

Job Report

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Project No. MF-M-3 Date July 7, 1965
Project Name: Marine Fisheries Management in Texas
Period Covered: June 1, 1963 to December 31, 1964 Job No. 1

Administration and Supervision of Contract Drum Removal Program

Abstract: Harvest of black drum from the bay waters of Cameron and Willacy Counties with contract nets was accomplished from November 1, 1963 through March 5, 1964. Due in part to a shortage of black drum in the contract fishing area, the 1963-64 season closed earlier than in previous years and the 1964-65 season was not initiated.

Net checks showed no change from checks made in previous years, and no significant numbers of desirable fish were harmed by any properly conducted contract netting operation.

Total drum landings for the 1963-64 season were 268,191 pounds compared to 462,577 pounds (dressed weight) for the previous season. Calculated live weight declined from 685,558 to 344,602 pounds. Over 70 per cent of the 1963-64 harvest was of small choice drum, (1-5 pounds) compared to only 34 per cent of this size in the 1962-63 season.

Value received for the 1963-64 harvest was \$20,429.57 and an average of 7.907 cents per pound compared to \$30,315.60 and an average of 7.396 cents per pound for the previous season.

The average number of pounds per net day was 50.9 compared to 65.1 for the previous season.

In each of the past two seasons, the primary peak of harvest occurred during the middle of January with a second smaller peak occurring in early March.

Objectives: To administer and supervise the contract drum removal program.

Procedures: Rules and regulations were formulated and printed at Regional Headquarters at Rockport. Application questionnaires were distributed to interested parties with completed forms being returned to the Rockport office. Coastal Commercial Fishing Contracts were issued by the Coastal Fisheries Supervisor of Region V to all applicants who met the requirements of the law (Acts 1941, 47th Leg., ch. 322, Sec. 3 (a)). On receipt of the \$5 application fee and proof of execution of performance bond in the amount of \$1,000 as required by law, permits were issued to 21 persons by the Austin office of the department.

Periodic and unannounced visits were made to nets of contract fishermen throughout the contract season. The purpose of these visits was to observe the effects of all types and variations of drum harvest methods used in all areas and in all weather conditions on all species of food and game species other than black drum. Reports on each net check included date and location of nets, mesh size and length of nets, depth of water, weather conditions, number of hours the nets had been fishing since last cleaned of fish, and contents of nets by species. Information gained in these visits were used to recommend any immediate or future changes in type of nets, location of fishing operations, or method of operations which might tend to reduce losses to desirable marine species other than black drum.

All monthly record of catch data forms were received and their data compiled and analyzed. Such data as actual net hours fishing, number of drum caught, market weight of catch, type of gear used, and price received per pound was used to evaluate catch per unit of effort, the effects of landings on market prices, the relationship of mesh size to fish size, and any other information which could be obtained from the report data submitted.

Continuous education and information of the general public pertaining to the purpose, operation, and future of the program was effected.

Findings: Laws in effect during the 1963-64 contract drum season provided for the taking of black drum from the waters of Cameron County during the months of November through March and in Willacy County from December through March. Fishing in Willacy County was restricted by law to the waters east of the Intra-coastal Waterway.

Of the 21 permits issued, 8 were never activated. Of the remaining 13 permits, 3 were fished during only 1 calendar month, 2 permits were fished during 2 months, 2 for 3 months, and 3 for 4 months. Only 3 permits were fished during all 5 calendar months allowed by law.

One permit was revoked in late November 1963 after a check of law violation records revealed that the permit holder was not eligible.

On March 5, 1963 the season was terminated due to a lack of drum within the contract area and a shortage of law enforcement personnel. An analysis of black drum populations in the waters of Cameron and Willacy Counties based on adult fish population samples taken during the year indicated that by October 1964, trout and redbfish populations far exceeded those of black drum. Since the purpose of the program was to reduce black drum populations when they became so great as to be detrimental to the more desirable fish, and since this situation did not exist at this time, it was recommended that the 1964-65 contract drum netting season be cancelled.

During the month of November 1963, contract drum netting was confined to the waters of Cameron County. While much of the drum harvest was accomplished by striking rigs, some set nets were used, and one net check was made. The results of this check are as follows:

Date: November 7, 1963	Location: Cameron County, one mile E. of Intracoastal Waterway Marker No. 79.
Weather: Clear	
Wind: SE 12 to 15 m.p.h.	Nets: 1,200 feet 6 1/2-inch nylon gill net and 900 feet of 5 3/4-inch nylon gill net, set 24 hours.
Water Depth: 4 feet	

Total contents of nets:

37 black drum	4 hardhead catfish
1 speckled trout (dead)	4 stingrays
1 flounder	2 cow-nosed rays
1 sheepshead	3 blue crabs
1 pompano	

In December 1963, two checks were made of set gill nets, both in the Three Islands area. The results of these checks are as follows:

Date: December 2, 1963

Location: Cameron County, 1/2 mile E. of Intracoastal Waterway Marker No. 33

Weather: Clear

Wind: SE. 4 to 8 m.p.h.

Nets: 1,500 feet 5 1/2-inch nylon gill net and 600 feet 5 1/2-inch monofilament gill net, set 24 hours

Water Depth: 3 feet

Total contents of nets:

275 black drum	2 speckled trout (1 dead)
12 sheepshead	8 blue crabs
7 redfish (2 dead)	

Date: December 27, 1964

Location: Cameron County, 1/4 mile NE., Intracoastal Waterway Marker No. 39

Weather: Partly Cloudy

Wind: NW. 8 to 10 m.p.h.

Nets: 2,400 feet, 5-inch nylon gill net set 24 hours

Water Depth: 3 feet

Total contents of nets:

750 black drum	2 sheepshead
7 speckled trout (1 dead)	2 blue crabs
4 redfish	

During the remaining two months of the season, numerous visits were made to the fishing grounds, but no actual net checks were made.

The results of these net checks show no significant changes from similar net checks made in previous years. Mortalities of food and/or game fish other than black drum remained at a low level when the contract holder and all other persons concerned adhered to the laws of the State of Texas and the current rules and regulations of the department.

Since the inception of the contract drum netting program, the rules and regulations have provided that the permit holder keep a daily record of certain pertinent information concerning his fishing operations. This daily record, which included the area of the bay fished, number of pounds, mesh size and length of nets used, number of hours nets had been set, and price paid per

pound for the fish sold was submitted monthly on data forms provided by the department (Fig. 1). All monthly data forms were received and their data compiled and analyzed. Pertinent data were used to evaluate the catch per unit of effort, value received for the total catch, and relative abundance of various age groups. Comparisons were made with information obtained in similar reports from the previous years.

Of the 268,191 pounds of drum (dressed weight) taken during the 1963-64 season, 190,452 pounds or 71 per cent were drum weighing 5 pounds or less and were sold gutted and gilled. During the 1962-63 season, 34 per cent of the total harvest was composed of drum of this size, with 70 per cent during the 1961-62 season. This indicated a recovery to the 1961-62 season high level of small drum compared to the shortage of this size during the 1962-63 season.

The remaining 77,739 pounds or 29 per cent caught in 1963-64 were over 5 pounds each in weight and were sold gutted and headed. No drum were reported sold collared and gutted with roe and bladder removed.

Using 19 per cent as the average weight loss in gutting and gilling the 190,452 pounds of smaller choice drum and 29 per cent as the average weight loss in heading and gutting the remaining 77,739 pounds of larger drum, the total calculated live weight of the 1963-64 season's catch is 344,602 pounds. This is compared to the calculated live weight of 685,558 pounds in the 1962-63 season and 725,561 pounds in the 1961-62 season.

The 268,191 pounds of drum (dressed weight) taken represents a 42 per cent drop from the 462,577 pounds taken during the 1962-63 season, and a 48 per cent drop from the 562,034 pounds harvested in the 1961-62 season. The 344,602 pounds of drum by calculated live weight is a drop of 50 per cent from the 1962-63 season harvest of 685,558 pounds and a 53 per cent drop from the 725,561 pounds harvested during the 1961-62 season.

The average number catch per day per contractor ranged from 73 to 666 pounds of dressed drum with an average of 369 pounds. This compares with the range of 99 to 880 pounds and the average of 450 pounds during the 1962-63 season, and 107 to 679 pounds and an average of 362 pounds during the 1961-62 season.

During the 1963-64 season, 258,383 pounds of drum (dressed weight) sold for \$20,429.57. This represented an average of 7.907 cents per pound. The 409,877 pounds of dressed drum taken during the 1962-63 season sold for a total of \$30,315.60 and an average of 7.396 cents per pound. The 558,074 pounds taken in the 1961-62 season brought \$46,849.26 and an average of 8.394 cents per pound.

Table 1 shows the range in prices paid for drum sold each month, the pounds sold at each price, and the value received.

The same record of catch data form used during the 1963-64 season was used the previous season. It provided space for noting the area fished, and had a map on the reverse side showing the numbered areas of the bay (Fig. 2). The nine fishing areas were based on natural and artificial boundaries separating zones of varying habitat (Areas 8 and 10 in Willacy County were deleted by law in 1963). The description of each area and its boundary was printed with the map.

Areas 1 through 7 were located in Cameron County and were available for fishing from November 1, 1963 through March 5, 1964. Areas 9 and 11, available for fishing from December 1, 1963 through March 5, 1964, were located in Willacy County. In all areas, recent legislation allowed fishing to start one month earlier than in previous seasons.

Table 2 shows the pounds of drum landed (dressed weight), net days fished, and pounds per net day by area and by 10-day periods beginning November 1, 1963.

A net day is arbitrarily defined as one 300-foot long gill net set for a period of 24 hours. "Pounds per net day" is the weight of drum (dressed weight) harvested in a net day. Totals and averages are also given in the table, both by period and by area.

As in the previous season, Area 1 was seldom fished. A few sets were made just inside Brazos Santiago Pass when drum were utilizing this pass, and an occasional test set was made in South Bay, but no significant drum catches came from this area.

Areas 2, 3, and 5 are primarily deep water regions of Port Isabel Bay, which produced 91 per cent of all drum harvested from the waters of Cameron County during the season. These same areas produced 94 per cent of the county harvest during the 1962-63 season. Areas 4 and 7 are primarily shallow water regions and are not extensively fished. Area 6 was not even tested during the season.

With Areas 8 and 10 (west of the Intracoastal Waterway) in Willacy County closed to contract netting, fishing was confined to Areas 9 and 11. Total poundage harvested from each area was about even although the catch per unit of effort was twice as great in Area 11 as in Area 9.

As in 1962-63, the best catches per unit of effort came from Area 3 in Cameron County (70.6) and in Area 11 in Willacy County (70.5). Catch per unit effort for all other areas ranged from 31.3 to 47.5 pounds.

The average pounds per net day by area ranged from 31.3 to 70.6 compared to extremes of 30.3 to 129.9 pounds during the previous season. The average pounds per net day by period ranged from 19.9 to 90.4 as compared to extremes of 12.2 to 104.2 in the 1962-63 season. The average catch per net day for the total catch in all areas through all periods was 50.9 pounds, compared to 65.1 pounds in the previous season.

Using both total pounds and pounds per net day, the peak harvest in all areas for the 1963-64 season occurred in the 8th period and for the 1962-63 season in the 5th period. Each of these periods, however, corresponds to the same dates (January 10 through 19). Moreover, the secondary peaks for the 1963-64 season occurred in the 13th period (February 29 through March 19), while the corresponding peak for the 1962-63 season occurred in the 10th period (March 1 through 10).

Comments: Apparent discrepancies in the total pounds of dressed drum used in this report can be clarified. The total pounds of dressed drum landed by all methods and in all areas during the entire contract season was 268,191. The total of 258,382 pounds reported in Table 1 represents those drum which were sold and do not include those drum for which there was no sale or which, for any reason, were not sold. The 255,701 pounds of dressed drum reported in Table 2 represents those drum which were harvested by set gill nets and do not include those harvested by strike methods.

The obvious reduction in the harvest of black drum during the 1963-64 season compared to the harvest of the previous season was due to many factors, which included the general reduction in the availability of drum over previous years, a reduction in the number of capable full-time fishermen, lack of ideal set net weather during most of the season, and the premature closing of the season some 26 days prior to its natural closing date.

While 71 per cent of the 1963-64 catch was of small choice drum, compared to only 34 per cent of this size during the previous season, the difference would probably not have been quite so great had the 1963-64 season been allowed

to run its course, as a sizeable bull drum population was reported in Port Isabel Bay just after the season was closed. The total would still have been far less than the previous season, however, and it would still have shown the third consecutive season of drum landings decrease.

The average price paid per pound during the 1963-64 season exceeded that of the 1962-63 season, reflecting the percentage differences between the smaller choice drum and the larger cheaper fish.

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Table 1
Pounds of Dressed Drum and Value Received

PRICE PAID PER POUND	NOV.	DEC.	JAN.	FEB.	MAR.	TOTAL
3¢	--	1,606 \$ 48.18	--	--	--	1,606 \$ 48.18
4¢	--	2,108 \$ 84.32	16 .64	335 \$ 13.40	--	2,459 \$ 98.36
5¢	--	--	2,367 \$ 118.35	3,926 \$ 196.30	--	6,293 \$ 314.65
6¢	--	27,789 \$ 1,667.34	22,292 \$ 1,337.52	9,218 \$ 553.08	1,585 \$ 95.10	60,884 \$ 3,653.04
7¢	463 \$ 32.41	521 \$ 36.47	5,047 \$ 353.29	3,848 \$ 269.36	6,928 \$ 484.96	16,807 \$ 1,176.49
8¢	7,532 \$ 602.56	8,297 \$ 663.76	43,963 \$ 3,517.04	32,693 \$ 2,615.44	6,560 \$ 524.80	99,045 \$ 7,923.60
9¢	--	--	4,666 \$ 419.94	2,320 \$ 208.80	--	6,986 \$ 628.74
10¢	10,363 \$ 1,036.30	5,090 \$ 509.00	10,445 \$ 1,044.50	27,619 \$ 2,761.90	3,422 \$ 342.20	56,939 \$ 5,693.90
11¢	--	--	--	--	--	--
12¢	246 \$ 23.52	--	--	4,588 \$ 550.56	1,824 \$ 218.88	6,658 \$ 798.96
13¢	705 \$ 91.65	--	--	--	--	705 \$ 91.65
Total	19,309 \$ 1,792.44	45,411 \$ 3,009.07	88,796 \$ 6,791.28	84,547 \$ 7,168.84	20,319 \$ 1,665.94	258,382 \$ 20,427.57

Table 2
Pounds, Net Days and Pounds Per Net Day by Periods and
Areas of Set Gill Nets in Cameron and Willacy Counties
November 1, 1963 to March 5, 1964
With Totals and Averages

Period	Date	AREA 2			AREA 3			AREA 4			AREA 5		
		Lbs.	N.D.	P/ND	Lbs.	N.D.	P/ND	Lbs.	N.D.	P/ND	Lbs.	N.D.	P/ND
1	11/10/63	119	4	29.9	4348	99	43.9	--	--	--	1268	84	15.1
2	11/20/63	2194	100	21.9	1816	104	17.5	82	8	10.3	2375	113	21.0
3	11/30/63	2306	101	22.8	--	--	--	--	--	--	2605	92	28.3
4	12/10/63	99	4	24.8	2625	35	75.0	--	--	--	6443	192	33.5
5	12/20/63	272	7	38.9	5504	92	59.8	--	--	--	5011	128	39.1
6	12/30/63	279	7	39.4	4437	86	51.6	--	--	--	5593	118	47.4
7	1/9/64	1176	33	35.7	4528	128	35.4	3226	88	36.7	7132	114	62.5
8	1/19/64	3656	46	79.5	17337	168	103.2	--	--	--	12227	152	80.4
9	1/29/64	--	--	--	1370	24	57.1	1740	48	36.3	12060	314	38.4
10	2/8/64	230	8	28.8	3417	32	106.8	825	16	51.6	10272	254	40.4
11	2/18/64	765	32	23.9	3174	40	79.4	--	--	--	16666	286	58.3
12	2/28/64	997	24	41.5	4613	24	192.2	--	--	--	16755	276	60.7
13	3/9/64	--	--	--	7271	24	303.0	--	--	--	8062	140	57.6
Total		12093	366		60440	856		5873	160		106469	2263	
Average				33.0			70.6			36.7			47.5

Area 1 was fished only twice, in Period 1 and in Period 13. There was a total of 250 pounds caught in 8 net-days for an average of 31.3/N.D.

Areas 6, 8 and 10 were closed by law.

1. Pounds of dressed drum landed after capture by set gill nets.
2. Net Days = 300 feet of gill net set for 24 hours.
3. P/ND = pounds of dressed drum taken per 300 feet of gill net set for 24 hours.

Table 2 Continued

AREA 7			AREA 9			AREA 11			ALL AREAS		
Lbs.	N.D.	P/ND	Lbs.	N.D.	P/ND	Lbs.	N.D.	P/ND	Lbs.	N.D.	P/ND
--	--	--	--	--	--	--	--	--	5735	187	30.6
--	--	--	--	--	--	--	--	--	6467	325	19.9
809	60	13.5	--	--	--	--	--	--	5807	257	22.6
783	40	19.6	2007	87	23.1	470	8	58.8	12427	366	33.9
2708	48	56.4	2257	70	32.2	2380	40	59.5	18132	385	47.1
1817	40	45.4	1087	49	22.2	--	--	--	13213	300	44.4
--	--	--	945	51	18.5	5578	72	77.5	22585	486	46.6
--	--	--	1802	27	66.8	7746	80	96.8	42768	473	90.4
--	--	--	604	33	18.3	4039	80	50.5	19813	499	39.9
1593	8	199.1	1461	72	20.3	4866	80	60.8	22664	470	48.2
1527	40	38.2	4711	110	42.8	3133	40	78.3	29976	548	54.6
2457	32	76.8	13686	152	90.0	--	--	--	38508	508	75.9
--	--	--	2110	50	42.2	--	--	--	17606	218	80.7
11694	268		30670	701		28212	400		255701	5022	
	43.6			43.7			70.5			50.9	

Figure 1
 RECORD OF CATCH OF CONTRACT FISHERMEN
 for the month of _____, 19__

Contract fishermen are required to fill out the following reports monthly and file with the Game and Fish Commission, 1118 Rio Hondo Road, Harlingen, Texas. This report must be received within 10 days after the final entry of the month. Failure to comply will result in the loss of fishing contract.

Date	Area Fished	Head on		Head off		Gear Used	Price paid per lb.		Fish Tags		Actual net hours fishing
		Number	Weight	Number	Weight		Head on	Head off	Tag number	Location taken	
1.						← →					
2.						expanded					
3.						on actual					
4.						form					
5.											
6.											
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29.											
30.											
31.											

Signed: _____

Contract Holder

Date: _____

Figure 2

Areas Fished

Area 1--South Bay; All

Area 2--North of the Queen Isabella Causeway, south of ICC Marker #79 and west of the Intracoastal Canal.

Area 3--North of the Queen Isabella Causeway, south of ICC Marker #79 and east of the Intracoastal Canal.

Area 4--North of ICC Marker #79, south of ICC Marker #39 and west of the Intracoastal Canal.

Area 5--North of ICC Marker #79, south of ICC Marker #39 and east of the Intracoastal Canal.

Area 6--North of ICC Marker #39, south of the Cameron-Willacy County line and west of the Intracoastal Canal.

Area 7--North of ICC Marker #39, south of the Cameron-Willacy County line and east of the Intracoastal Canal.

Area 8--Willacy County; north of the Cameron County line, south of Mansfield Channel and west of the Intracoastal Canal.

Area 9--Willacy County; north of the Cameron County line, south of Mansfield Channel and east of the Intracoastal Canal.

Area 10--Willacy County; north of Mansfield Channel, south of the Kenedy County line and west of the Intracoastal Canal.

Area 11--Willacy County; north of the Port Mansfield Channel, south of the Kenedy County line and east of the Intracoastal Canal.

