

# **GUAM 2003 FISHERY STATISTICS**

Compiled by

Guam Division of Aquatic and Wildlife Resources

and the

Western Pacific Fishery Information Network

May 2005



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# GUAM 2003 FISHERY STATISTICS

## INTRODUCTION

The Territory of Guam is the southernmost, largest, and most populous island in the Mariana Archipelago.

*Location:* 13.4°N latitude, 144.4°E longitude

*Population:* 166,000 (*The World Factbook*, 2004)

*Economy:* U.S. military, tourism, and fish and handicrafts exports



Guam

source: <http://www.cia.gov/cia/publications/factbook/geos/gq.html>

*The World Factbook*

Fishing activities on Guam are divided into two basic categories: offshore and inshore fishing. Offshore fishing typically involves small boats (12 to 48 feet) going on 1- to 2-day trolling and bottomfishing trips. They usually originate from one of the three principal harbors located on the west coast and southern tip of the island. Inshore fishing is usually conducted without the use of a boat and consists mostly of nearshore casting, netting, and spearfishing. From the late 1980s to about 1996, the sportfishing charter boat industry grew significantly due to a strong Asian economy. Since 1996, declines in that economy have resulted in a downturn. However, charter boats still contribute considerably to the commercial landings on Guam since much of their catch is sold.

In recent years, the consumption of reef-associated fish has increased on Guam. This demand, however, appears to be stressing bottomfish and reef fish stocks around Guam. These stocks are not caught just by bottomfishing, but also by other methods such as gillnetting and SCUBA spearfishing.

In 1982, WPacFIN began working with staff of the Division of Aquatic and Wildlife Resources (DAWR) and with local fish dealers to obtain information on commercial landings through voluntary use of “trip ticket” invoices provided by WPacFIN. The tables and graphs in this section are based on data that are summarized from receipts submitted by all participating dealers on Guam and then adjusted to create the estimated total commercial landings based on an estimated annual percent coverage factor.

## COMMERCIAL LANDINGS DATA COLLECTION SYSTEM

There are three sources of fish in Guam's commercial market: 1) full-time commercial fishermen; 2) part-time commercial fishermen; and 3) subsistence or recreational "expense" fishermen who frequently sell portions of their catch to help defray costs. Licenses are not required to sell fish in Guam, nor are there any reporting requirements for those selling fish.

In July 1979 the Guam Fishermen's Coop was established in Agana through government funding. It subsequently became the central distribution center for fresh local fish. Prior to 1979 there was no central place to sell fish, and fishermen had to develop their own markets and peddle fish after each trip.

In 1982, WPacFIN began working with the Coop to improve their invoicing system and to obtain data on all fish purchases. A cooperative system was established whereby the Coop would use forms and coding schemes designed by WPacFIN and would supply copies of all invoices to WPacFIN for computer data entry. In return, WPacFIN would provide the Coop with document quality control and computer-generated summary statistics. All purchase data back to July 1979 were also coded and computerized. As time progressed, other fish markets began to operate, and DAWR and WPacFIN staff worked with them to obtain data through the voluntary receipt book program.

Although a proposed law has been introduced several times that would require reporting by dealers and possibly commercial fishermen, it has never made it very far through the legislative process, and the commercial landings data collection system remains voluntary.

Data collected on commercial receipts forms include

- Date
- Number of fishermen
- Area fished
- Number of pieces caught
- Price per pound
- Fisherman code
- Hours fished
- Species caught
- Pounds caught

## COMMERCIAL LANDINGS DATA PROCESSING SYSTEM

In earlier years data were processed at the central WPacFIN office in Honolulu. But beginning in 1994 DAWR staff took over this task using a computer and software provided by WPacFIN. The processing system for the commercial landings data collected from the fish dealers is fairly straightforward. Dealers complete a purchase form every time they purchase fish from a fisherman. On this form, catches are divided into categories for weighing by species or species group (where practicable, number of pieces is also recorded). Once all the edits, adjustments, verifications, and corrections are made, summary reports are generated.



Numerous standard reports are available, but only the monthly and annual landings by species are provided in this document.

### COMMERCIAL LANDINGS DATA REPORTING SYSTEM

After completing all editing, adjusting, and quality control activities for the commercial landings data, monthly and annual summary reports by species are generated. Each table contains information on the pounds, value, and the average price per pound for each species or species group. Each monthly report contains a subtotal for the sum of all species combined for that month. Annual reports contain the estimated total landings for each species and the estimated total recorded landings for all species for the calendar year. Included with the estimated commercial landings summary reports are graphs of some of the important statistics.

Please note that commercial landings data have been adjusted to reflect total coverage and are referenced as “Estimated Commercial Landings” in the charts and tables. Also, some of the charts in this volume are new or modified from earlier volumes.

To access the most up-to-date data and charts, please visit the WPacFIN Website at <<http://www.pifsc.noaa.gov/wpacfin>>.

The following groupings of species, species categories, and abbreviations are used in the tables and graphs for Guam's commercial landings:

*Note: Many of the species included in this report have been recategorized over the years. For example, the Magnuson Fishery Conservation and Management Act of 1976 was amended in 1992 to include tunas in the Pelagic Management Unit Species (PMUS) category. However, this FSWP volume will maintain the original species categorizations from previous volumes for comparative purposes. As such, tunas are kept in a separate category.*

#### I. Pelagic Management Unit Species (PMUS)

- Mahimahi (dolphin)
- Marlin (probably all blue but possibly striped or black)
- Spearfish
- Sailfish
- Wahoo
- Sharks

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### II. Bottomfish Management Unit Species (BMUS)

Jacks (unclassified but excluding bigeye scad)  
Amberjack  
Bottomfish (unclassified)  
Ehu (red snapper)  
Gindai (flower snapper)  
Grouper  
Kalekale (pink snapper)  
Lehi (silverjaw snapper)  
Onaga (red or longtail snapper)  
Opakapaka (pink snapper)  
Uku (gray snapper)  
Emperor (mafute)

### III. Billfish

Marlin (probably all blue but possibly striped or black)  
Spearfish  
Sailfish

### IV. Tunas

Tunas (unclassified)  
Skipjack Tuna  
Yellowfin Tuna  
Dogtooth or White Tuna  
Kawakawa

### V. Other Tuna

All the above tunas excluding skipjack and yellowfin tunas.

### VI. Fisheries Categories

#### A. Pelagic Species

All PMUS and tuna species plus the following:

Troll Fish (unclassified)  
Barracuda  
Rainbow Runner

## C.5

### B. Bottomfish

Same as the BMUS

### C. Reef Fish

Reef Fish (unclassified)	Parrotfish
Giant Wrasse	Snapper
Rabbitfish	Surgeonfish
Rudderfish	Unicornfish
Squirrelfish	Goatfish

### D. Other

Miscellaneous (unclassified)	Coconut Crab
Bigeye Scad	Lobster
Mullet	Shrimp
Eels	Octopus
Milkfish	Squid
Invertebrates (unclassified)	Seaweeds
Crabs (unclassified)	Imported

## **INTERPRETATION OF STATISTICS**

The user is reminded again to pay heed to the precautions and assumptions identified earlier in this document when making interpretations of or inferences from data reported in the tables and graphs. Remember also that the commercial landings summaries are adjusted numbers based on samples of fishing activities.

## C.6

**Table C-1**  
**2003 Estimated Commercial Landings**

Species	Pounds	Value	Price/Lb.
Unknown	135	\$418	\$3.09
Assorted	16	\$40	\$2.50
Miscellaneous	496	\$1,134	\$2.28
Bigeye Scad (Atulai)	1,532	\$2,739	\$1.79
Black Jack	78	\$198	\$2.53
Jacks	2,820	\$7,390	\$2.62
Sharks	6	\$15	\$2.50
Bottom Fish	889	\$2,640	\$2.97
Ehu (Red Snapper)	393	\$1,502	\$3.83
Gindai (Flower Snap)	222	\$885	\$3.99
Grouper	1,444	\$4,009	\$2.78
Kalikali (Pink Snap)	179	\$600	\$3.35
Lehi (Silverjaw)	222	\$852	\$3.83
Onaga (Red Snapper)	1,428	\$7,061	\$4.95
Opakapaka (Pink Snp)	270	\$1,069	\$3.96
Uku (Gray Snapper)	190	\$501	\$2.64
Amberjack	204	\$527	\$2.58
Reef Fish	51,397	\$151,081	\$2.94
Wrasse	549	\$1,430	\$2.61
Rabbitfish	658	\$1,944	\$2.95
Rudderfish (Guilli)	107	\$321	\$3.00
Mafute (Emperor)	3,195	\$8,805	\$2.76
Parrotfish	305	\$893	\$2.93
Snapper	187	\$466	\$2.50
Surgeonfish	1,374	\$3,660	\$2.66
Unicornfish	13,688	\$34,676	\$2.53
Goatfish	354	\$1,007	\$2.84
Troll Fish	109	\$146	\$1.34
Barracuda	3,100	\$6,073	\$1.96
Mahi / Dolphinfish	55,145	\$89,846	\$1.63
Marlin	44,151	\$48,731	\$1.10
Spearfish	185	\$196	\$1.06
Sailfish	1,806	\$2,321	\$1.29
Rainbow Runner	5,883	\$10,010	\$1.70
Monchong	251	\$628	\$2.50
Wahoo	36,582	\$72,371	\$1.98
Tunas	4	\$8	\$2.00
Bonita/skipjack Tuna	83,171	\$87,721	\$1.05
Dogtooth Tuna	2,289	\$2,880	\$1.26
Yellowfin Tuna	37,868	\$75,386	\$1.99
Kawakawa	86	\$102	\$1.19
Invertebrates	4	\$12	\$3.00
Crabs (Misc)	18	\$44	\$2.50

**Table C-1**  
**2003 Estimated Commercial Landings (cont.)**

Species	Pounds	Value	Price/Lb.
Lobster	2,225	\$7,279	\$3.27
Octopus	3,748	\$9,341	\$2.49
Seaweeds	114	\$0	\$0.00
<b>TOTAL</b>	<b>359,078</b>	<b>\$648,957</b>	<b>\$1.81</b>

**Table C-2**  
**January 2003 Estimated Commercial Landings**

Species	Pounds	Value	Price/Lb.
Black Jack	8	\$23	\$2.75
Jacks	107	\$284	\$2.65
Ehu (Red Snapper)	12	\$47	\$4.00
Gindai (Flower Snap)	27	\$108	\$4.00
Grouper	65	\$196	\$3.00
Kalikali (Pink Snap)	8	\$25	\$3.00
Lehi (Silverjaw)	12	\$49	\$4.00
Onaga (Red Snapper)	46	\$229	\$5.00
Uku (Gray Snapper)	10	\$28	\$2.75
Amberjack	12	\$37	\$3.00
Reef Fish	3,782	\$11,251	\$2.97
Rabbitfish	101	\$304	\$3.00
Rudderfish (Guilli)	107	\$321	\$3.00
Mafute (Emperor)	109	\$316	\$2.89
Snapper	31	\$78	\$2.50
Troll Fish	12	\$24	\$2.00
Barracuda	138	\$275	\$2.00
Mahi / Dolphinfish	7,801	\$13,243	\$1.70
Marlin	174	\$250	\$1.44
Spearfish	42	\$52	\$1.25
Sailfish	62	\$77	\$1.25
Rainbow Runner	1,262	\$2,279	\$1.81
Wahoo	3,490	\$7,101	\$2.03
Bonita/skipjack Tuna	3,448	\$4,430	\$1.28
Dogtooth Tuna	121	\$179	\$1.48
Yellowfin Tuna	4,777	\$9,762	\$2.04
Lobster	574	\$1,172	\$2.04
Octopus	267	\$690	\$2.58
<b>TOTAL</b>	<b>26,606</b>	<b>\$52,830</b>	<b>\$1.99</b>

**Table C-3**  
**February 2003 Estimated Commercial Landings**

Species	Pounds	Value	Price/Lb.
Unknown	123	\$368	\$3.00
Bigeye Scad (Atulai)	5	\$14	\$3.00
Black Jack	16	\$41	\$2.50
Jacks	13	\$32	\$2.50
Bottom Fish	106	\$318	\$3.00
Gindai (Flower Snap)	18	\$71	\$4.00
Grouper	23	\$69	\$3.00
Lehi (Silverjaw)	14	\$54	\$4.00
Onaga (Red Snapper)	80	\$400	\$5.00
Opakapaka (Pink Snp)	5	\$21	\$4.00
Uku (Gray Snapper)	58	\$152	\$2.64
Reef Fish	4,138	\$12,392	\$2.99
Mafute (Emperor)	112	\$330	\$2.93
Barracuda	486	\$909	\$1.87
Mahi / Dolphinfish	15,071	\$23,683	\$1.57
Marlin	205	\$283	\$1.38
Spearfish	11	\$11	\$1.00
Sailfish	249	\$433	\$1.74
Rainbow Runner	437	\$777	\$1.78
Monchong	114	\$284	\$2.50
Wahoo	4,409	\$8,793	\$1.99
Bonita/skipjack Tuna	2,503	\$3,262	\$1.30
Dogtooth Tuna	161	\$201	\$1.25
Yellowfin Tuna	1,976	\$4,073	\$2.06
Lobster	58	\$216	\$3.75
Octopus	248	\$690	\$2.78
Seaweeds	114	\$0	\$0.00
<b>TOTAL</b>	<b>30,749</b>	<b>\$57,877</b>	<b>\$1.88</b>

**Table C-4**  
**March 2003 Estimated Commercial Landings**

Species	Pounds	Value	Price/Lb.
Unknown	12	\$49	\$4.00
Assorted	16	\$40	\$2.50
Jacks	299	\$810	\$2.71
Bottom Fish	83	\$249	\$3.00
Ehu (Red Snapper)	86	\$346	\$4.00
Gindai (Flower Snap)	2	\$9	\$4.00
Grouper	75	\$224	\$3.00
Kalikali (Pink Snap)	23	\$93	\$4.00
Lehi (Silverjaw)	49	\$195	\$4.00
Onaga (Red Snapper)	205	\$1,012	\$4.94
Opakapaka (Pink Snp)	31	\$125	\$4.00
Uku (Gray Snapper)	21	\$51	\$2.50
Amberjack	94	\$235	\$2.51
Reef Fish	4,318	\$12,903	\$2.99
Rabbitfish	119	\$356	\$3.00
Mafute (Emperor)	267	\$746	\$2.80
Snapper	12	\$29	\$2.50
Unicornfish	4	\$11	\$3.00
Barracuda	328	\$626	\$1.91
Mahi / Dolphinfish	11,562	\$19,406	\$1.68
Marlin	1,331	\$1,668	\$1.25
Sailfish	62	\$77	\$1.25
Rainbow Runner	549	\$988	\$1.80
Monchong	32	\$79	\$2.50
Wahoo	7,526	\$15,465	\$2.05
Bonita/skipjack Tuna	8,010	\$10,301	\$1.29
Dogtooth Tuna	386	\$500	\$1.29
Yellowfin Tuna	2,760	\$5,340	\$1.93
Lobster	133	\$498	\$3.75
Octopus	41	\$113	\$2.75
<b>TOTAL</b>	<b>38,435</b>	<b>\$72,547</b>	<b>\$1.89</b>



**Table C-5**  
**April 2003 Estimated Commercial Landings**

Species	Pounds	Value	Price/Lb.
Miscellaneous	9	\$24	\$2.50
Black Jack	45	\$112	\$2.50
Jacks	228	\$612	\$2.68
Bottom Fish	39	\$118	\$3.00
Ehu (Red Snapper)	8	\$31	\$4.00
Gindai (Flower Snap)	27	\$108	\$4.00
Grouper	194	\$453	\$2.34
Kalikali (Pink Snap)	8	\$23	\$3.00
Lehi (Silverjaw)	8	\$33	\$4.00
Onaga (Red Snapper)	78	\$388	\$5.00
Opakapaka (Pink Snp)	2	\$9	\$4.00
Uku (Gray Snapper)	9	\$28	\$3.00
Reef Fish	5,535	\$16,158	\$2.92
Wrasse	14	\$39	\$2.75
Rabbitfish	25	\$76	\$3.00
Mafute (Emperor)	135	\$389	\$2.89
Unicornfish	41	\$124	\$3.00
Barracuda	366	\$732	\$2.00
Mahi / Dolphinfish	6,701	\$10,758	\$1.61
Marlin	4,376	\$5,582	\$1.28
Spearfish	28	\$28	\$1.00
Sailfish	196	\$255	\$1.30
Rainbow Runner	281	\$525	\$1.87
Wahoo	3,943	\$7,840	\$1.99
Bonita/skipjack Tuna	9,220	\$10,160	\$1.10
Dogtooth Tuna	96	\$121	\$1.25
Yellowfin Tuna	4,755	\$9,187	\$1.93
Lobster	47	\$178	\$3.75
Octopus	96	\$260	\$2.69
<b>TOTAL</b>	<b>36,511</b>	<b>\$64,347</b>	<b>\$1.76</b>

**Table C-6**  
**May 2003 Estimated Commercial Landings**

Species	Pounds	Value	Price/Lb.
Jacks	477	\$1,297	\$2.72
Bottom Fish	32	\$127	\$4.00
Gindai (Flower Snap)	14	\$52	\$3.83
Grouper	52	\$160	\$3.09
Kalikali (Pink Snap)	20	\$60	\$3.00
Lehi (Silverjaw)	18	\$71	\$4.00
Onaga (Red Snapper)	41	\$206	\$5.00
Opakapaka (Pink Snp)	17	\$68	\$4.00
Uku (Gray Snapper)	11	\$29	\$2.75
Amberjack	11	\$28	\$2.50
Reef Fish	5,945	\$17,605	\$2.96
Wrasse	41	\$113	\$2.75
Rabbitfish	187	\$561	\$3.00
Mafute (Emperor)	245	\$657	\$2.68
Parrotfish	57	\$157	\$2.75
Surgeonfish	215	\$646	\$3.00
Unicornfish	26	\$78	\$3.00
Barracuda	95	\$191	\$2.00
Mahi / Dolphinfish	1,269	\$2,240	\$1.76
Marlin	3,788	\$4,199	\$1.11
Spearfish	34	\$34	\$1.00
Sailfish	403	\$549	\$1.36
Rainbow Runner	559	\$921	\$1.65
Wahoo	942	\$1,943	\$2.06
Bonita/skipjack Tuna	15,068	\$15,068	\$1.00
Dogtooth Tuna	584	\$631	\$1.08
Yellowfin Tuna	3,932	\$7,732	\$1.97
Lobster	186	\$697	\$3.75
Octopus	108	\$298	\$2.75
<b>TOTAL</b>	<b>34,377</b>	<b>\$56,416</b>	<b>\$1.64</b>

**Table C-7**  
**June 2003 Estimated Commercial Landings**

Species	Pounds	Value	Price/Lb.
Miscellaneous	250	\$482	\$1.93
Bigeye Scad (Atulai)	5	\$14	\$3.00
Jacks	123	\$317	\$2.58
Bottom Fish	53	\$160	\$3.00
Ehu (Red Snapper)	60	\$240	\$4.00
Gindai (Flower Snap)	18	\$71	\$4.00
Grouper	195	\$574	\$2.94
Kalikali (Pink Snap)	46	\$165	\$3.56
Lehi (Silverjaw)	17	\$68	\$4.00
Onaga (Red Snapper)	321	\$1,557	\$4.85
Opakapaka (Pink Snp)	102	\$407	\$4.00
Uku (Gray Snapper)	68	\$176	\$2.61
Amberjack	14	\$35	\$2.50
Reef Fish	6,098	\$17,466	\$2.86
Wrasse	43	\$107	\$2.50
Rabbitfish	18	\$55	\$3.00
Mafute (Emperor)	540	\$1,489	\$2.76
Parrotfish	168	\$505	\$3.00
Snapper	34	\$84	\$2.52
Surgeonfish	536	\$1,459	\$2.72
Unicornfish	1,761	\$4,580	\$2.60
Barracuda	134	\$268	\$2.00
Mahi / Dolphinfish	856	\$1,574	\$1.84
Marlin	5,709	\$6,809	\$1.19
Sailfish	36	\$36	\$1.00
Rainbow Runner	616	\$1,065	\$1.73
Monchong	106	\$264	\$2.50
Wahoo	657	\$1,449	\$2.21
Bonita/skipjack Tuna	14,459	\$14,459	\$1.00
Dogtooth Tuna	91	\$147	\$1.61
Yellowfin Tuna	6,439	\$12,173	\$1.89
Lobster	327	\$1,228	\$3.75
Octopus	264	\$679	\$2.57
<b>TOTAL</b>	<b>40,165</b>	<b>\$70,162</b>	<b>\$1.75</b>

**Table C-8**  
**July 2003 Estimated Commercial Landings**

Species	Pounds	Value	Price/Lb.
Miscellaneous	105	\$282	\$2.69
Bigeye Scad (Atulai)	47	\$141	\$3.00
Black Jack	9	\$22	\$2.50
Jacks	311	\$754	\$2.42
Bottom Fish	68	\$204	\$3.00
Ehu (Red Snapper)	128	\$443	\$3.46
Gindai (Flower Snap)	42	\$167	\$4.00
Grouper	256	\$767	\$3.00
Kalikali (Pink Snap)	22	\$75	\$3.34
Lehi (Silverjaw)	13	\$52	\$4.00
Onaga (Red Snapper)	228	\$1,125	\$4.93
Opakapaka (Pink Snp)	20	\$80	\$4.00
Uku (Gray Snapper)	11	\$26	\$2.50
Amberjack	7	\$18	\$2.50
Reef Fish	5,547	\$16,374	\$2.95
Rabbitfish	79	\$238	\$3.00
Mafute (Emperor)	469	\$1,291	\$2.75
Parrotfish	18	\$53	\$3.00
Snapper	13	\$32	\$2.50
Surgeonfish	441	\$1,103	\$2.50
Unicornfish	2,210	\$5,525	\$2.50
Goatfish	201	\$589	\$2.93
Barracuda	134	\$268	\$2.00
Mahi / Dolphinfish	91	\$180	\$1.99
Marlin	10,339	\$11,403	\$1.10
Spearfish	31	\$31	\$1.00
Sailfish	191	\$191	\$1.00
Rainbow Runner	501	\$820	\$1.64
Wahoo	1,062	\$1,484	\$1.40
Tunas	4	\$8	\$2.00
Bonita/skipjack Tuna	15,834	\$14,705	\$0.93
Yellowfin Tuna	4,679	\$9,367	\$2.00
Lobster	395	\$1,482	\$3.75
Octopus	361	\$931	\$2.58
<b>TOTAL</b>	<b>43,867</b>	<b>\$70,229</b>	<b>\$1.60</b>

**Table C-9**  
**August 2003 Estimated Commercial Landings**

Species	Pounds	Value	Price/Lb.
Bigeye Scad (Atulai)	35	\$104	\$2.95
Jacks	75	\$179	\$2.40
Bottom Fish	508	\$1,465	\$2.88
Ehu (Red Snapper)	22	\$89	\$4.00
Gindai (Flower Snap)	26	\$104	\$4.00
Grouper	144	\$432	\$3.00
Kalikali (Pink Snap)	5	\$21	\$4.00
Lehi (Silverjaw)	17	\$68	\$4.00
Onaga (Red Snapper)	146	\$729	\$5.00
Opakapaka (Pink Snp)	10	\$40	\$4.00
Reef Fish	1,204	\$3,522	\$2.93
Wrasse	111	\$306	\$2.75
Rabbitfish	61	\$153	\$2.50
Mafute (Emperor)	424	\$1,166	\$2.75
Parrotfish	12	\$35	\$3.00
Snapper	24	\$60	\$2.50
Unicornfish	1,000	\$2,500	\$2.50
Goatfish	72	\$215	\$3.00
Barracuda	55	\$111	\$2.00
Marlin	4,281	\$3,447	\$0.81
Rainbow Runner	229	\$346	\$1.51
Wahoo	235	\$523	\$2.23
Bonita/skipjack Tuna	3,178	\$3,202	\$1.01
Yellowfin Tuna	1,092	\$2,185	\$2.00
Crabs (Misc)	18	\$44	\$2.50
Lobster	51	\$192	\$3.75
Octopus	291	\$728	\$2.50
<b>TOTAL</b>	<b>13,327</b>	<b>\$21,969</b>	<b>\$1.65</b>

**Table C-10**  
**September 2003 Estimated Commercial Landings**

Species	Pounds	Value	Price/Lb.
Bigeye Scad (Atulai)	244	\$609	\$2.50
Jacks	259	\$668	\$2.58
Sharks	6	\$15	\$2.50
Grouper	23	\$69	\$3.00
Lehi (Silverjaw)	16	\$56	\$3.50
Onaga (Red Snapper)	116	\$579	\$5.00
Reef Fish	1,115	\$3,315	\$2.97
Wrasse	110	\$303	\$2.75
Mafute (Emperor)	182	\$501	\$2.75
Snapper	14	\$35	\$2.50
Unicornfish	538	\$1,349	\$2.51
Barracuda	179	\$359	\$2.00
Mahi / Dolphinfish	159	\$292	\$1.84
Marlin	546	\$660	\$1.21
Rainbow Runner	142	\$214	\$1.50
Wahoo	206	\$410	\$1.99
Bonita/skipjack Tuna	2,601	\$2,389	\$0.92
Dogtooth Tuna	25	\$32	\$1.25
Yellowfin Tuna	669	\$1,312	\$1.96
Kawakawa	4	\$4	\$1.00
Lobster	144	\$542	\$3.77
Octopus	180	\$434	\$2.41
<b>TOTAL</b>	<b>7,479</b>	<b>\$14,145</b>	<b>\$1.89</b>

**Table C-11**  
**October 2003 Estimated Commercial Landings**

Species	Pounds	Value	Price/Lb.
Miscellaneous	64	\$160	\$2.50
Bigeye Scad (Atulai)	1,065	\$1,651	\$1.55
Jacks	287	\$725	\$2.52
Ehu (Red Snapper)	55	\$221	\$4.00
Gindai (Flower Snap)	46	\$186	\$4.00
Grouper	249	\$619	\$2.49
Kalikali (Pink Snap)	38	\$115	\$3.00
Lehi (Silverjaw)	59	\$206	\$3.50
Onaga (Red Snapper)	120	\$600	\$5.00
Opakapaka (Pink Snp)	82	\$319	\$3.87
Uku (Gray Snapper)	1	\$3	\$2.75
Amberjack	66	\$174	\$2.63
Reef Fish	4,212	\$12,279	\$2.92
Wrasse	28	\$78	\$2.75
Rabbitfish	67	\$201	\$3.00
Mafute (Emperor)	547	\$1,493	\$2.73
Parrotfish	14	\$40	\$2.85
Snapper	34	\$84	\$2.47
Surgeonfish	38	\$94	\$2.50
Unicornfish	3,554	\$8,886	\$2.50
Barracuda	492	\$950	\$1.93
Mahi / Dolphinfish	3,346	\$5,138	\$1.54
Marlin	8,531	\$8,930	\$1.05
Spearfish	40	\$40	\$1.00
Sailfish	293	\$360	\$1.23
Rainbow Runner	678	\$1,013	\$1.49
Wahoo	5,062	\$10,045	\$1.98
Bonita/skipjack Tuna	4,748	\$4,877	\$1.03
Dogtooth Tuna	145	\$231	\$1.59
Yellowfin Tuna	2,337	\$4,880	\$2.09
Kawakawa	6	\$6	\$1.00
Lobster	181	\$614	\$3.40
Octopus	734	\$1,682	\$2.29
<b>TOTAL</b>	<b>37,220</b>	<b>\$66,899</b>	<b>\$1.80</b>

**Table C-12**  
**November 2003 Estimated Commercial Landings**

Species	Pounds	Value	Price/Lb.
Miscellaneous	45	\$123	\$2.74
Jacks	26	\$68	\$2.56
Gindai (Flower Snap)	2	\$9	\$4.00
Grouper	148	\$399	\$2.71
Kalikali (Pink Snap)	7	\$21	\$3.00
Reef Fish	4,700	\$13,690	\$2.91
Wrasse	201	\$484	\$2.41
Mafute (Emperor)	128	\$337	\$2.64
Snapper	25	\$63	\$2.50
Unicornfish	2,831	\$7,106	\$2.51
Troll Fish	47	\$47	\$1.00
Barracuda	193	\$386	\$2.00
Mahi / Dolphinfish	4,627	\$7,244	\$1.57
Marlin	2,396	\$2,621	\$1.09
Sailfish	114	\$143	\$1.25
Rainbow Runner	304	\$428	\$1.41
Wahoo	3,901	\$7,232	\$1.85
Bonita/skipjack Tuna	1,848	\$2,039	\$1.10
Dogtooth Tuna	292	\$365	\$1.25
Yellowfin Tuna	1,314	\$2,785	\$2.12
Kawakawa	75	\$92	\$1.22
Lobster	19	\$70	\$3.75
Octopus	547	\$1,336	\$2.44
<b>TOTAL</b>	<b>23,790</b>	<b>\$47,088</b>	<b>\$1.98</b>



**Table C-13**  
**December 2003 Estimated Commercial Landings**

Species	Pounds	Value	Price/Lb.
Miscellaneous	24	\$64	\$2.70
Bigeye Scad (Atulai)	132	\$205	\$1.55
Jacks	614	\$1,645	\$2.68
Ehu (Red Snapper)	21	\$85	\$4.00
Grouper	21	\$48	\$2.25
Kalikali (Pink Snap)	1	\$2	\$3.00
Onaga (Red Snapper)	47	\$235	\$5.00
Uku (Gray Snapper)	2	\$6	\$2.75
Reef Fish	4,803	\$14,126	\$2.94
Mafute (Emperor)	36	\$89	\$2.48
Parrotfish	36	\$102	\$2.85
Surgeonfish	144	\$359	\$2.50
Unicornfish	1,723	\$4,519	\$2.62
Goatfish	81	\$203	\$2.50
Troll Fish	51	\$76	\$1.50
Barracuda	499	\$999	\$2.00
Mahi / Dolphinfish	3,663	\$6,089	\$1.66
Marlin	2,475	\$2,879	\$1.16
Sailfish	199	\$199	\$1.00
Rainbow Runner	326	\$634	\$1.95
Wahoo	5,149	\$10,085	\$1.96
Bonita/skipjack Tuna	2,256	\$2,830	\$1.25
Dogtooth Tuna	388	\$475	\$1.23
Yellowfin Tuna	3,139	\$6,591	\$2.10
Invertebrates	4	\$12	\$3.00
Lobster	111	\$390	\$3.52
Octopus	609	\$1,501	\$2.47
<b>TOTAL</b>	<b>26,552</b>	<b>\$54,447</b>	<b>\$2.05</b>

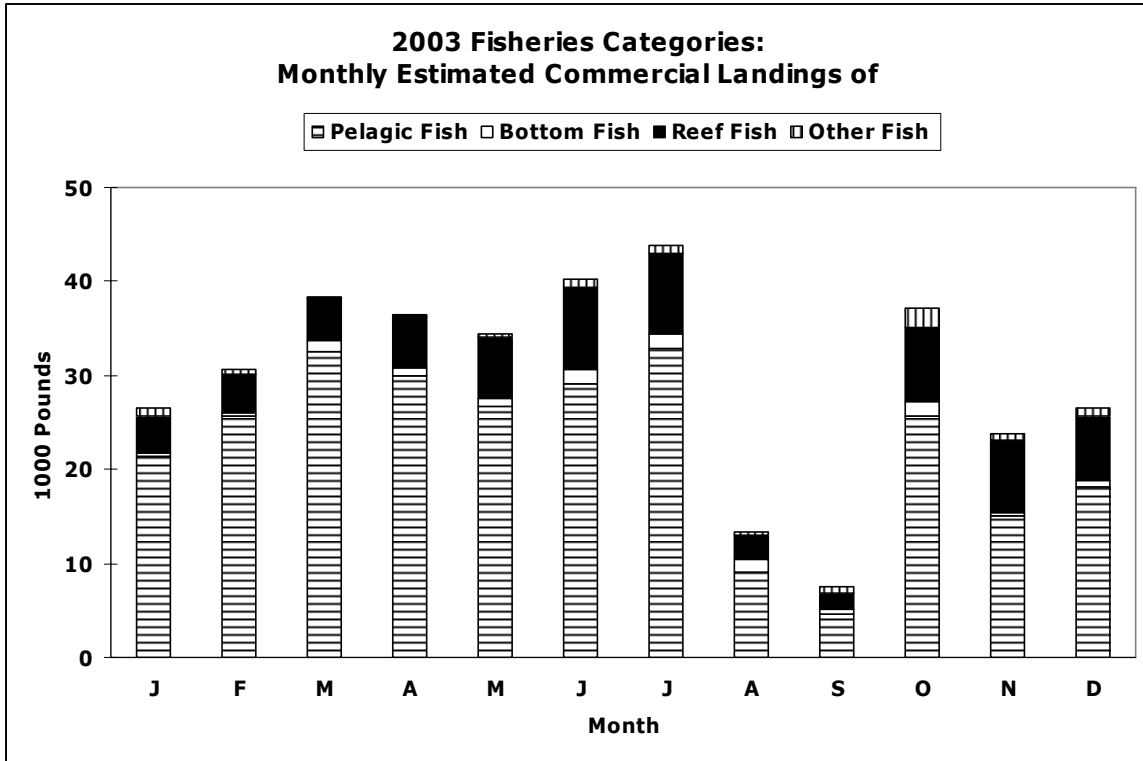


Figure C-1-1

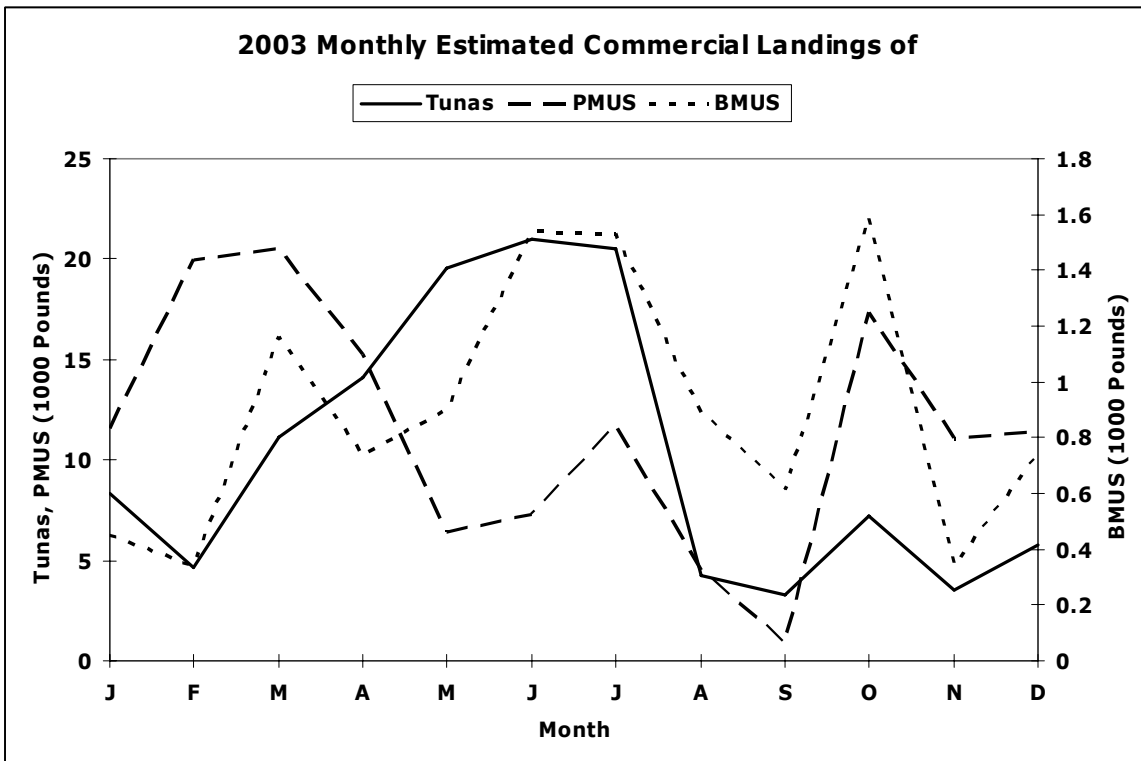


Figure C-1-2

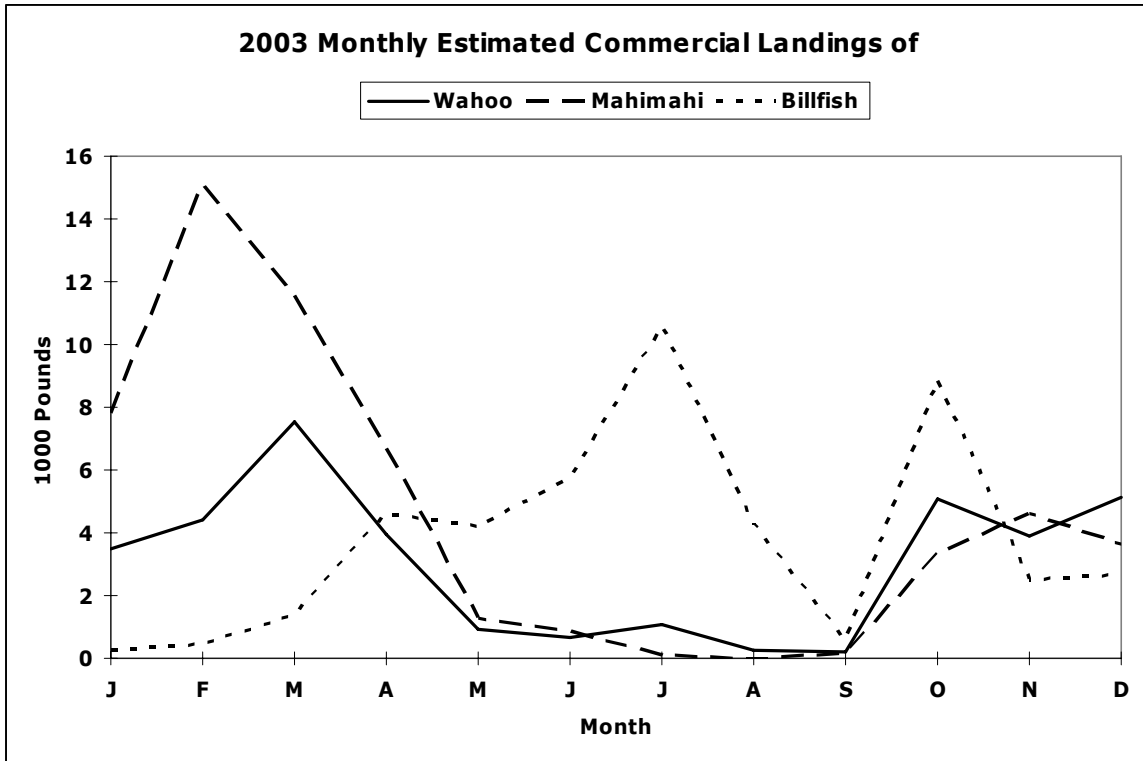


Figure C-1-3

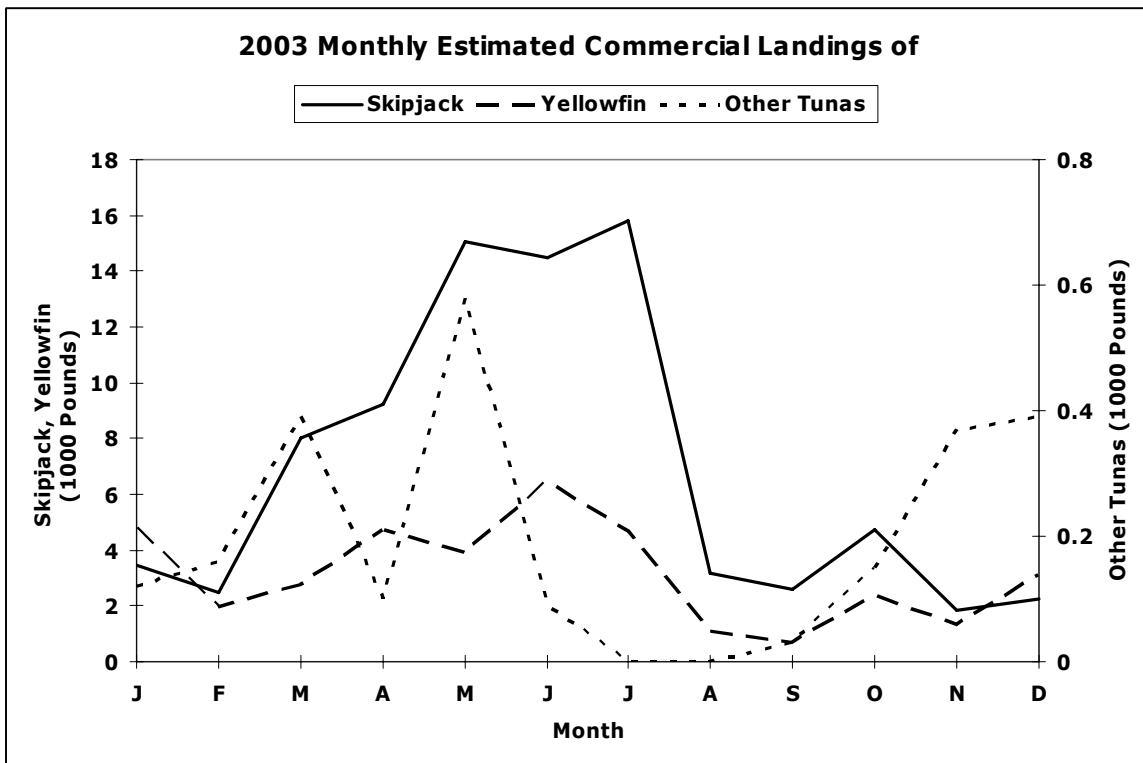


Figure C-1-4

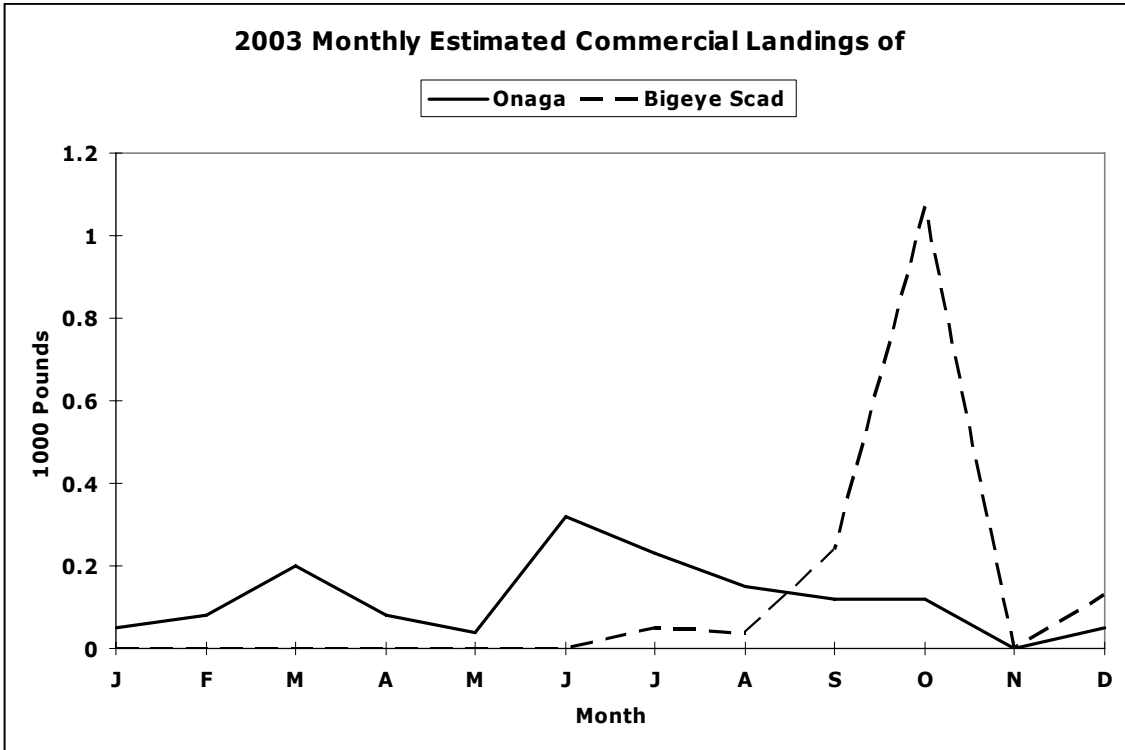


Figure C-1-5

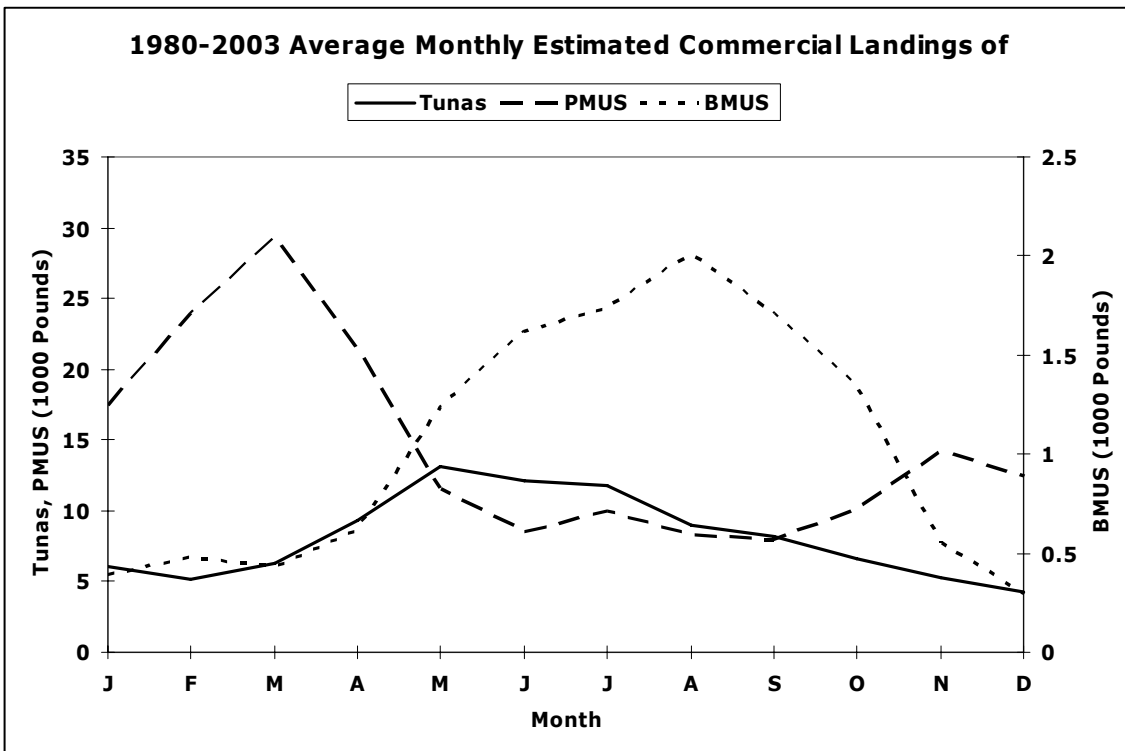


Figure C-2-1

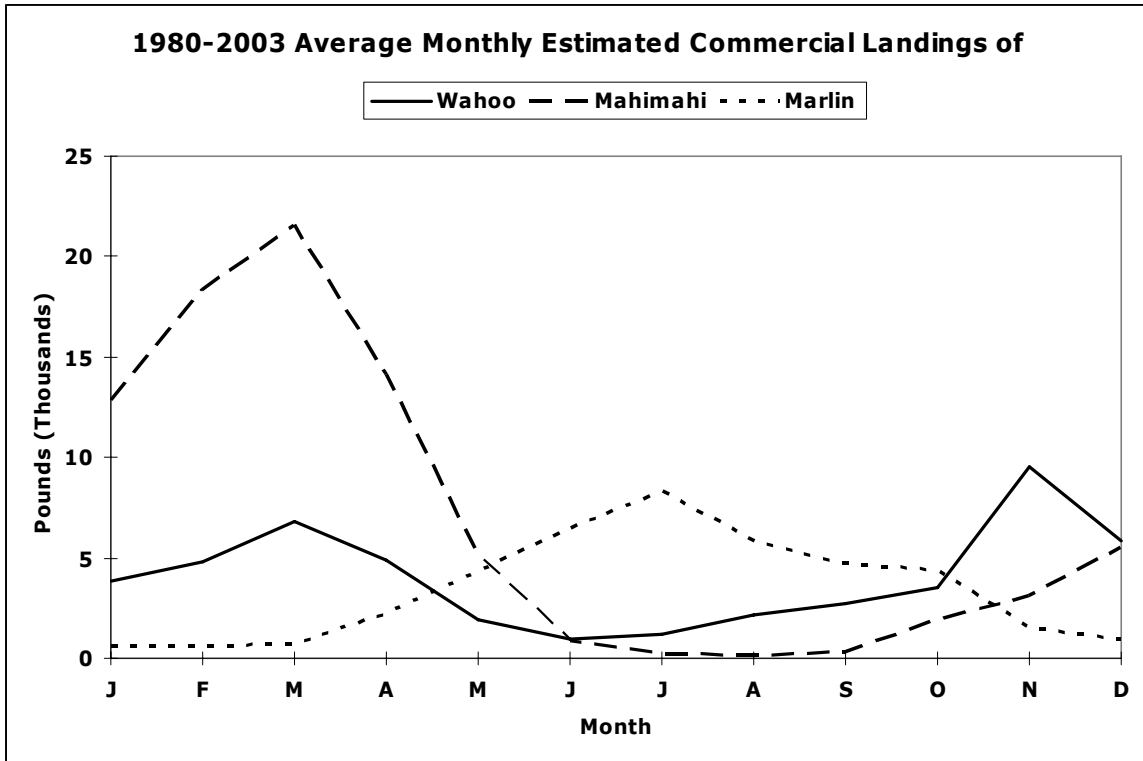


Figure C-2-2

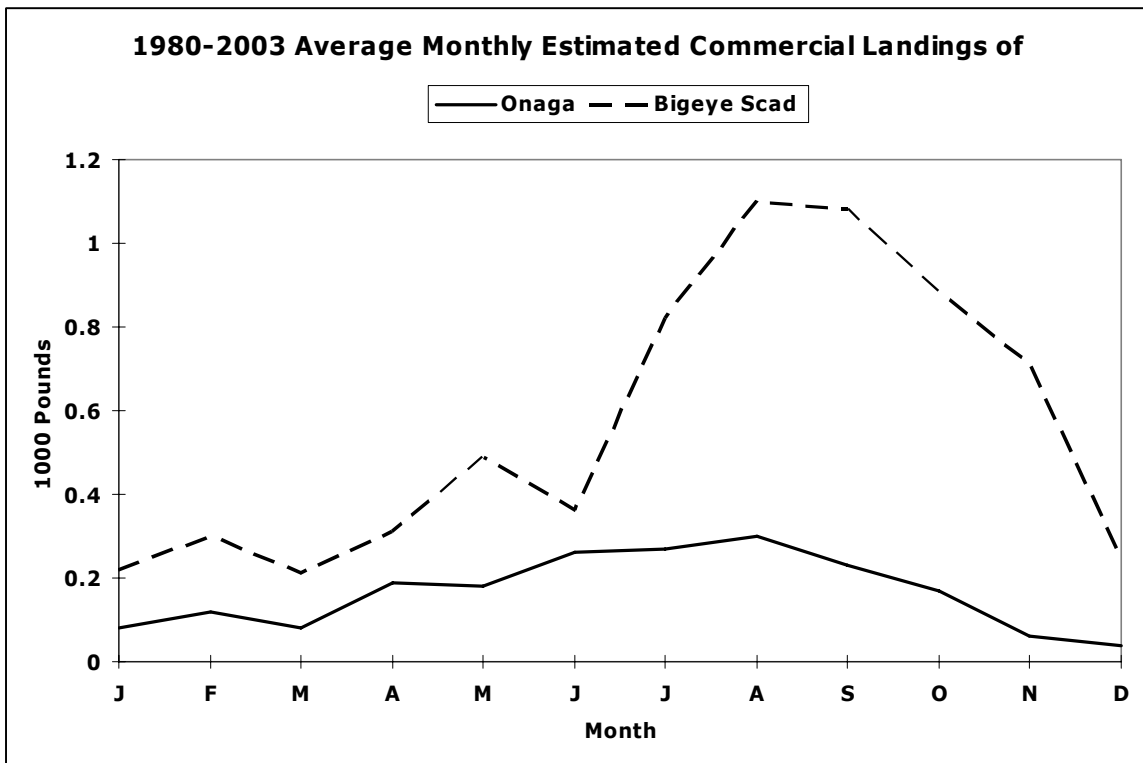


Figure C-2-3

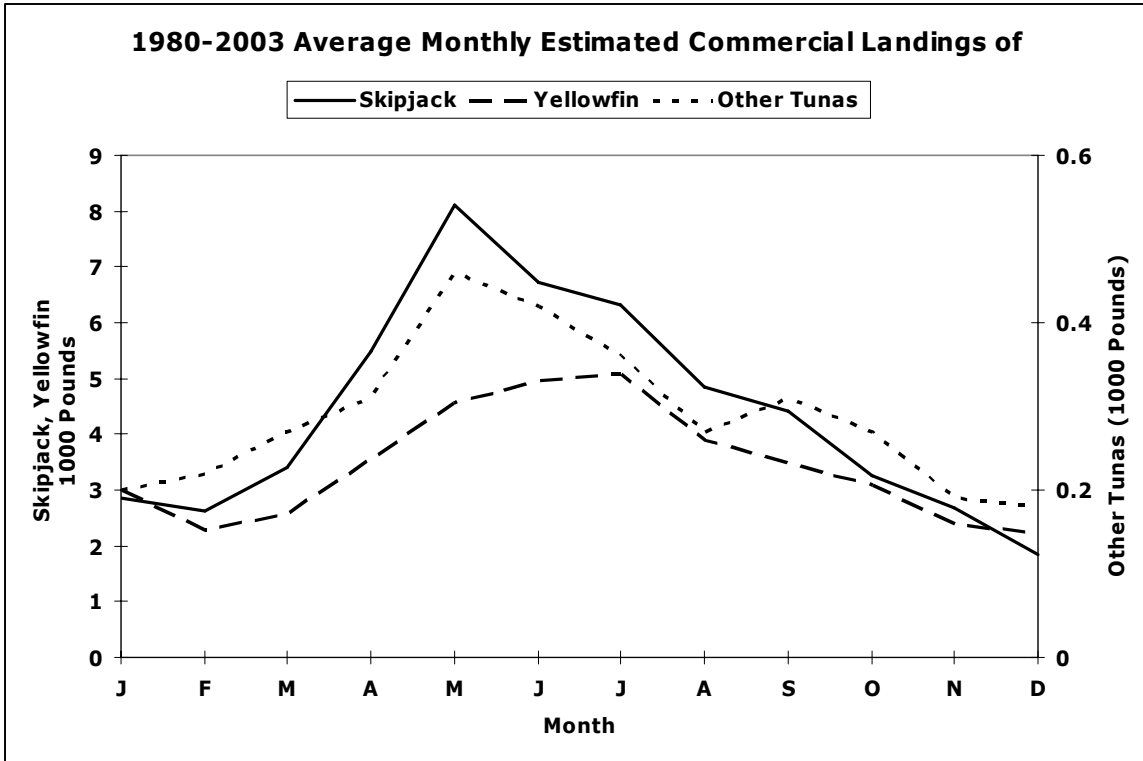


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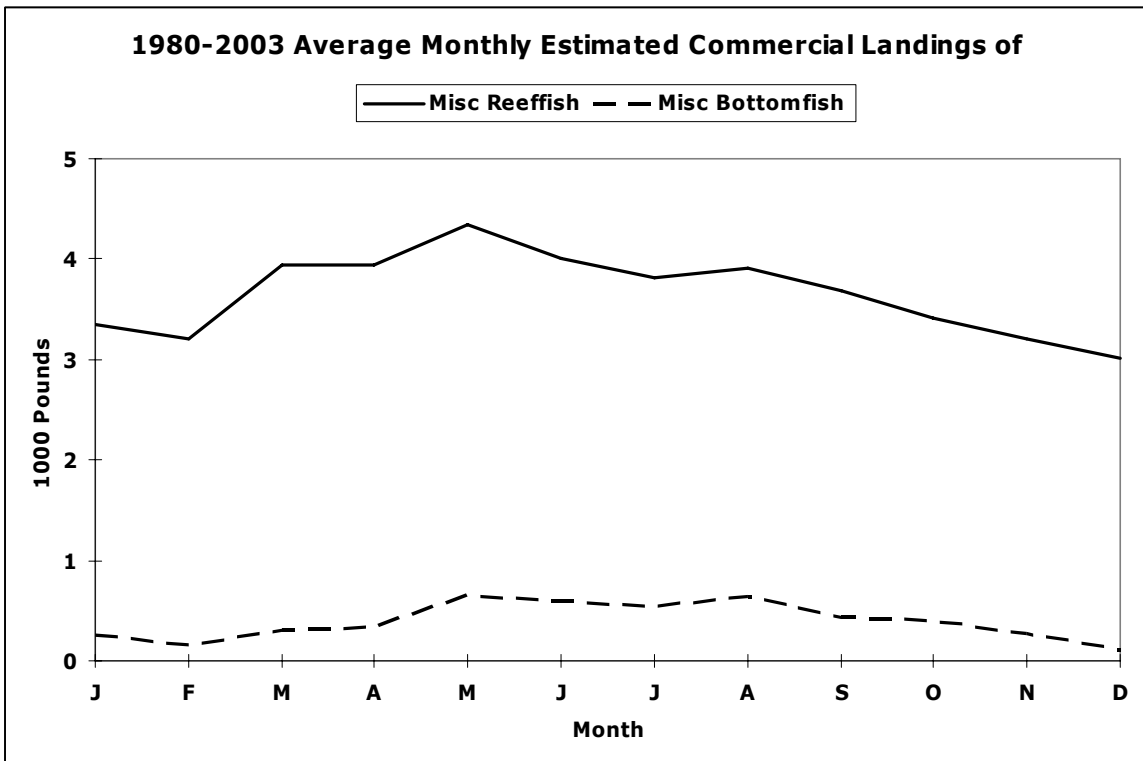


Figure C-2-5

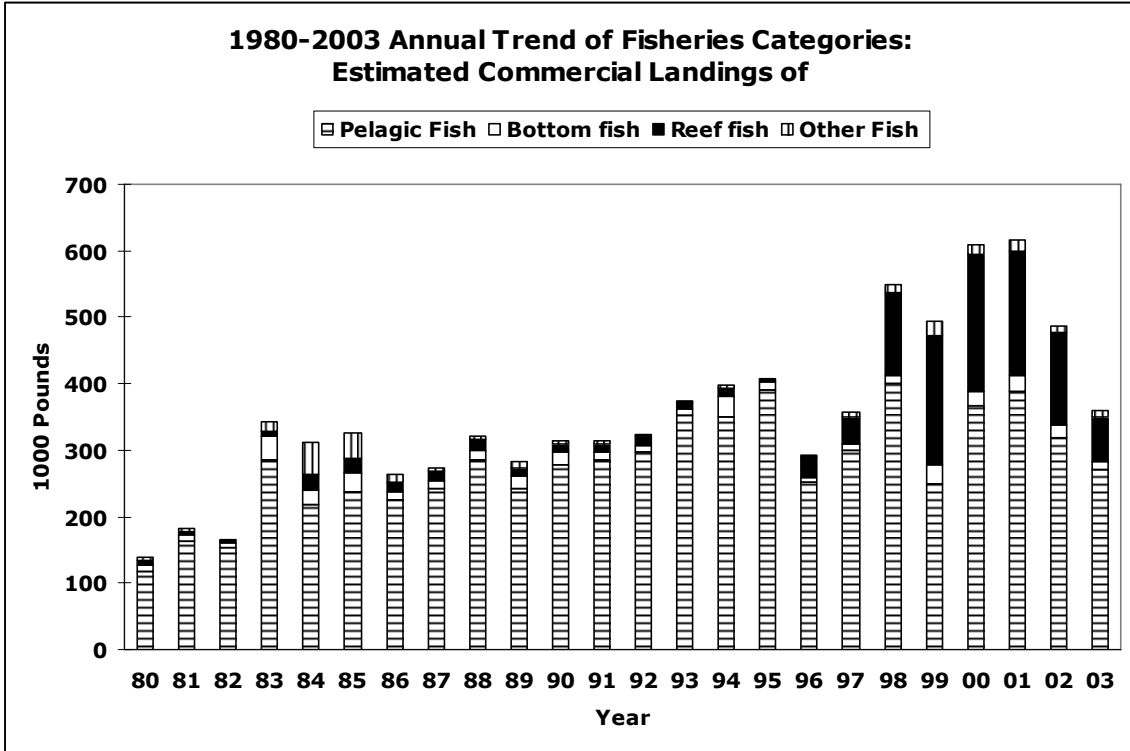


Figure C-3-1

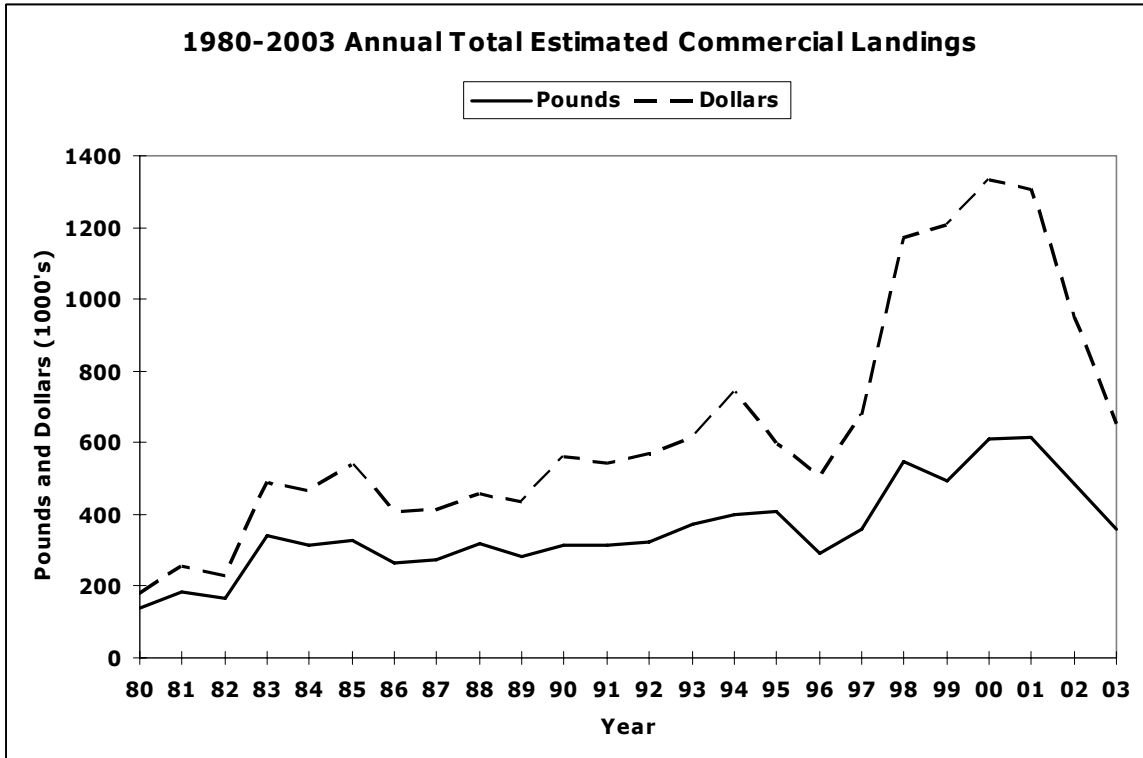


Figure C-3-2

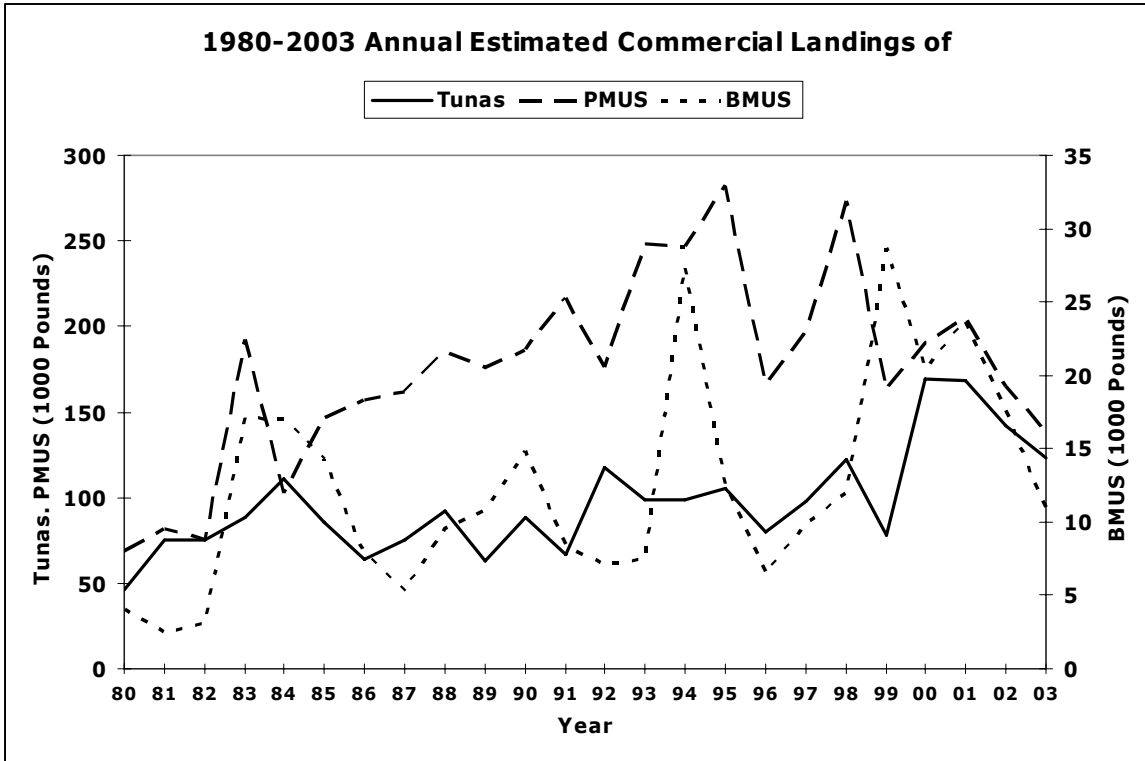


Figure C-3-3

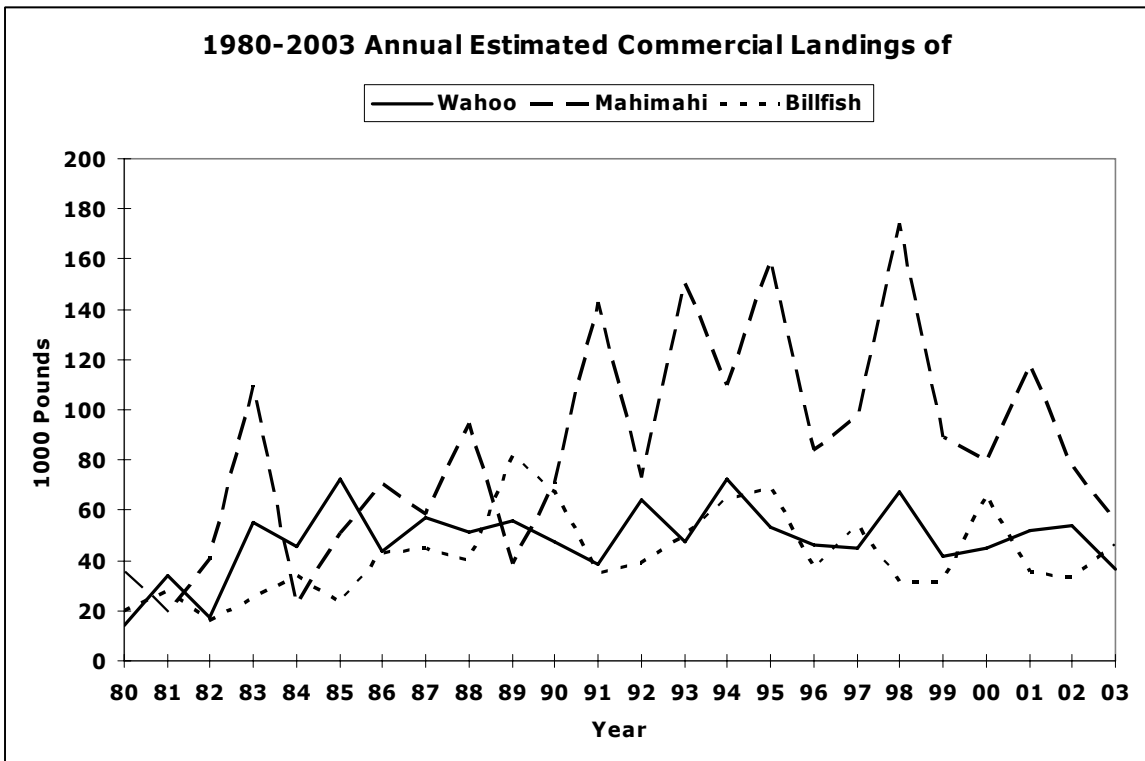


Figure C-3-4



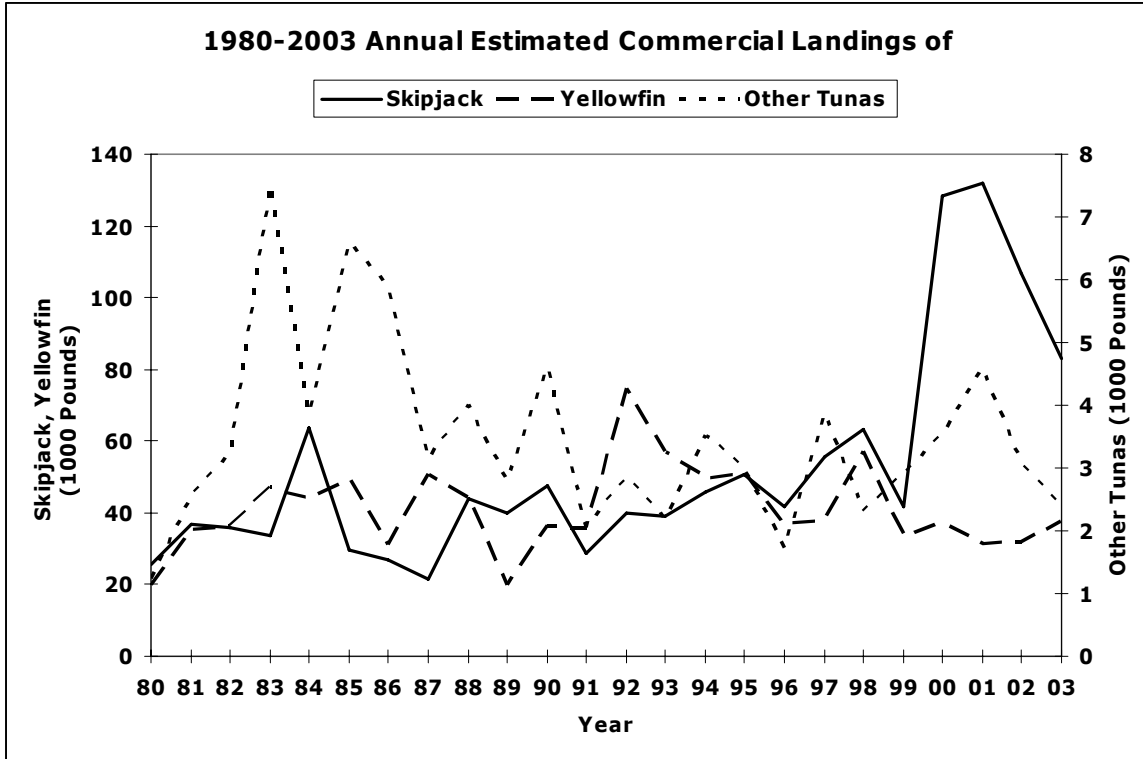


Figure C-3-5

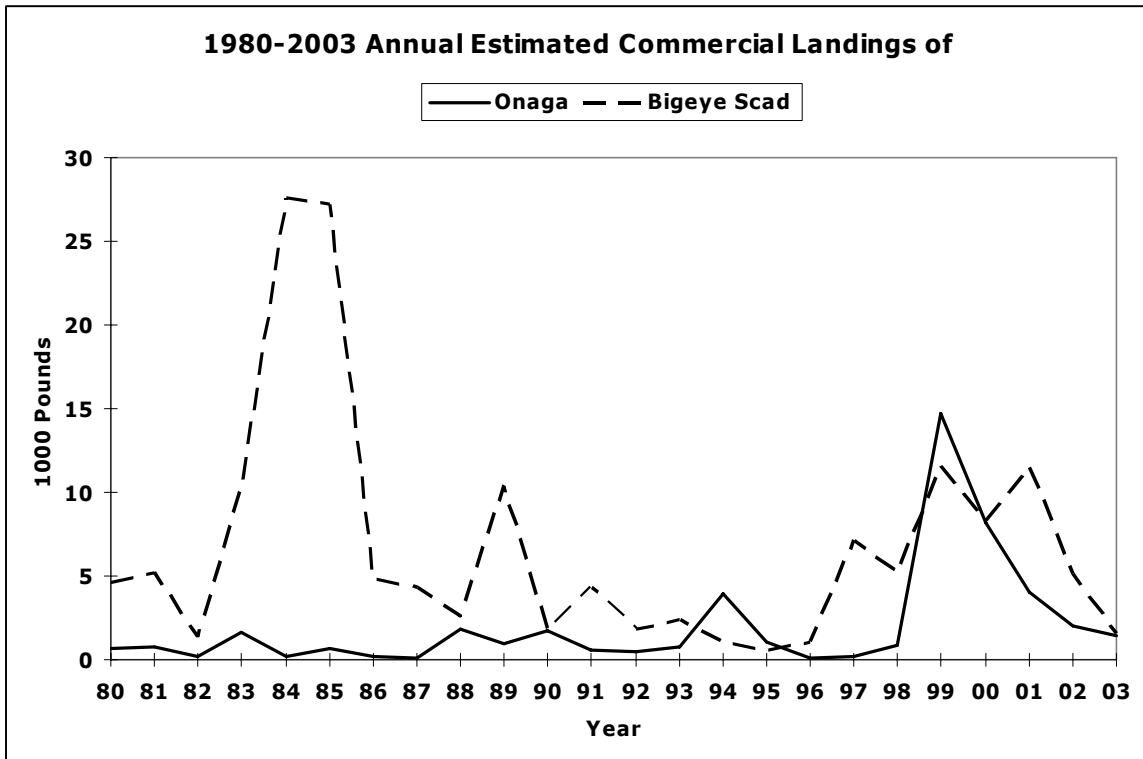


Figure C-3-6

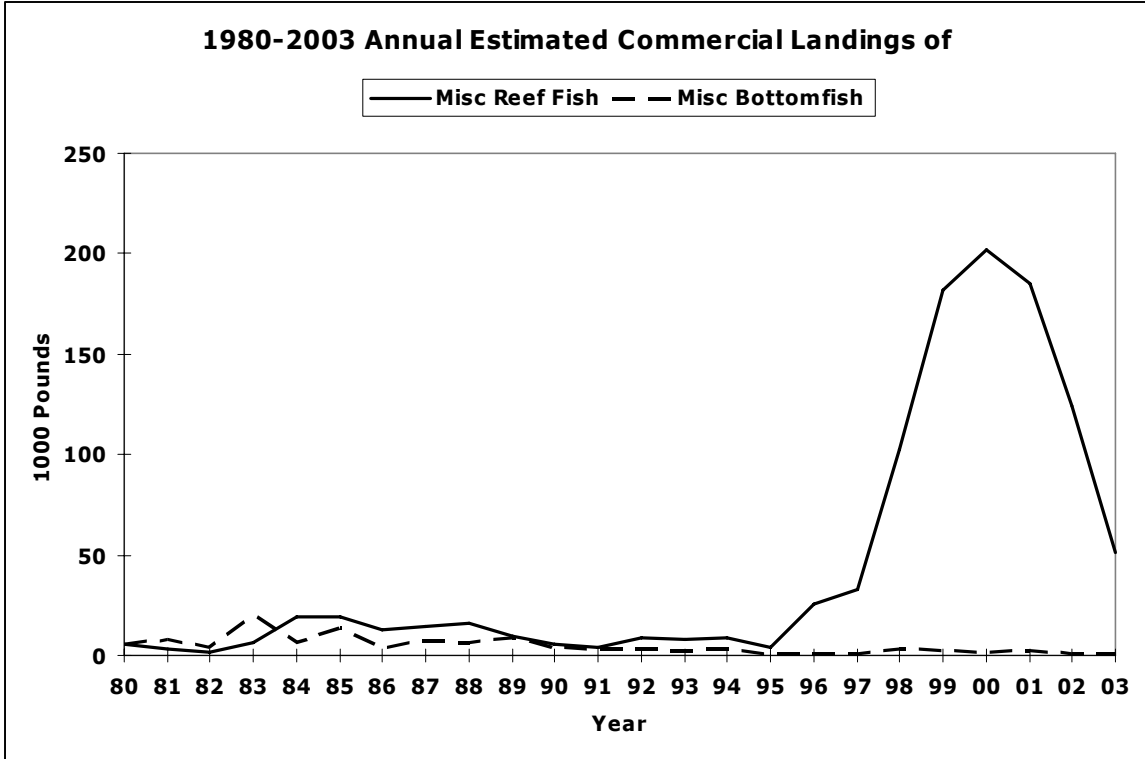


Figure C-3-7

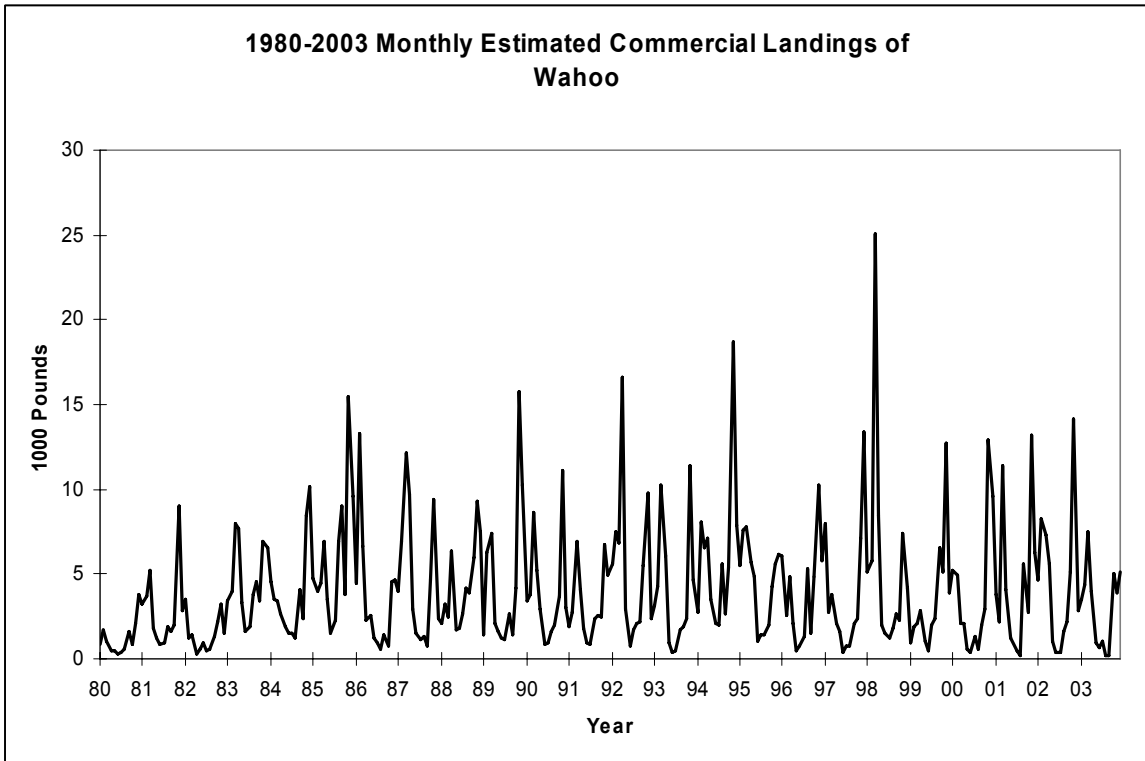


Figure C-4-1

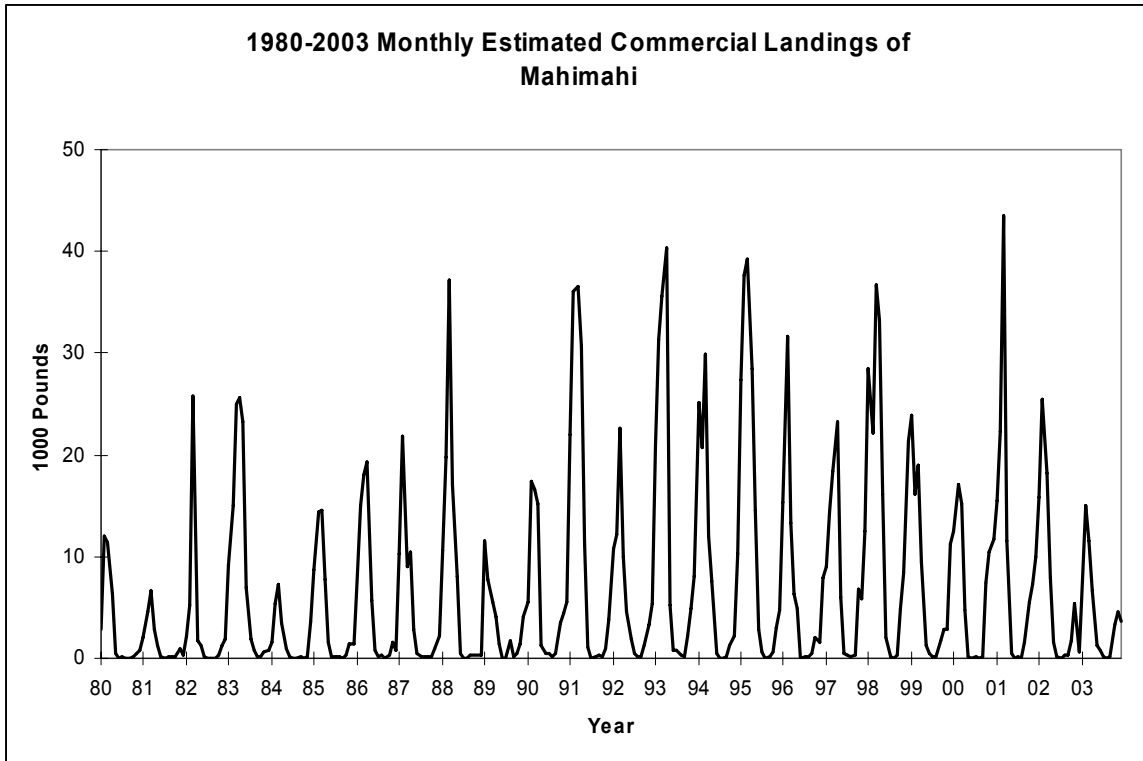


Figure C-4-2

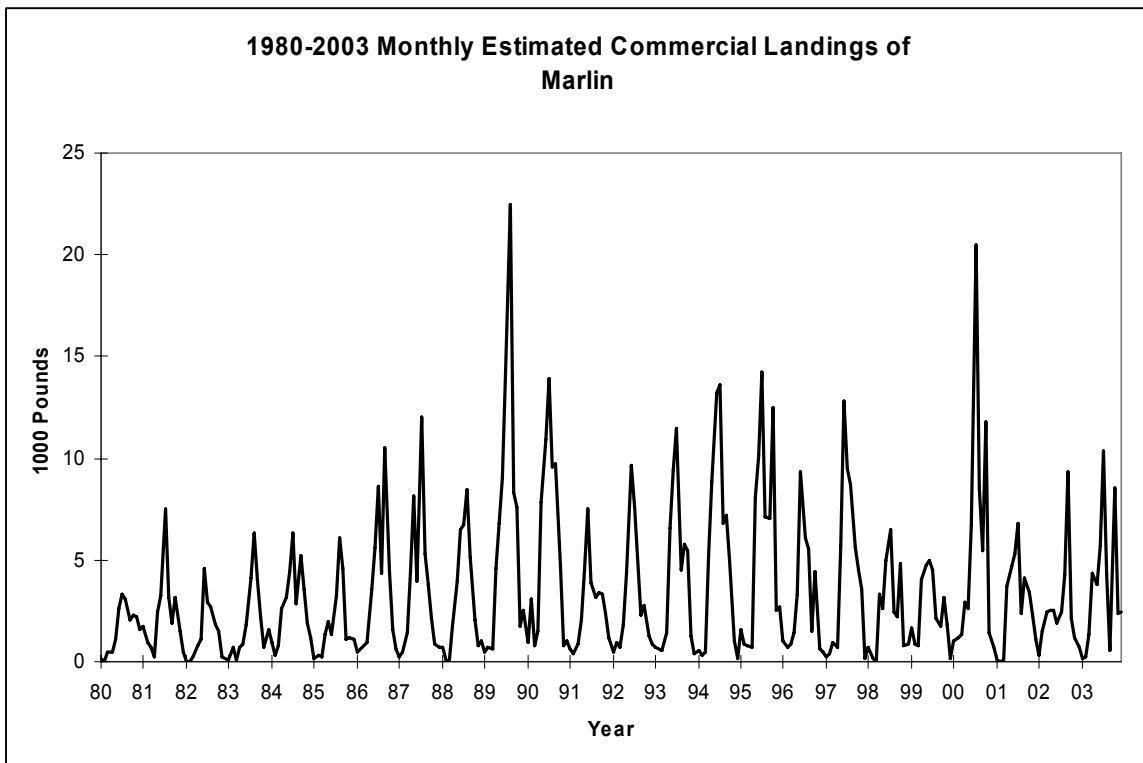


Figure C-4-3

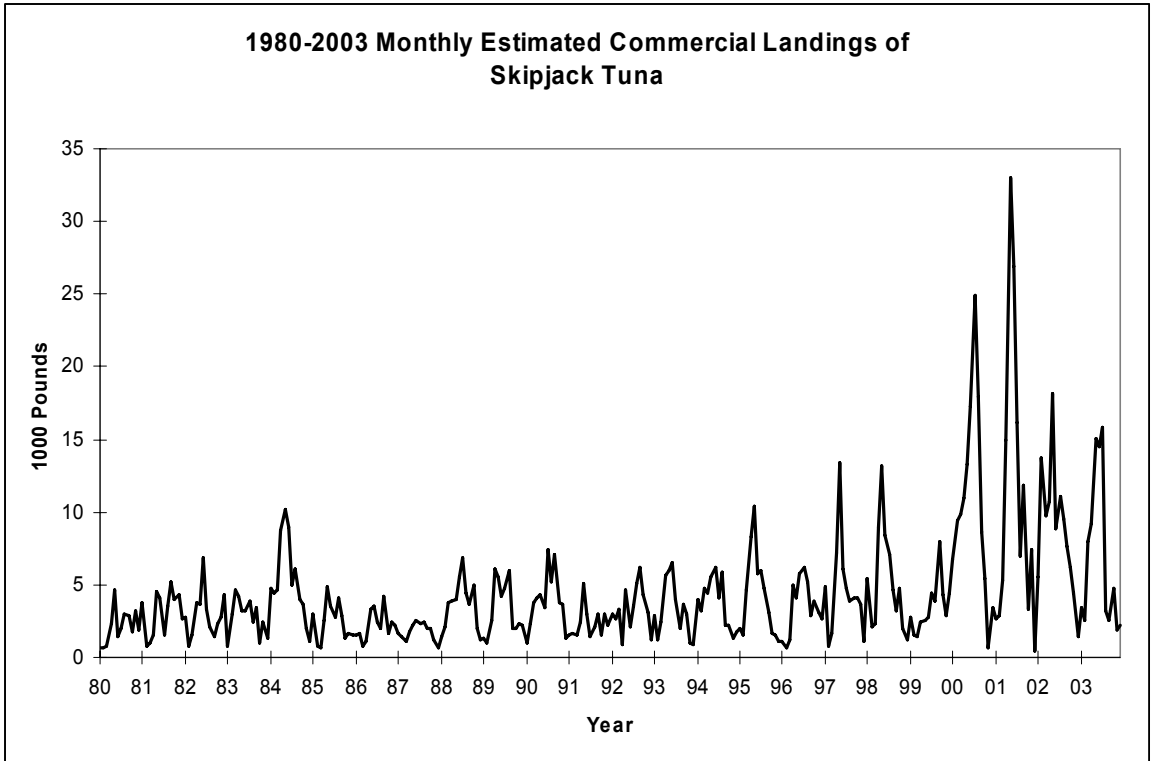


Figure C-4-4

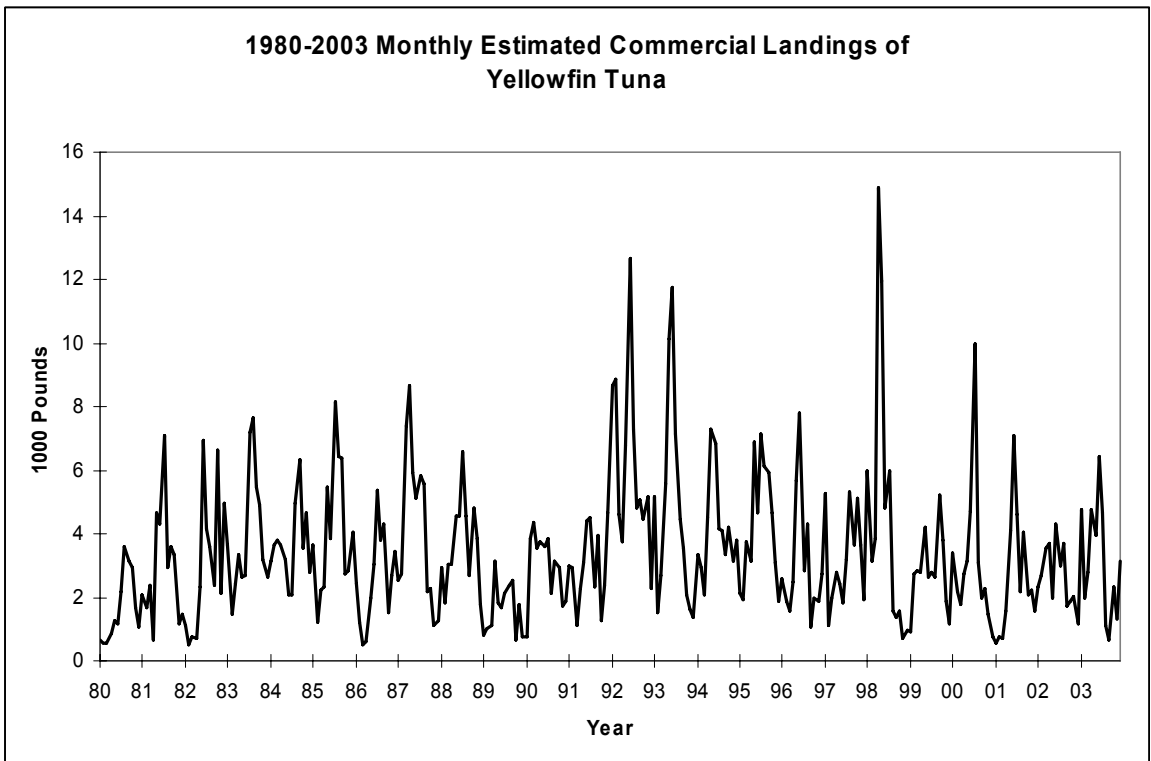


Figure C-4-5

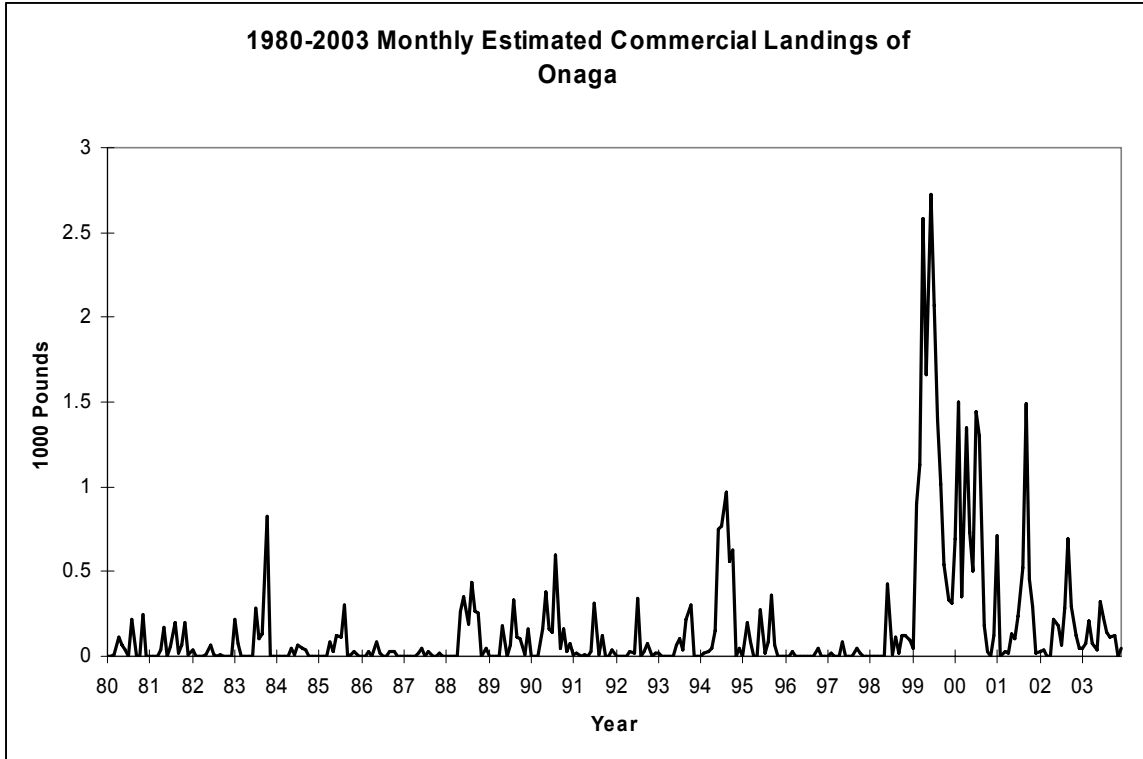


Figure C-4-6

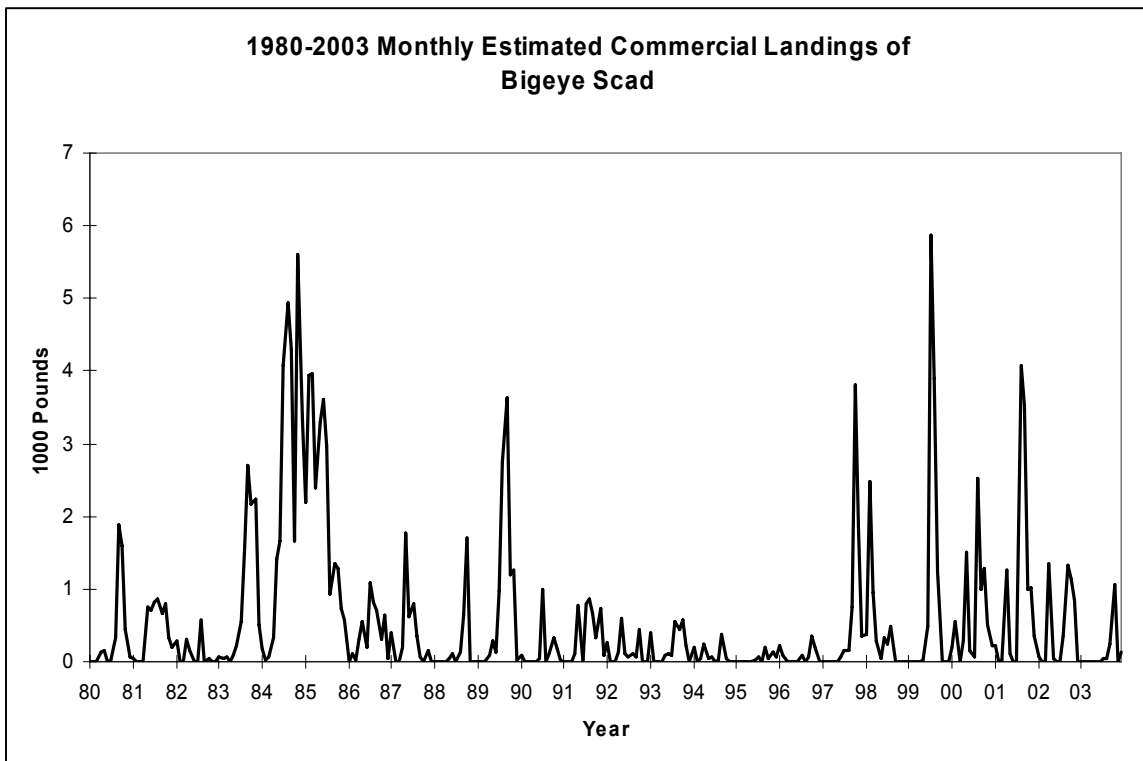


Figure C-4-7

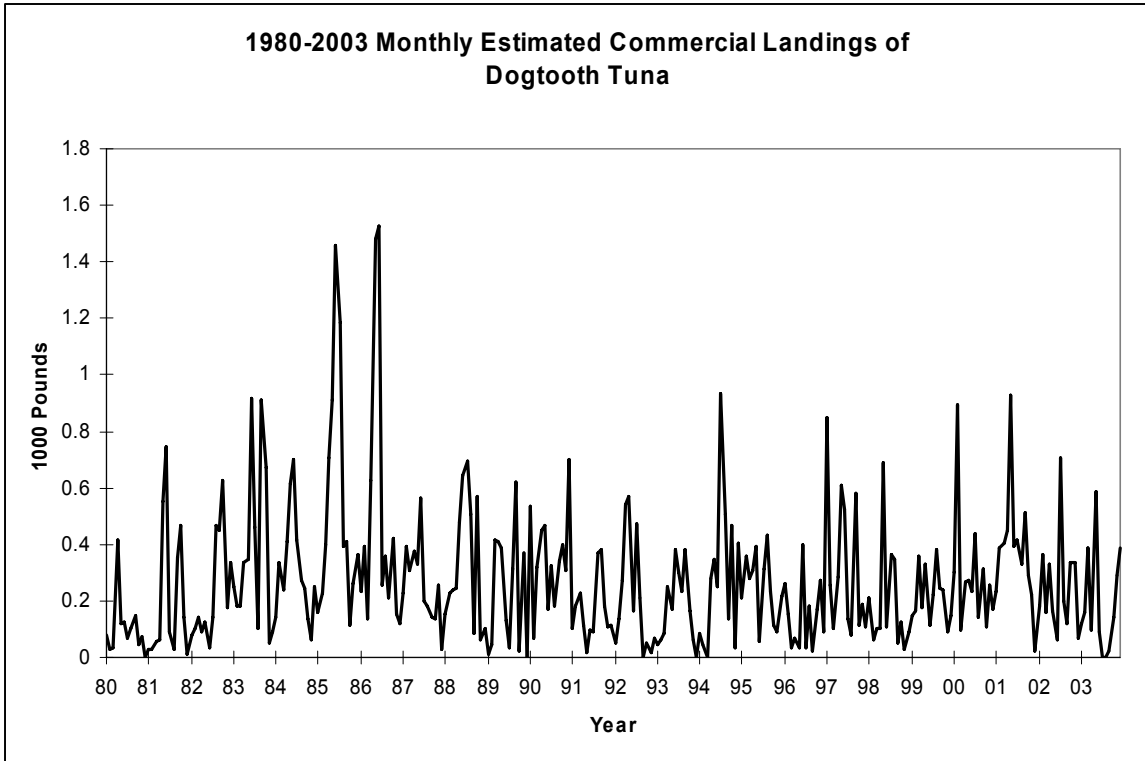


Figure C-4-8

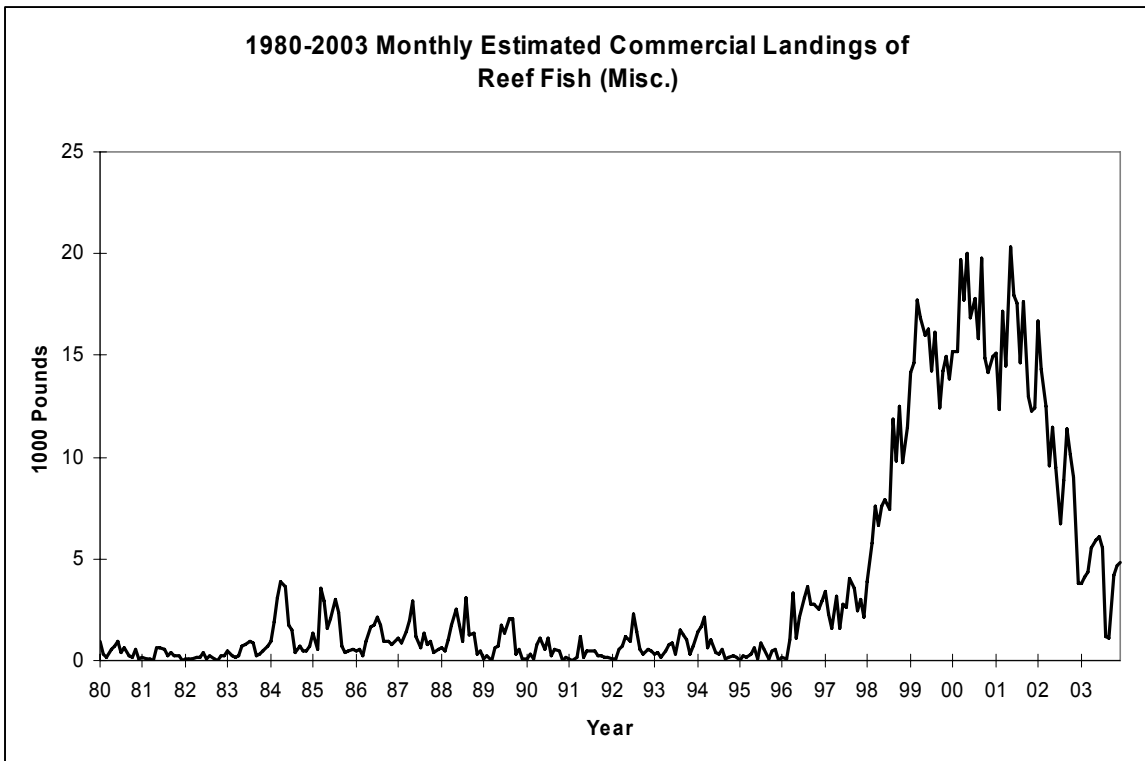


Figure C-4-9

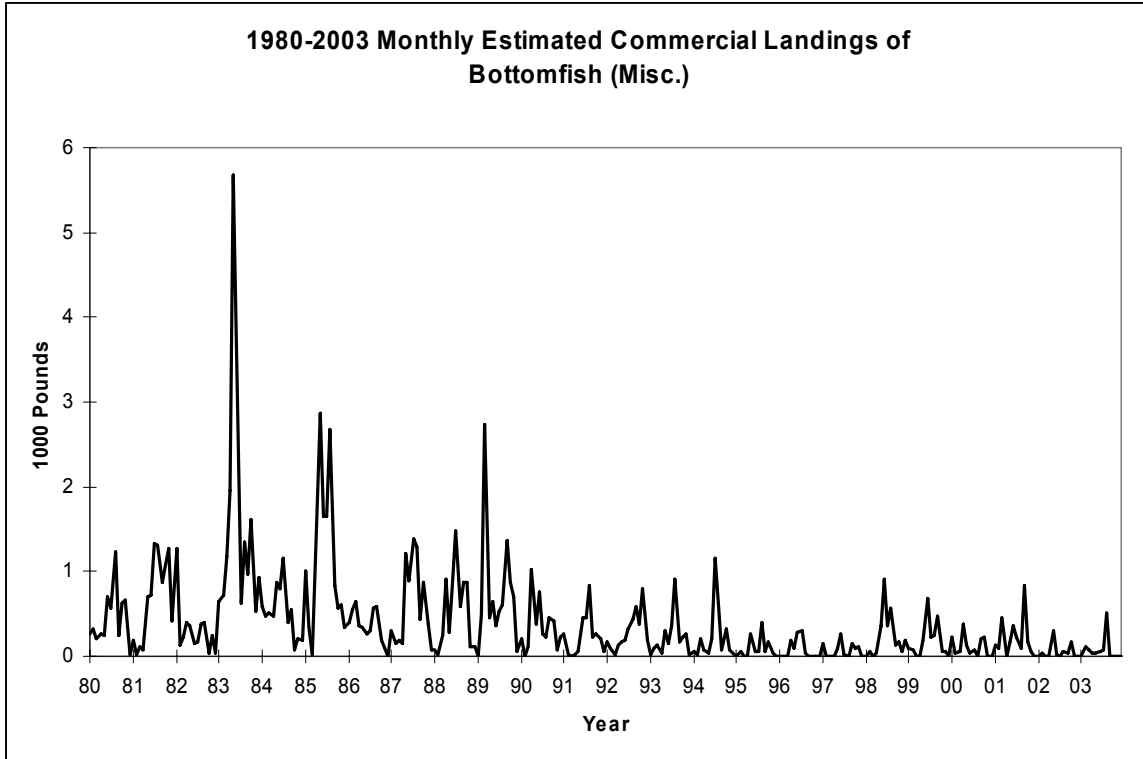


Figure C-4-10