bluegill	13	8	1	4	0	0	0	0
Crappie	8	1	5	1	0	1	0	0

During each site visit to Dufurrena Ponds a general habitat assessment was conducted at Pond 20 that includes water temperature, water level, water clarity, and road conditions. Table 4 summarizes the assessments that occurred in 2017.

Table 4. Habitat Assessment at Pond 20, 2017.

Date	Water Temperature (°F)	Water Level	Water Clarity	Road Conditions
3/28/2017	39	100 %	Murky	Good
5/10/2017	50	100 %	Murky	Good
6/10/2017	55	100 %	Murky	Good
7/17/2017	72	100 %	Murky	Good
8/21/2017	70	100 %	Murky	Good
9/18/2017	67	100 %	Murky	Good
11/8/2017	37	100 %	Murky	Good

The water level remained at 100% capacity in Dufurrena Pond 20 throughout the year. In general, the water clarity was typically murky with little change throughout the year. The road conditions were good throughout the fishing season providing anglers access to this remote fishery.

Obtain a special use permit or a cooperative agreement with the Sheldon National Wildlife Refuge to monitor the populations of fish species by conducting 1 night of electrofishing. A special use permit was obtained from the Sheldon National Wildlife Refuge to conduct an electroshocking survey. The survey was not conducted due to mechanical issues with the electroshocking boat.

Coordinate with Sheldon National Wildlife Refuge staff to draft a plan to clean out and dredge Ponds 19 and 20. Discussions occurred between NDOW and USFWS staff about the best way to develop a plan to dredge and manage vegetation on Ponds 19 and 20. A draft plan for the management for these ponds was discussed, but writing the draft plan was not initiated in 2017.

MANAGEMENT REVIEW

Angler success reported in the 2016 Mail-in Angler Questionnaire Survey was 8.7 fish per day and 21.21 fish per angler, which was above the 5-year average of 6.32 fish per day and 14.49 fish per angler. Angler drop-box satisfaction ratings for 2017 were positive, and above the ratings for 2016. Angler success in 2017 as reported in the angler drop-box was 2.33 fish per hour and 8.23 fish per angler. Guidelines set forth by a General Warmwater Fishery Management Concept suggest, “Success rates should range between 0.25 and 0.75 fish per hour and 1.0 and 2.0 fish per angler day.” The 2017 angler drop-box results and the 2016 mail-in survey results indicate that the fishery is exceeding the standards for a General Warmwater Fishery Management Concept.

Species composition surveys were not conducted in 2017 due to mechanical issues with the electroshocking boat. Electroshocking is the best method available to sample fish in these ponds due to the large amounts of dense aquatic vegetation.

Discussions did occur throughout 2017 with USFWS that included ideas on the best way to proceed with the development of a draft plan to manage and dredge Ponds 19 and 20. NDOW has committed to take the lead on the development of the draft plan.

RECOMMENDATIONS

- Conduct a general fisheries assessment through opportunistic angler contacts and mail-in, angler questionnaire data.
- Obtain a special use permit or a cooperative agreement with the Sheldon National Wildlife Refuge to monitor the populations of fish species by conducting 1 night of electroshocking.
- Continue to coordinate with Sheldon National Wildlife Refuge to draft a plan to manage and dredge Ponds 19 and 20.

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Date: January 2, 2017