

Acceptable Biological Catch Calculations for South Atlantic Snapper-Grouper Species

LAPP/DM Branch
Southeast Regional Office
St. Petersburg, Florida

South Atlantic SSC Meeting
October 23-25, 2012



Overview of ABC Calculations

ABCs calculated for 37 unassessed species

20 were assigned using **proxy method** due to late Council decision to retain many Snapper-Grouper stocks in FMU



Data Sources

CompACL

15 Sept 2010 Recreational ACL Data

“Shore” inadvertently assigned to For-Hire (no impact on ABC)

8 Oct 2010 Commercial ACL Data

NewMRFSS+NewComm

30 Aug 2012 Recreational ACL Data

Updated weight backfill, charter calibration (SEDAR-25 2011)

3 July 2012 Commercial ACL Data

NewMRIP+NewComm

1 Oct 2012 Recreational ACL Data

MRIP (2004-2011), adjusted MRFSS (1981-2003; SEDAR-31 2012), SEFSC standardized weight estimation (1981-2012)

3 July 2012 Commercial ACL Data

MRIP Data (2004-2011)

The Marine Recreational Information Program (MRIP) was implemented in 2004 to address issues identified by the National Research Council in the existing Marine Recreational Fisheries Statistics Survey (MRFSS) program.

GOAL - To provide more detailed, timely, and reliable estimates of marine recreational fishing catch and effort.

Currently, official MRIP estimates are available from 2004-2011. These represent the best available scientific data.

MRIP ('86-'03) = Recalibrated MRFSS

March 2012: **SEDAR MRIP Recalibration Workshop**

Ad-Hoc Working Group: apply ratio estimators, based on the ratios of the means, to hind-cast catch and variances.

Southeast Regional MRIP Recalibration WG: developed specific recommendations to address regional needs.

Salz et al. (2012)

MRFSS_MRIP Calibration

Ad-hoc Working Group FINAL Report



MRIP ('86-'03) = Recalibrated MRFSS

Each ratio of means was calculated at the stock, sub-region, mode level* as:

$$\hat{R} = \frac{\overline{C}_{MRIP}}{\overline{C}_{MRFSS}} = \frac{\sum_{y=1}^n C_{y,MRIP}}{\sum_{y=1}^n C_{y,MRFSS}}$$

Ratios were applied at each stratum (species, sub-region, year, wave, state, mode, and area) to the A, B1, and B2 estimates and variances:

$$\hat{C}_{y,\hat{R}} = \hat{R} \hat{C}_{y,MRFSS}$$

MRFSS → MRIP S. Atl. Ratio Estimators

Common Name	Charter	Private/Rental	Shore
almaco jack	1.015402	0.985457	
atlantic spadefish	1.628027	0.993378	0.617729
banded rudderfish	0.931823	0.928341	0.464524
bar jack	2.481521	1.196412	1.402559
black snapper			
blackfin snapper	0.937071	0.882982	
blue runner	0.994338	1.190118	0.802393
blueline tilefish	0.940958	0.792646	
coney	0.625635	1.162762	
cupera snapper	0.901402	0.948679	0.488547
dog snapper	1.020509	0.79838	1.522893
gray snapper	0.594493	0.963733	0.543697
gray triggerfish	1.056789	0.947016	0.548359
graysby	1.417926	0.910291	
hogfish	0.903173	0.873729	0.37575
jolthead porgy	0.849587	0.897303	0.482483
knobbed porgy	1.290265	1.204519	0.771392

Common Name	Charter	Private/Rental	Shore
lane snapper	0.804986	0.765977	0.513552
lesser amberjack	0.625834	1.013631	
mahogany snapper		1.326981	0.456246
margate	0.854906	0.946525	0.768271
misty grouper			
queen snapper	0.702257	0.969656	
red hind	0.985036	1.013069	
rock hind	1.356045	1.36774	
sailors choice	0.713252	0.98031	0.558199
sand tilefish	0.657189	0.907314	0.55074
saucereye porgy	0.461468	1.038721	
scamp	1.557292	1.20065	
scup	1.540459	1.155228	0.578074
silk snapper	1.05117	0.436414	
tomtate	1.364139	0.912316	0.898122
white grunt	1.235682	1.078366	0.7404
whitebone porgy	0.940949	0.783128	0.524168
yellowedge grouper	0.590406	2.407618	
yellowfin grouper		1.648847	
yellowmouth grouper	1.117054	1.021294	

Overview of ABC Calculations

Method for computing ABC:

Median landings (1999-2008) – *yellowedge grouper, silk snapper, white grunt, and scamp*

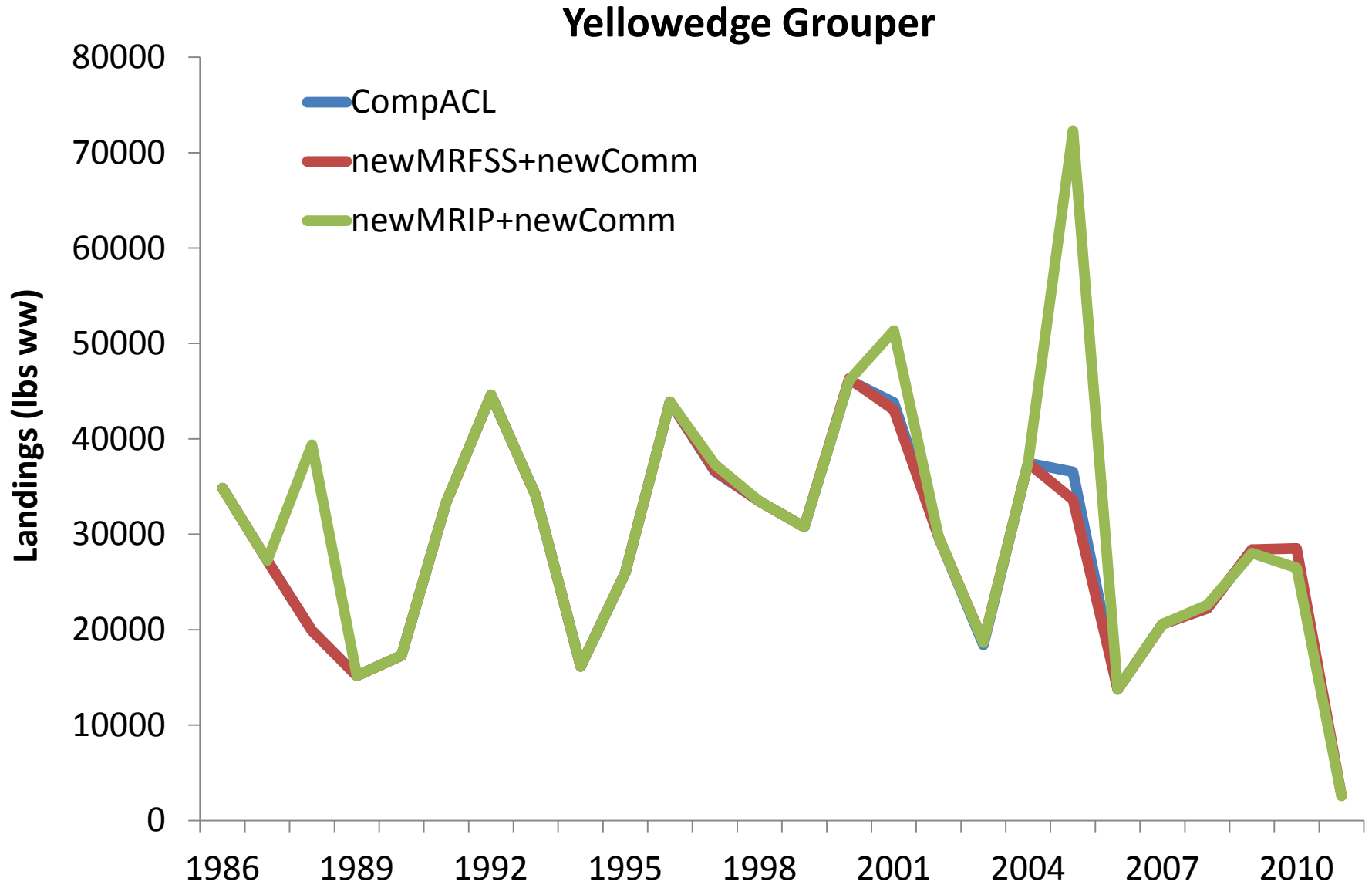
3rd highest landings (1999-2008) – *32 species*

2× max landings (1986-2005) – *blueline tilefish*

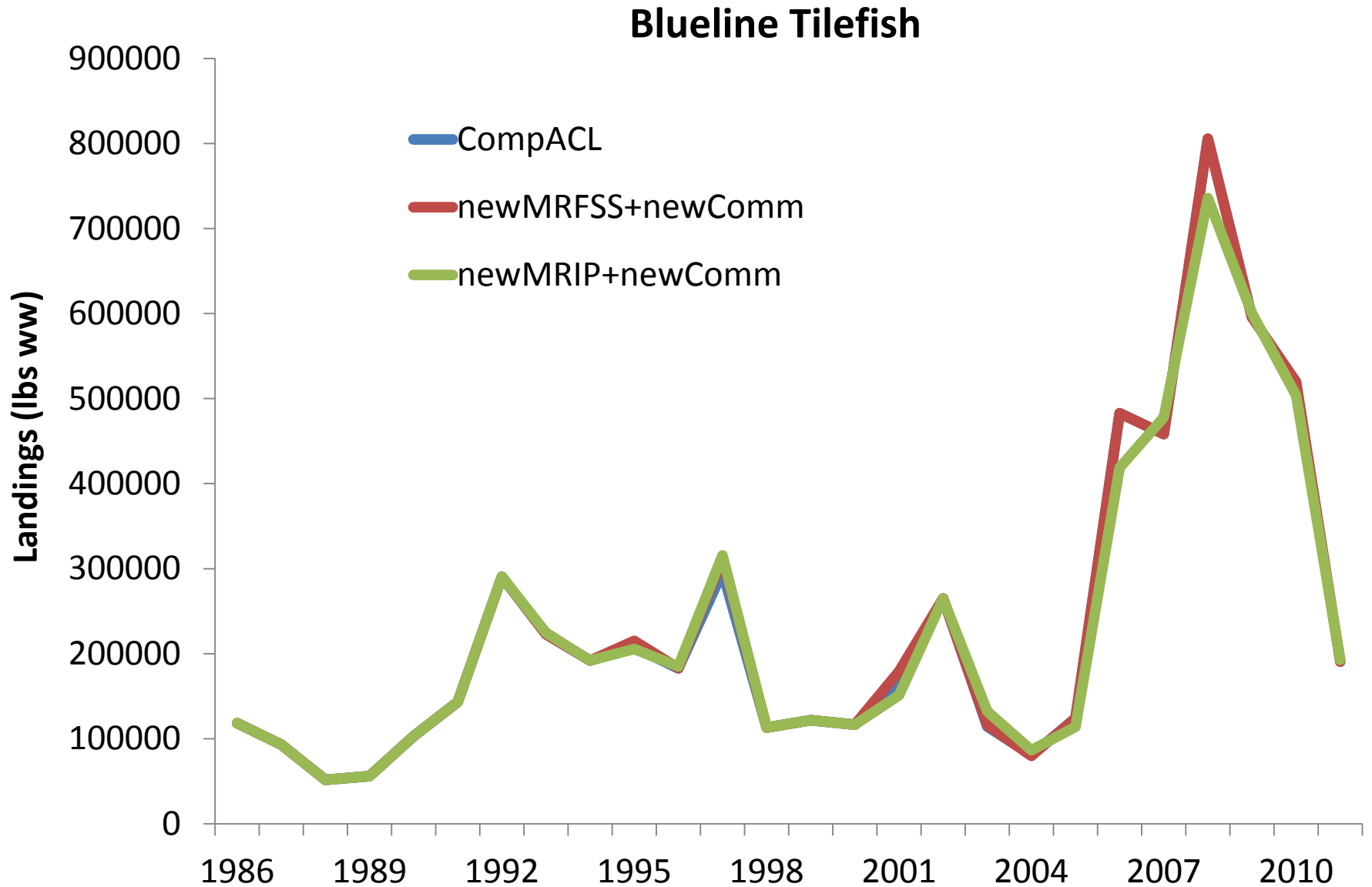
ABCs calculated for each stock individually using combined commercial and recreational annual landings



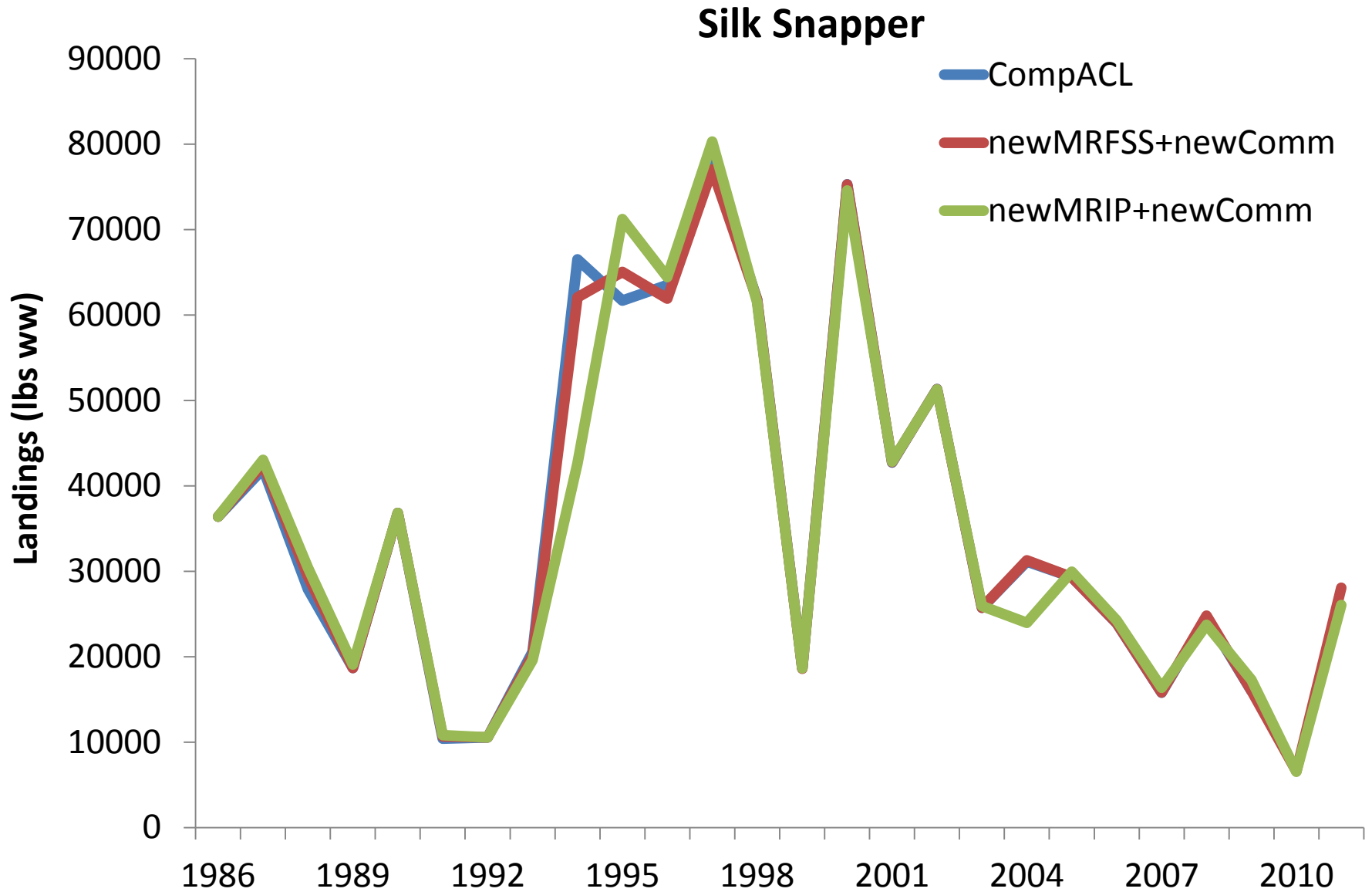
Yellowedge Grouper



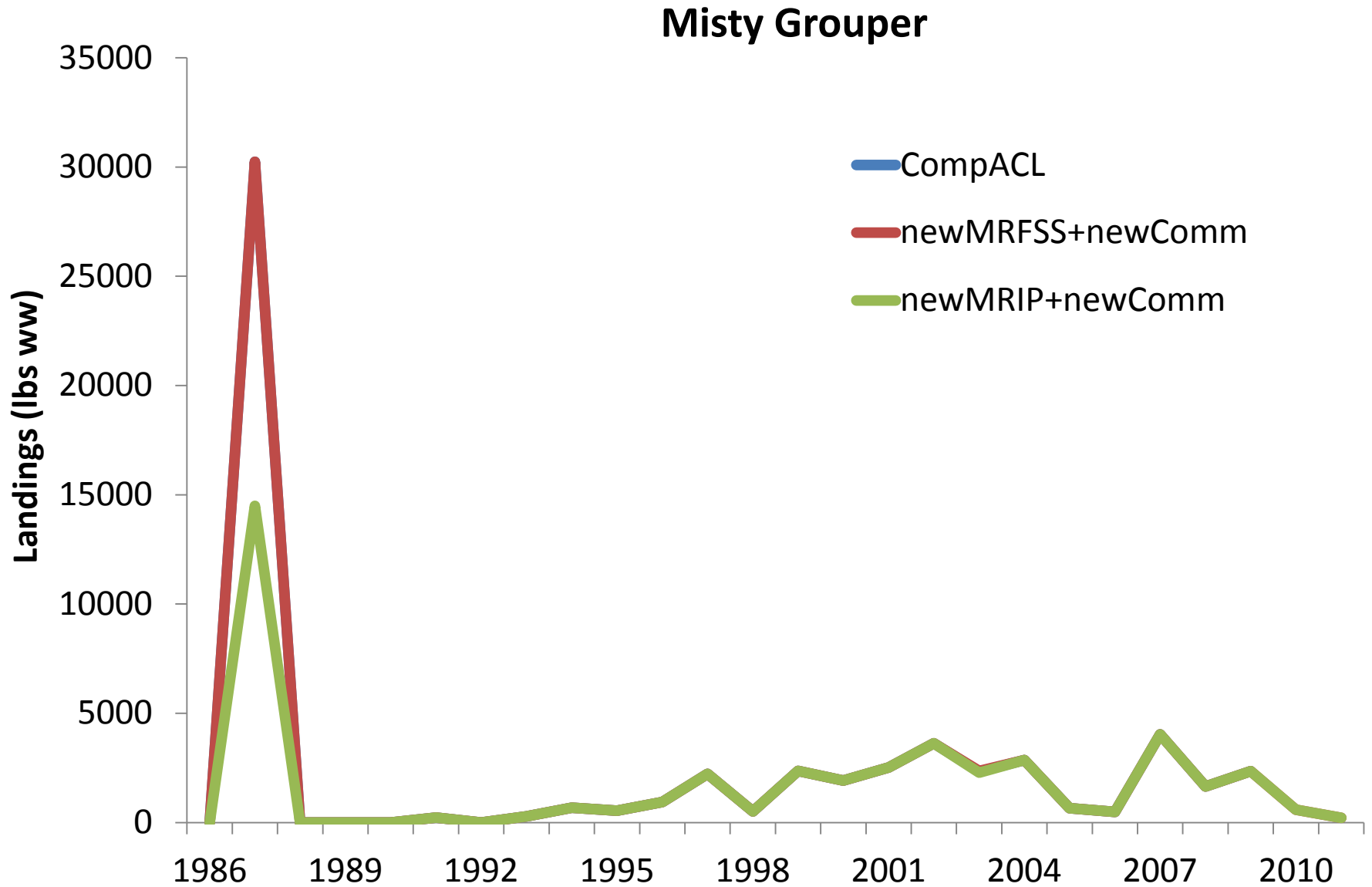
BlueLine Tilefish



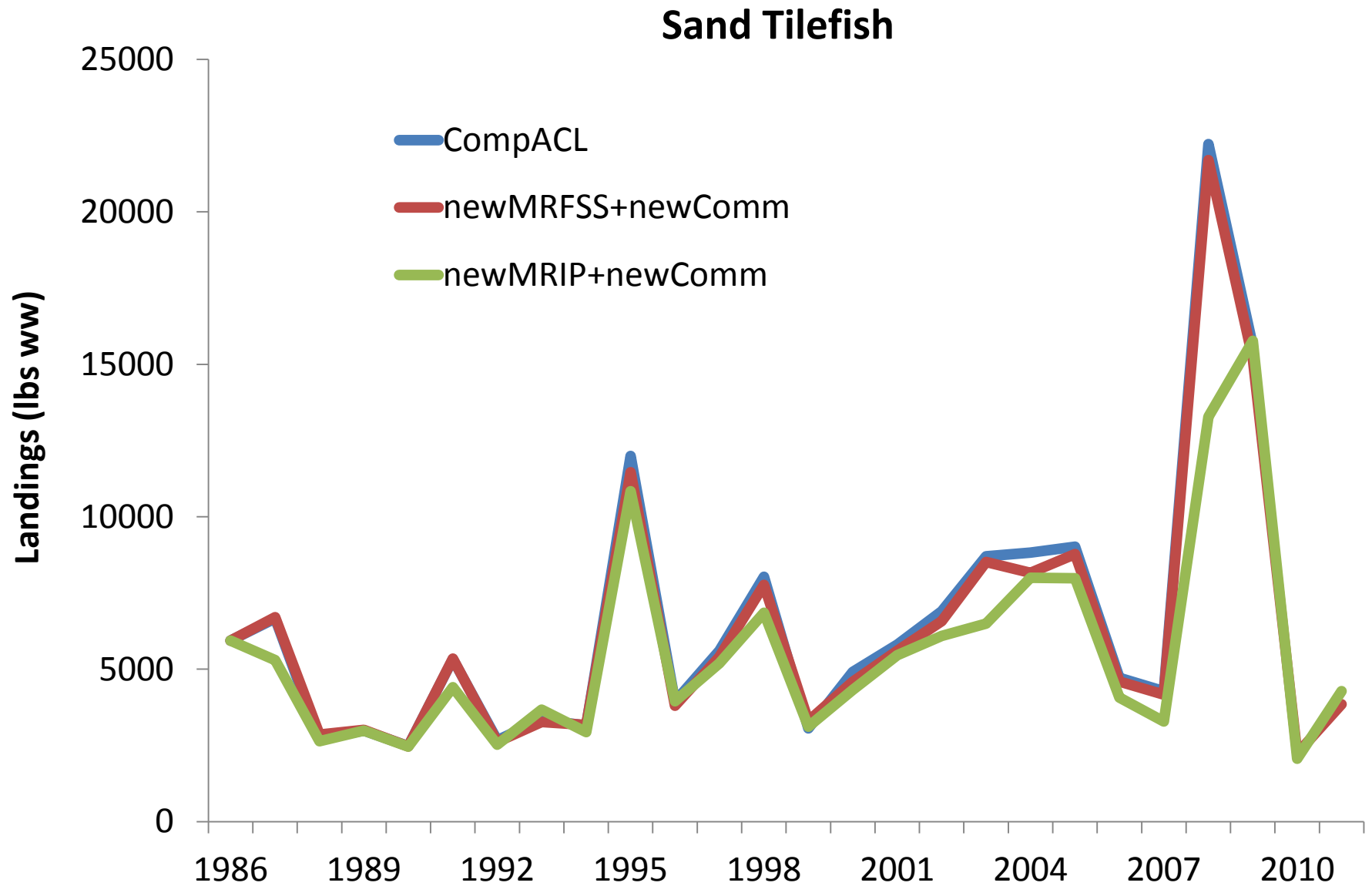
Silk Snapper



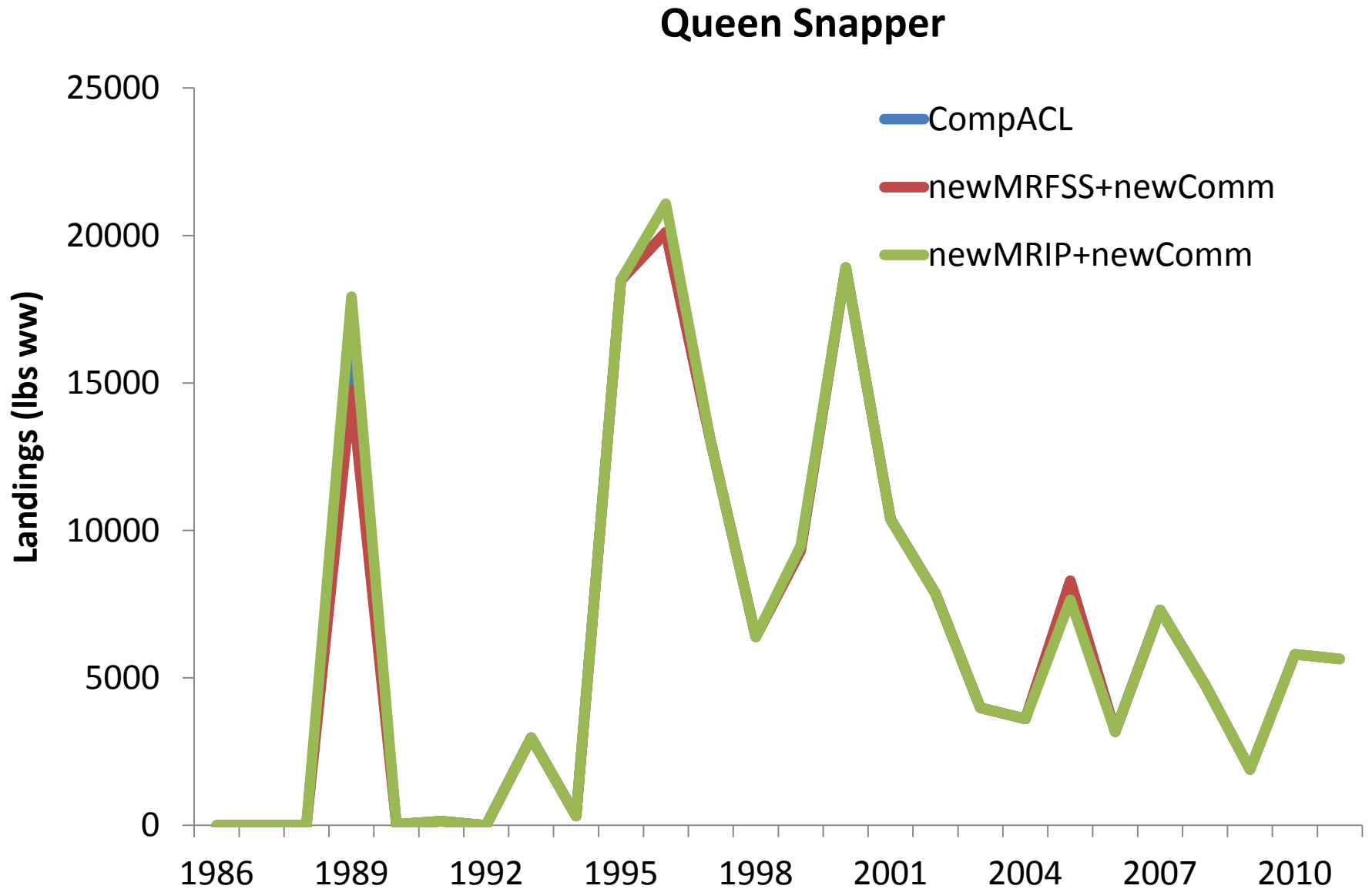
Misty Grouper



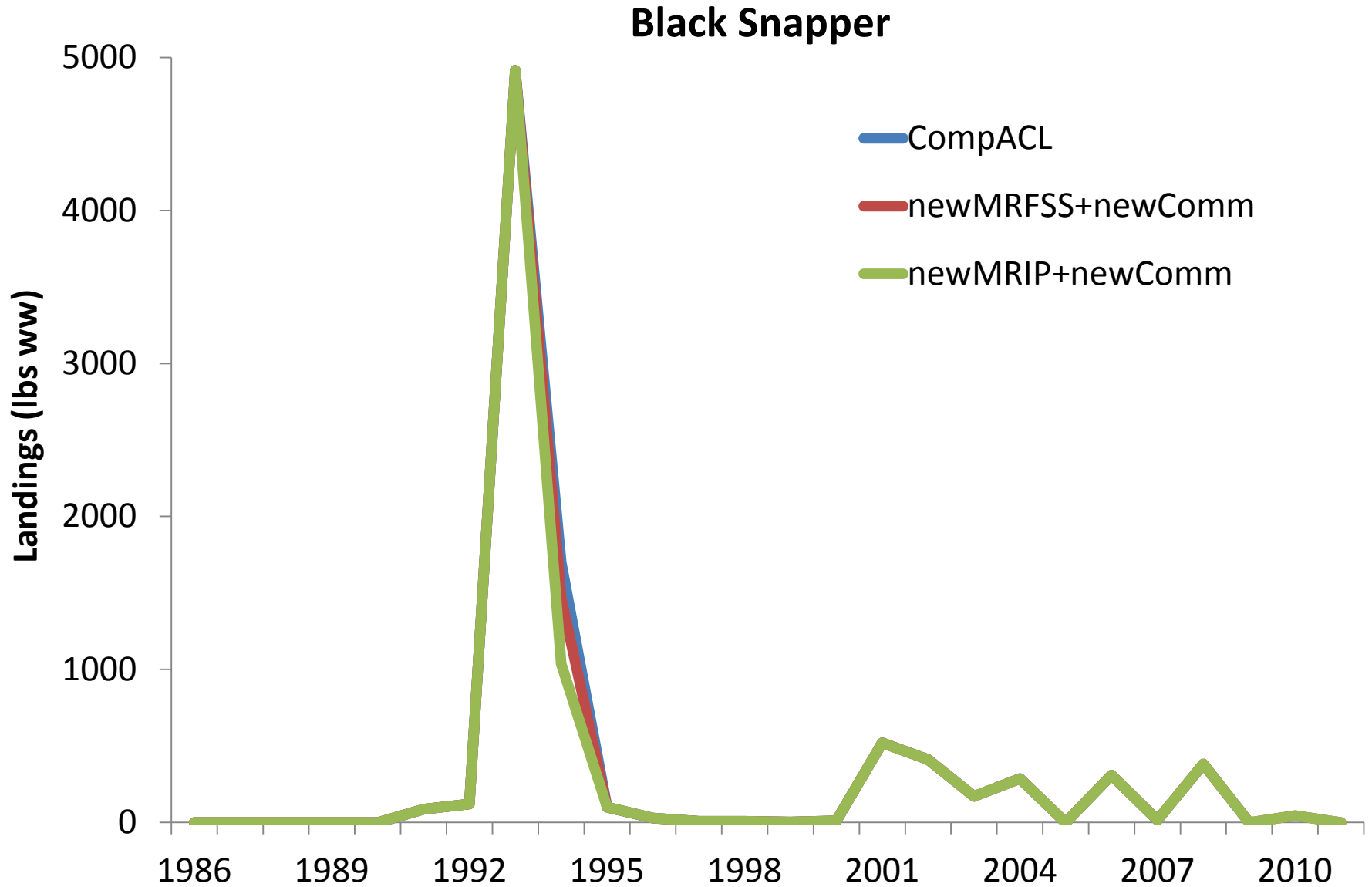
Sand Tilefish



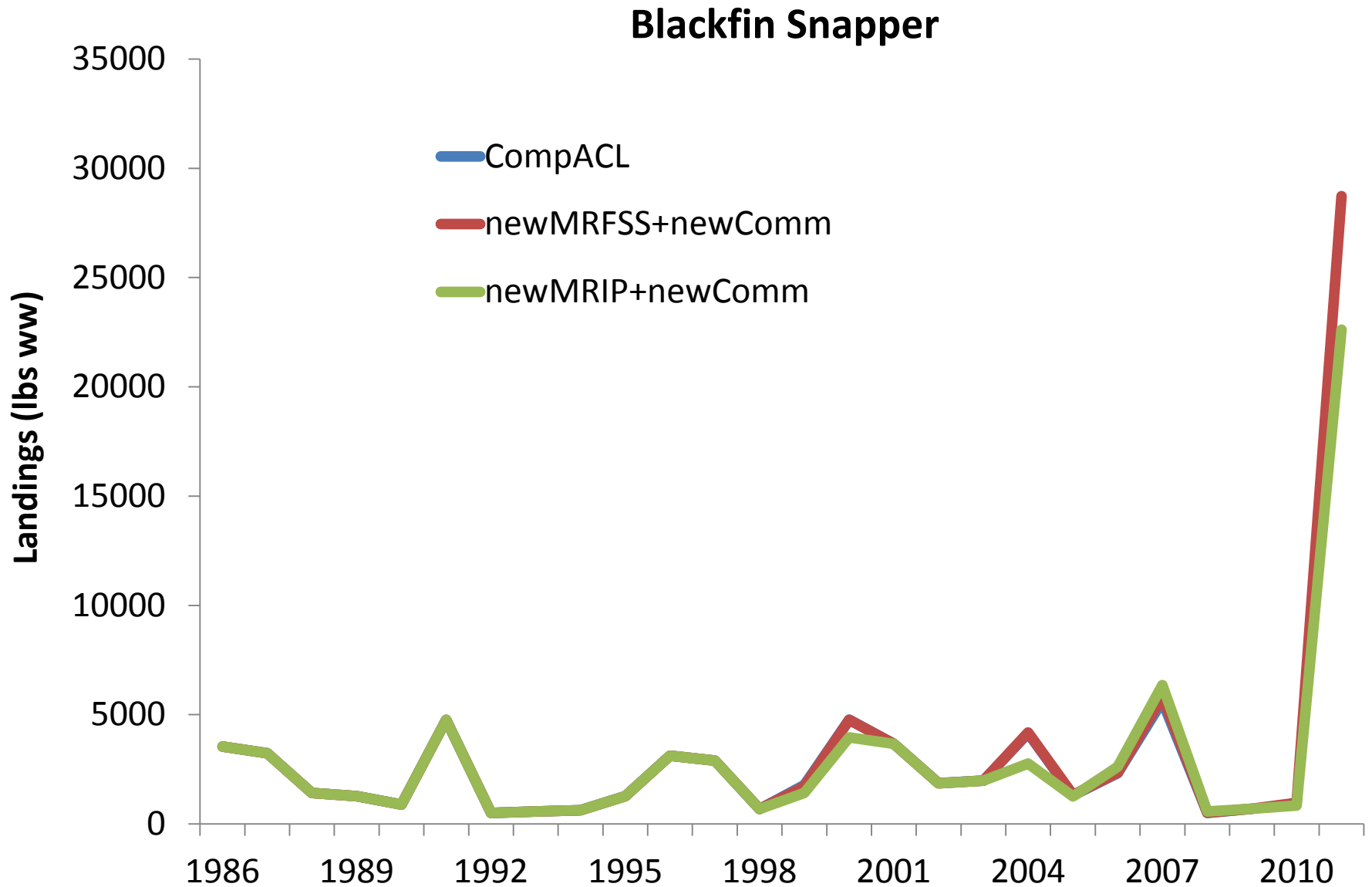
Queen Snapper



Black Snapper



Blackfin Snapper

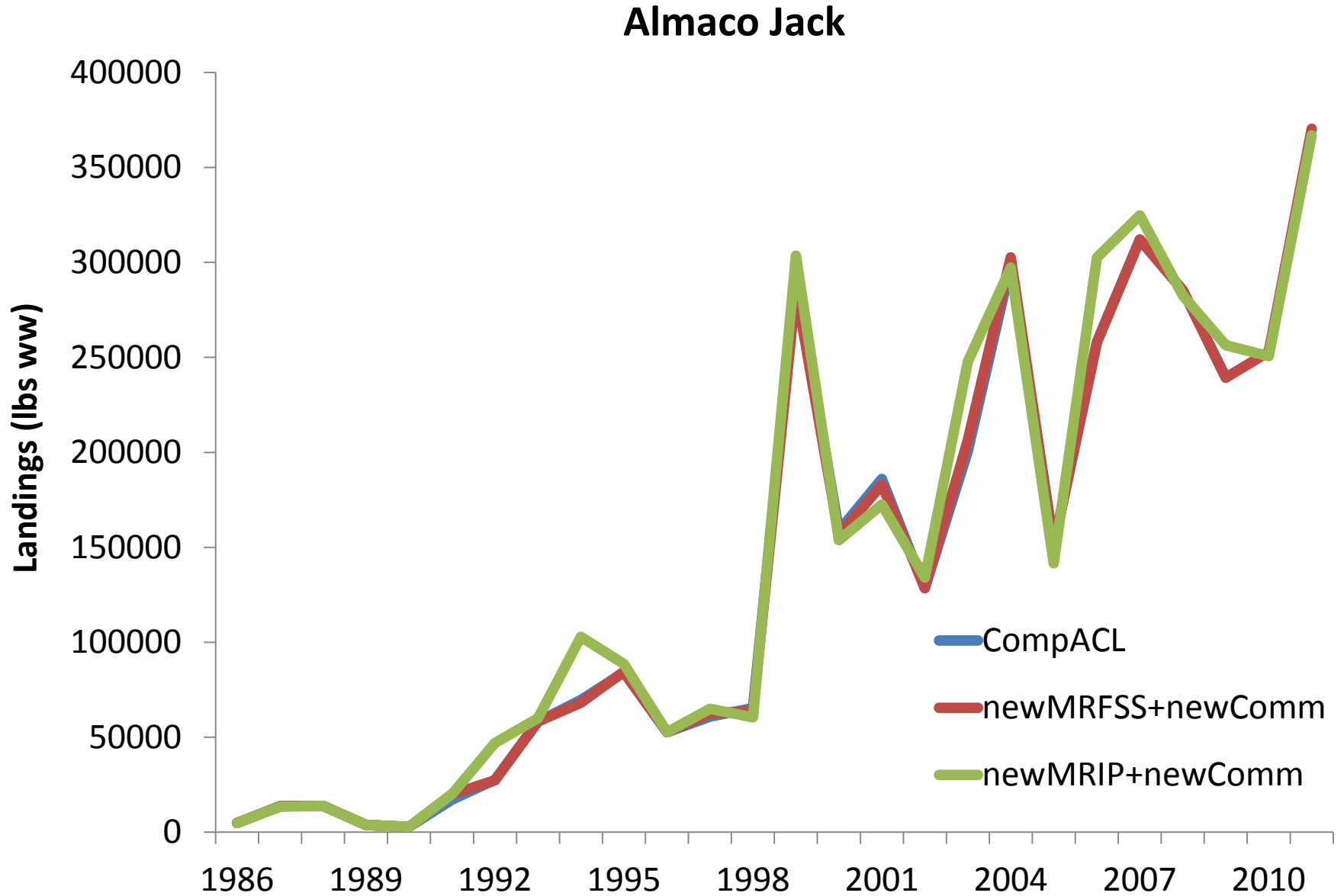


Deepwater Complex

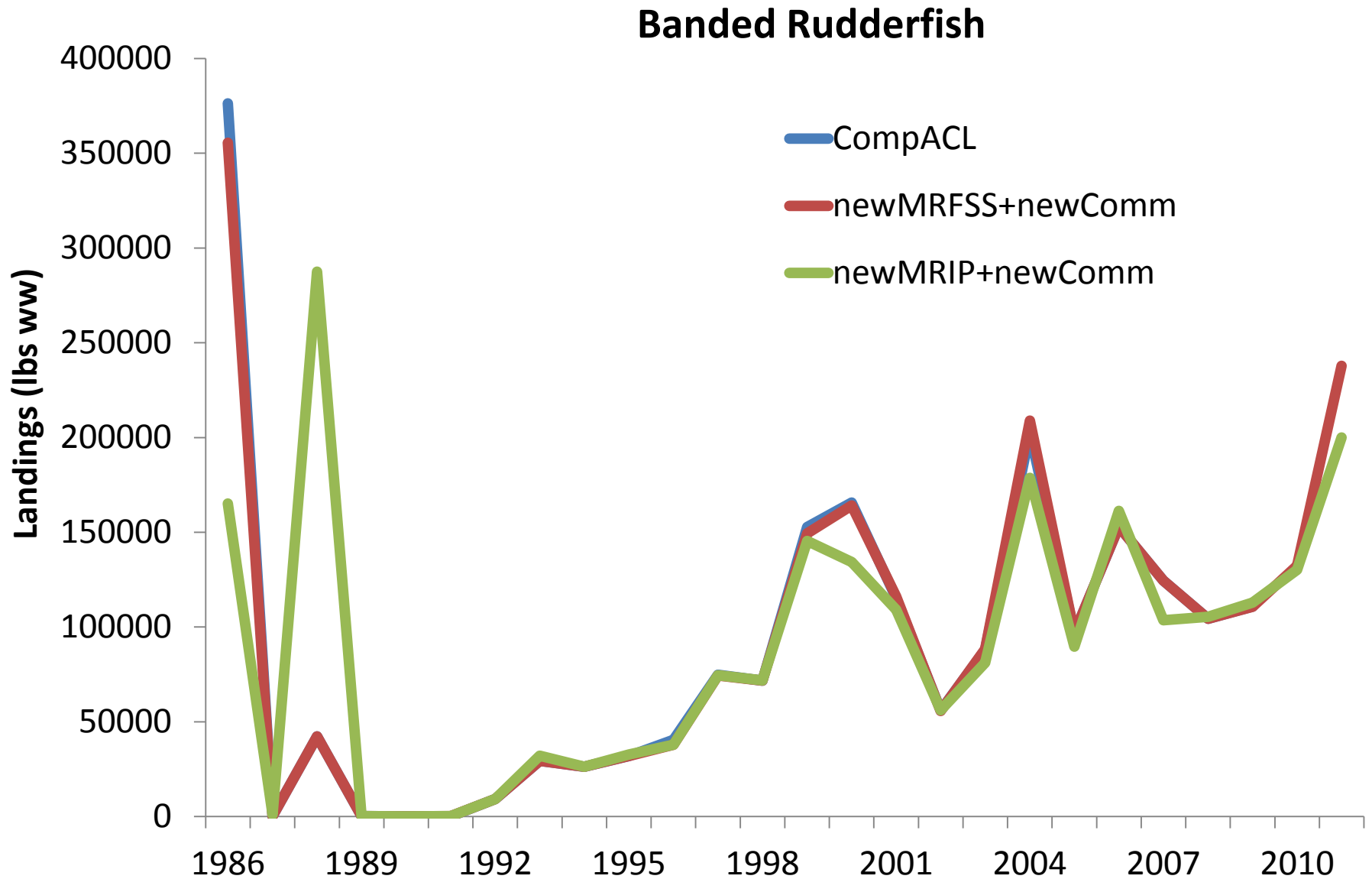
ABC proxy

STOCK OR STOCK COMPLEX NAME	ABC			How ABC was calculated
	ACL Amendment	New MRFSS & Commercial	MRIP & New Commercial	
DEEPWATER	675,908	707,030	711,025	sum of individual ABCs
Yellowedge grouper	30,221	30,221	30,221	median (99-08)
Blueline tilefish	592,602	624,028	631,341	2× max landings (86-05)
Silk Snapper	27,519	27,529	25,104	median (99-08)
Misty grouper	2,863	2,863	2,863	3rd highest (99-08)
Sand tilefish	8,823	8,521	7,983	3rd highest (99-08)
Queen snapper	9,344	9,306	9,466	3rd highest (99-08)
Black snapper	382	382	382	3rd highest (99-08)
Blackfin snapper	4,154	4,181	3,665	3rd highest (99-08)

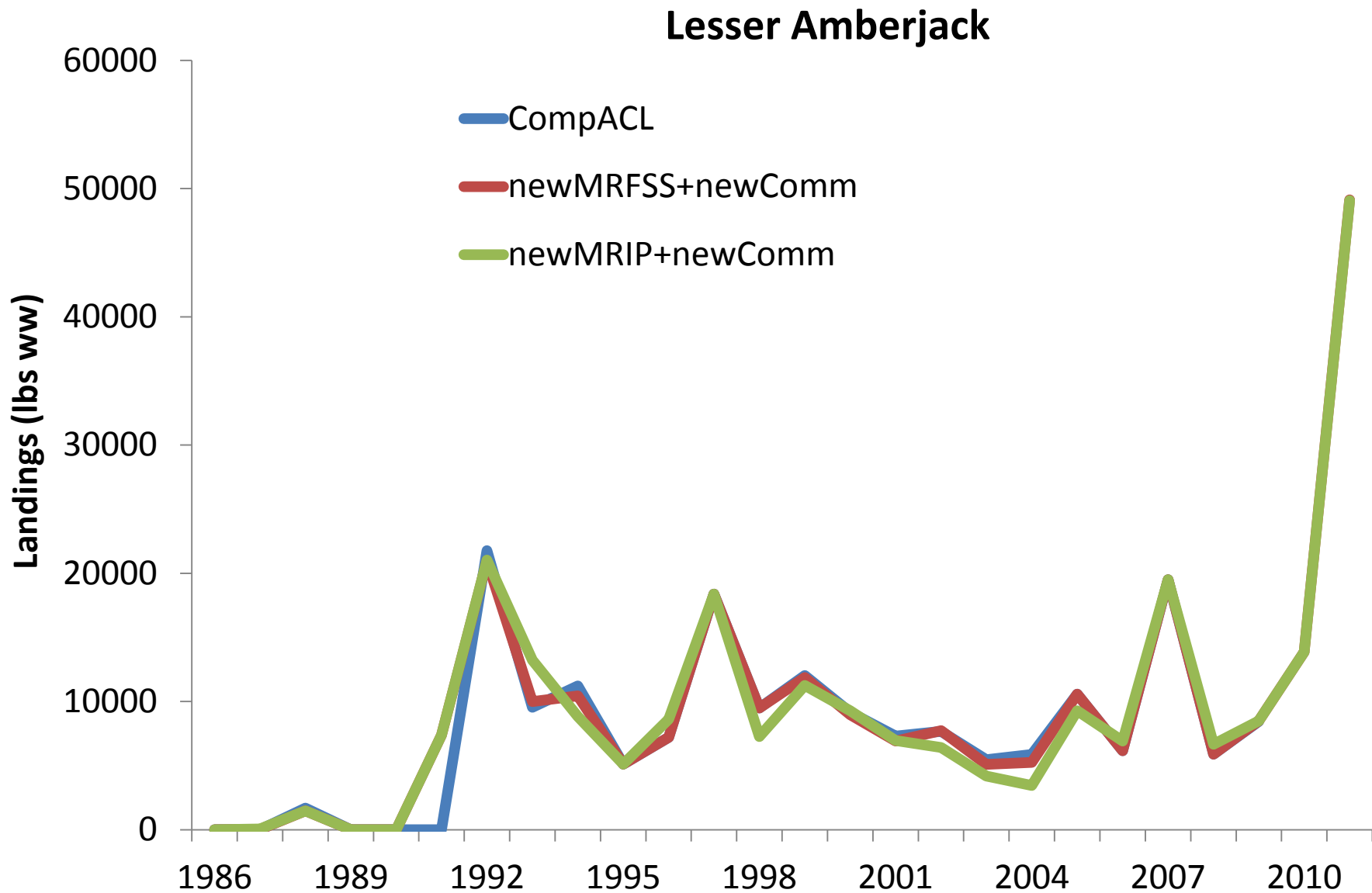
Almaco Jack



Banded Rudderfish



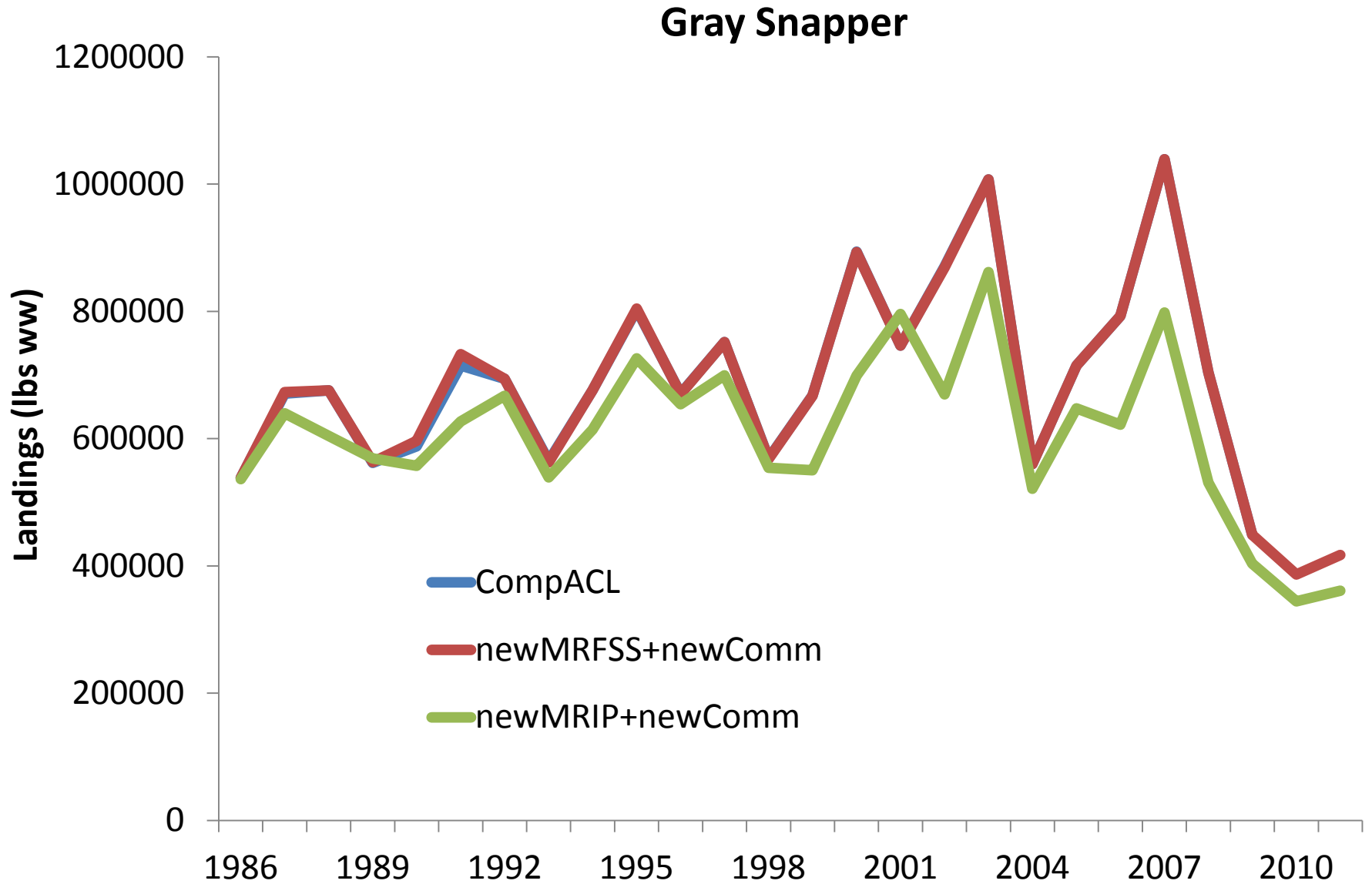
Lesser Amberjack



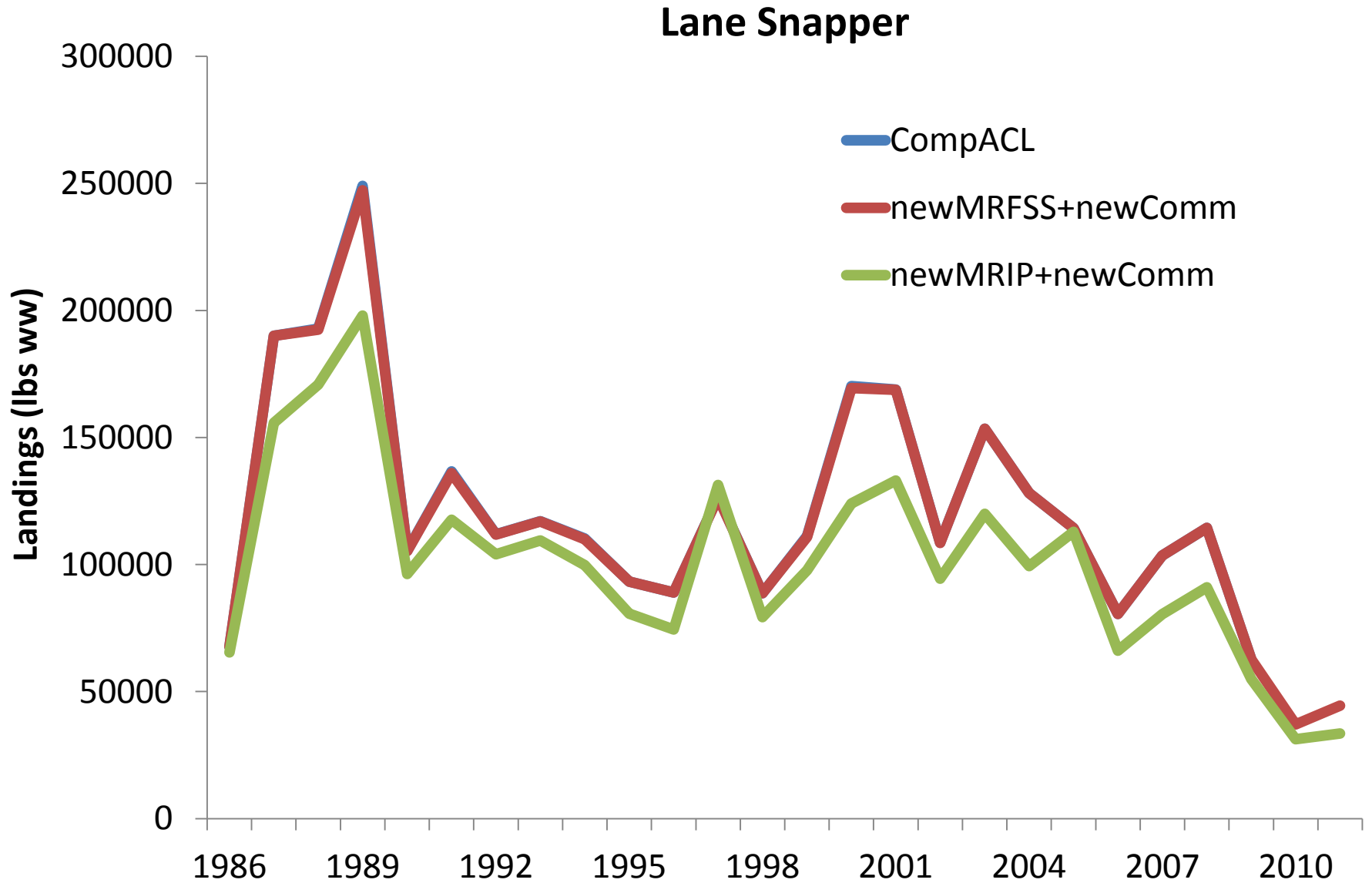
Jacks Complex

STOCK OR STOCK COMPLEX NAME	ABC			How ABC was calculated
	ACL Amendment	New MRFSS & Commercial	MRIP & New Commercial	
JACKS	455,489	449,739	457,221	sum of individual ABCs
Almaco jack	291,922	286,196	302,517	3rd highest (99-08)
Banded rudderfish	152,999	152,966	145,434	3rd highest (99-08)
Lesser amberjack	10,568	10,577	9,270	3rd highest (99-08)

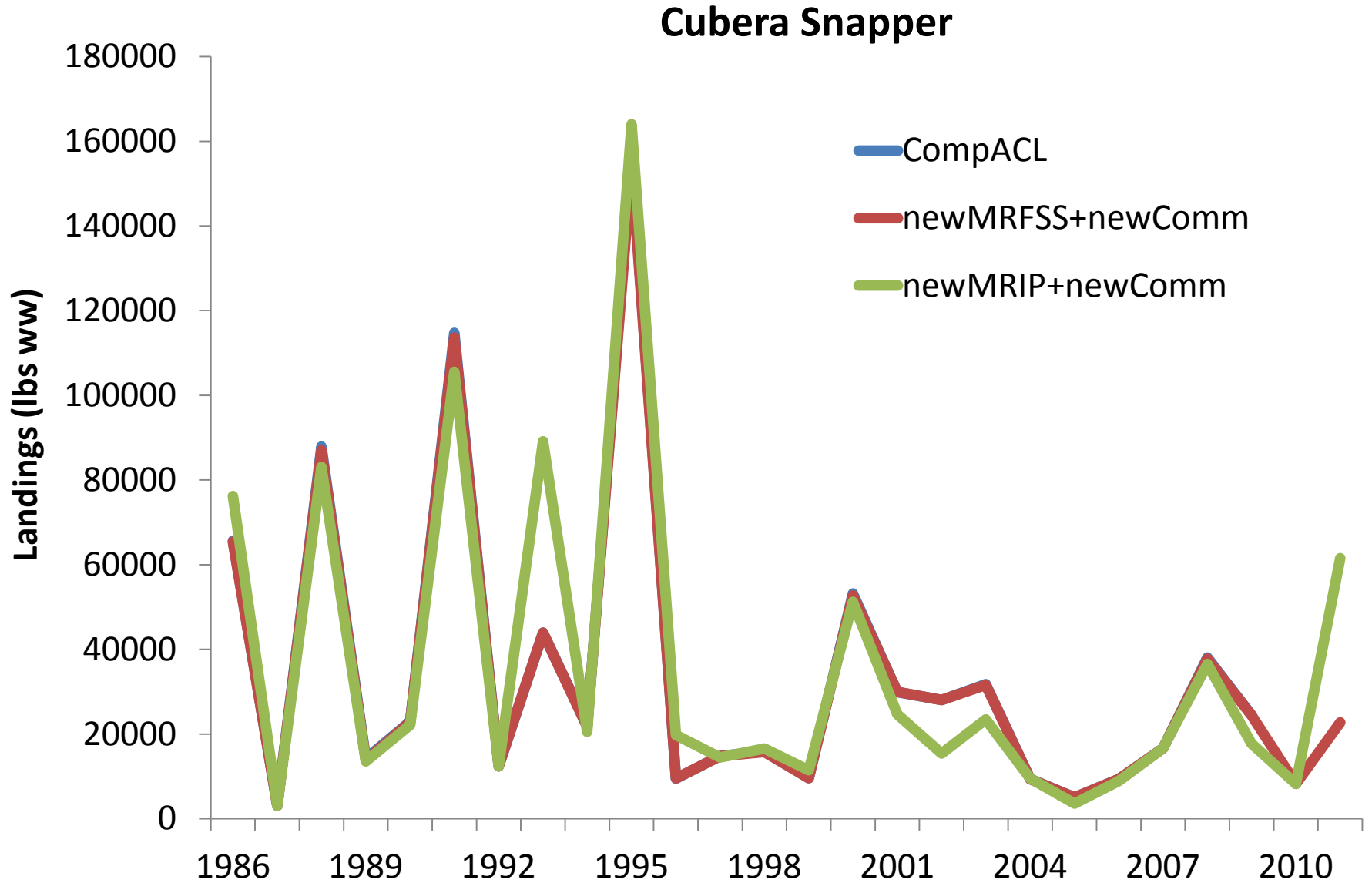
Gray Snapper



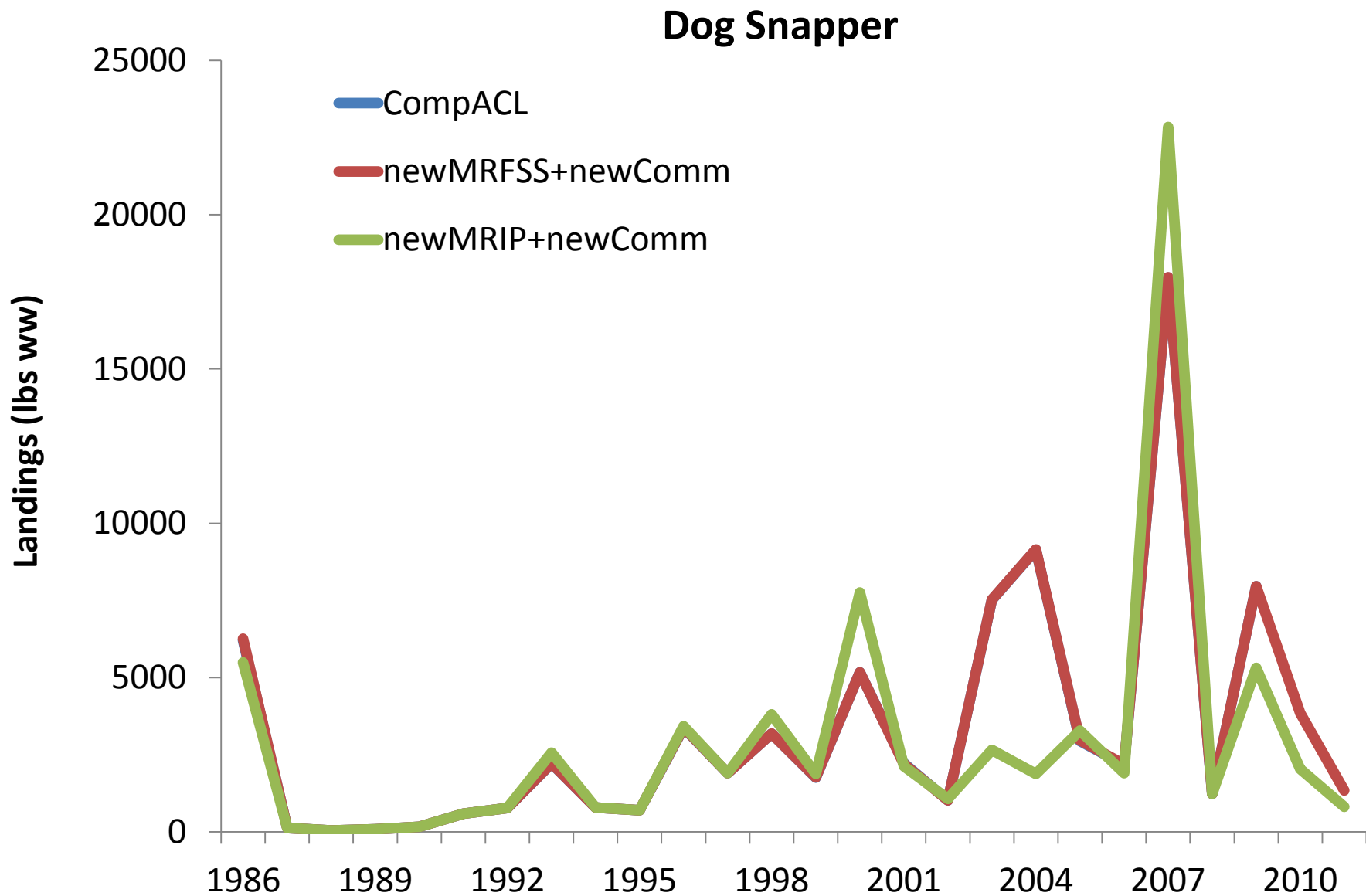
Lane Snapper



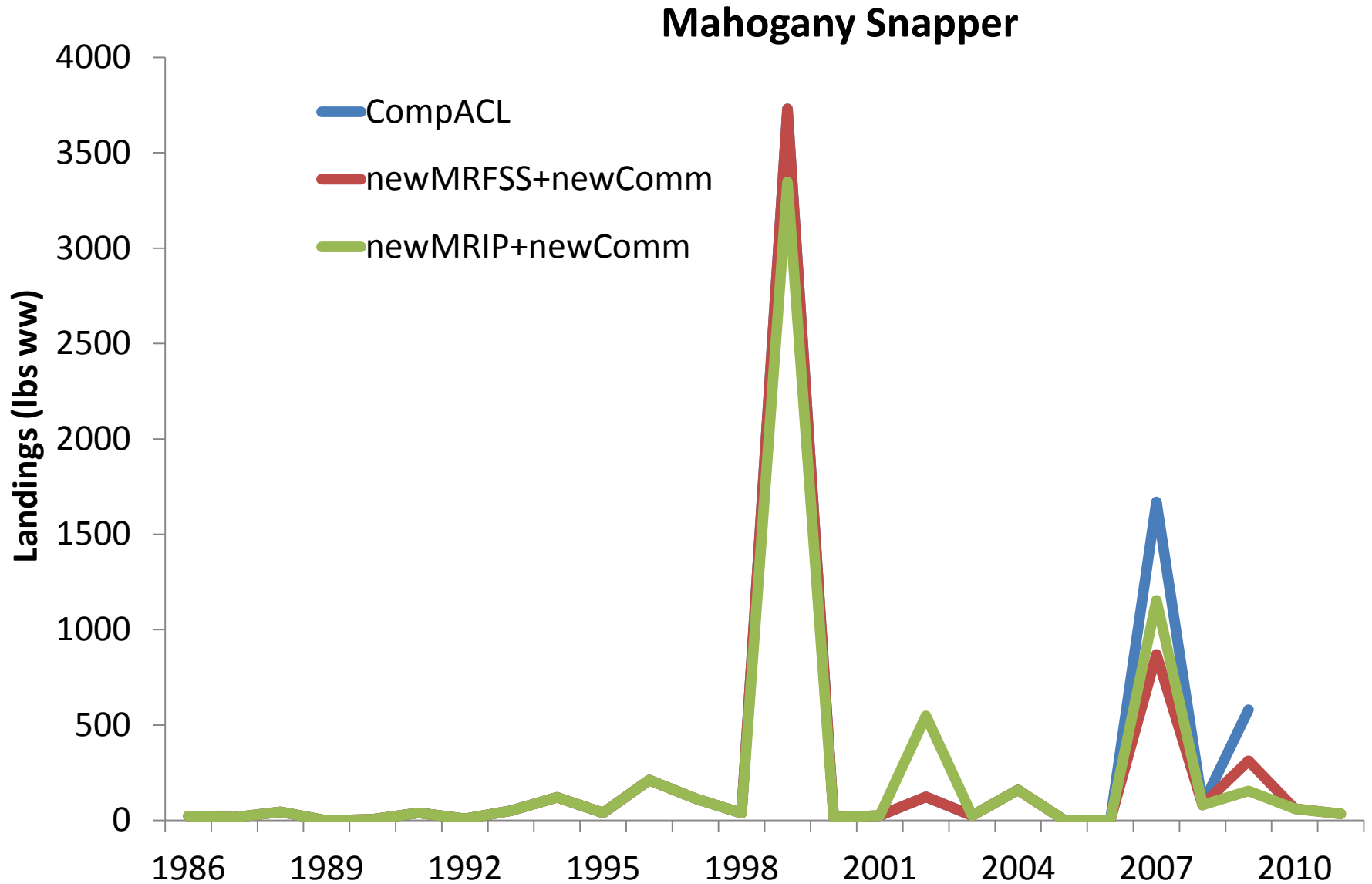
Cubera Snapper



Dog Snapper



Mahogany Snapper

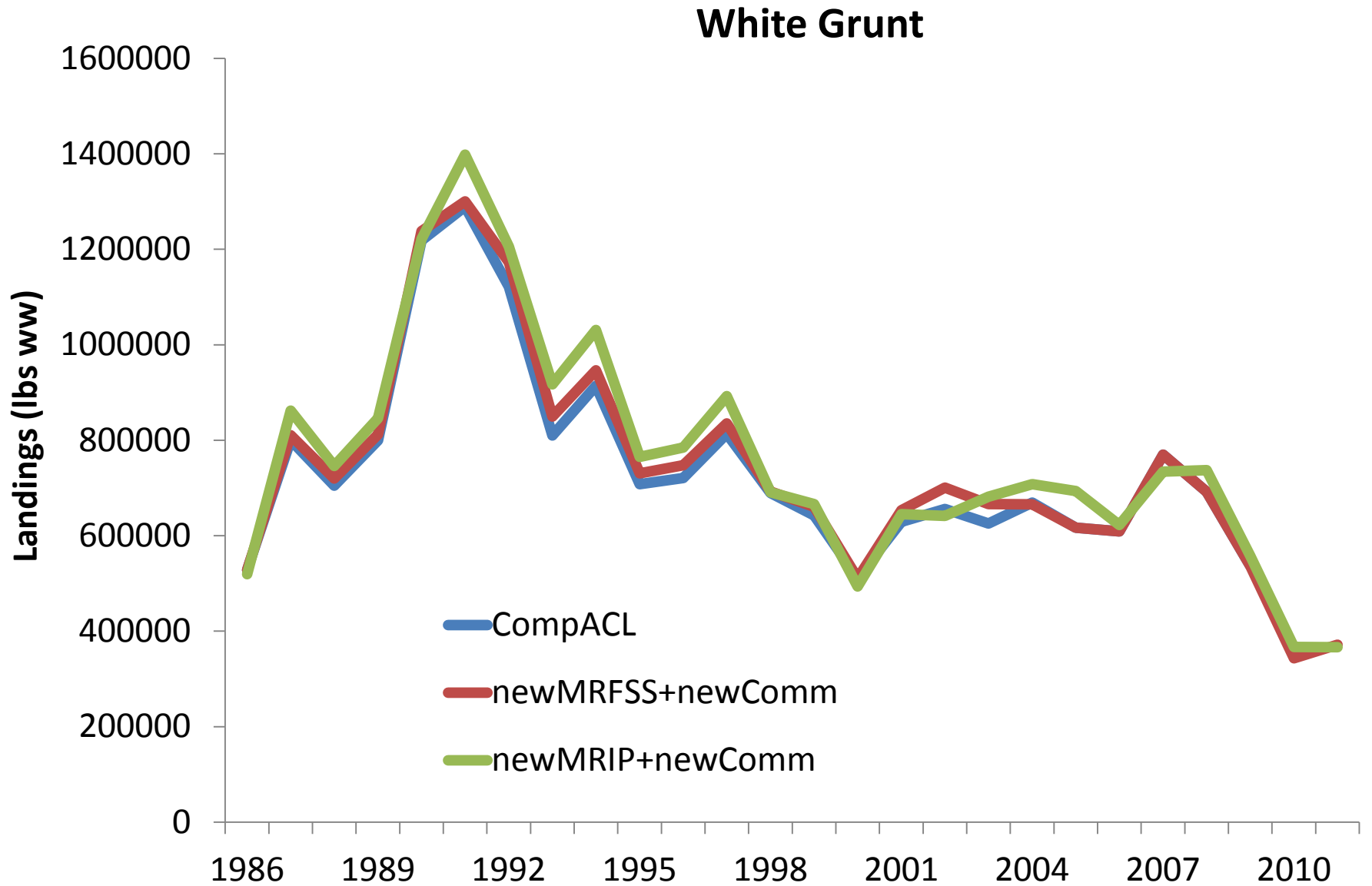


Snappers Complex

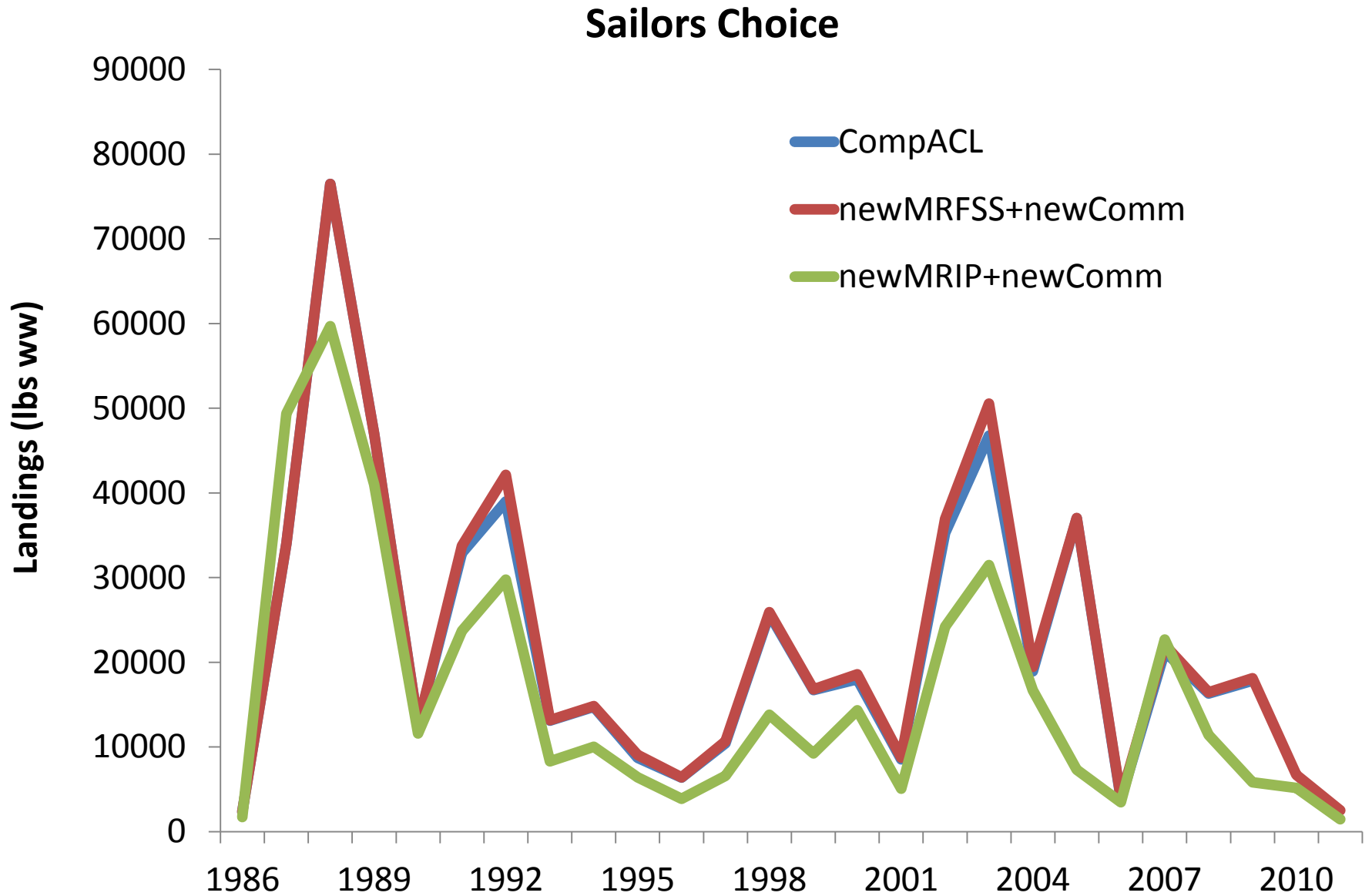
ABC proxy

STOCK OR STOCK COMPLEX NAME	ABC			How ABC was calculated
	ACL Amendment	New MRFSS & Commercial	MRIP & New Commercial	
SNAPPERS	1,086,940	1,085,914	944,239	sum of individual ABCs
Gray snapper	894,019	893,161	795,743	3rd highest (99-08)
Lane snapper	153,466	153,466	119,984	3rd highest (99-08)
Cubera snapper	31,772	31,602	24,680	3rd highest (99-08)
Dog snapper	7,523	7,525	3,285	3rd highest (99-08)
Mahogany snapper	160	160	548	3rd highest (99-08)

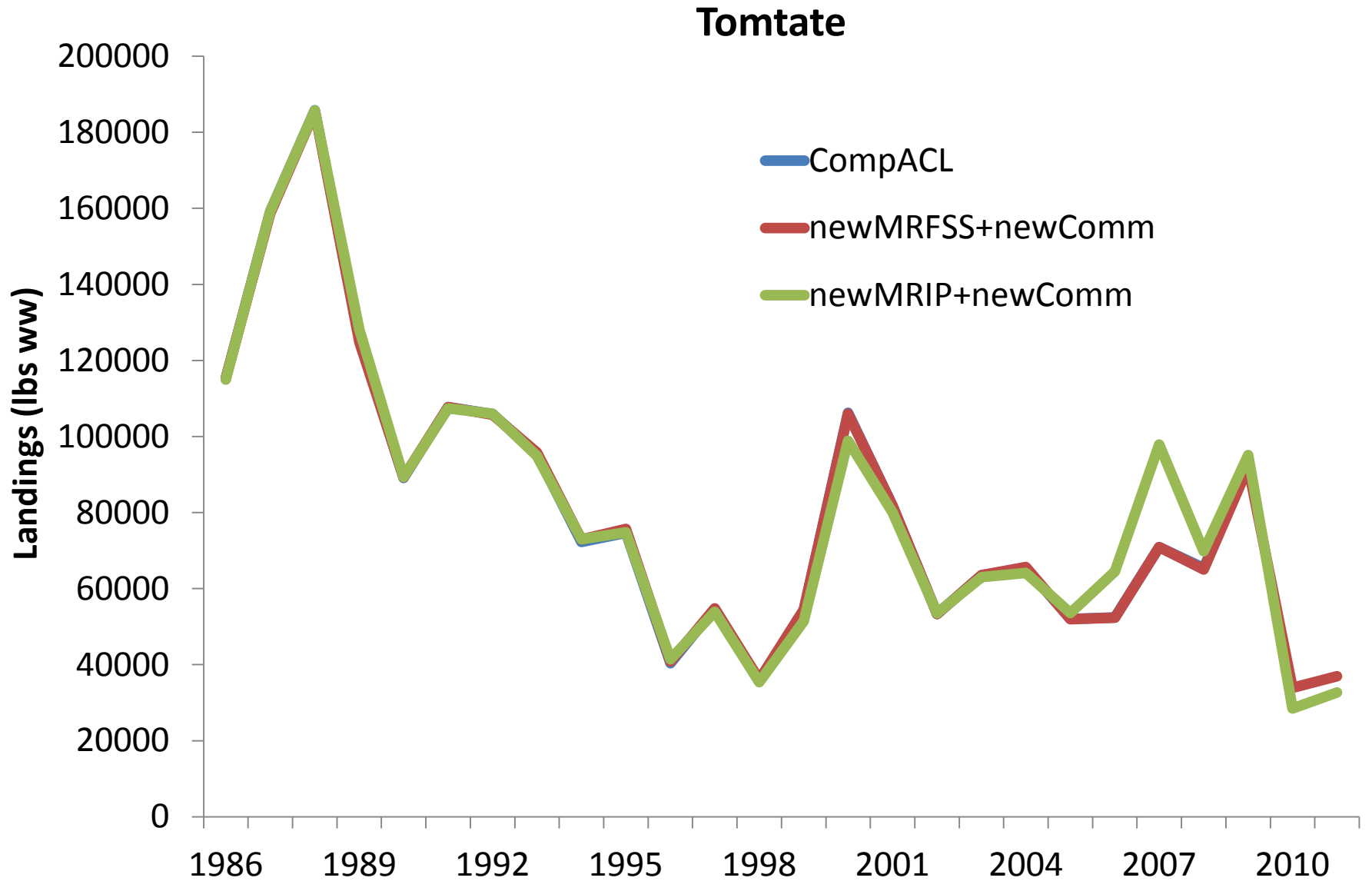
White Grunt



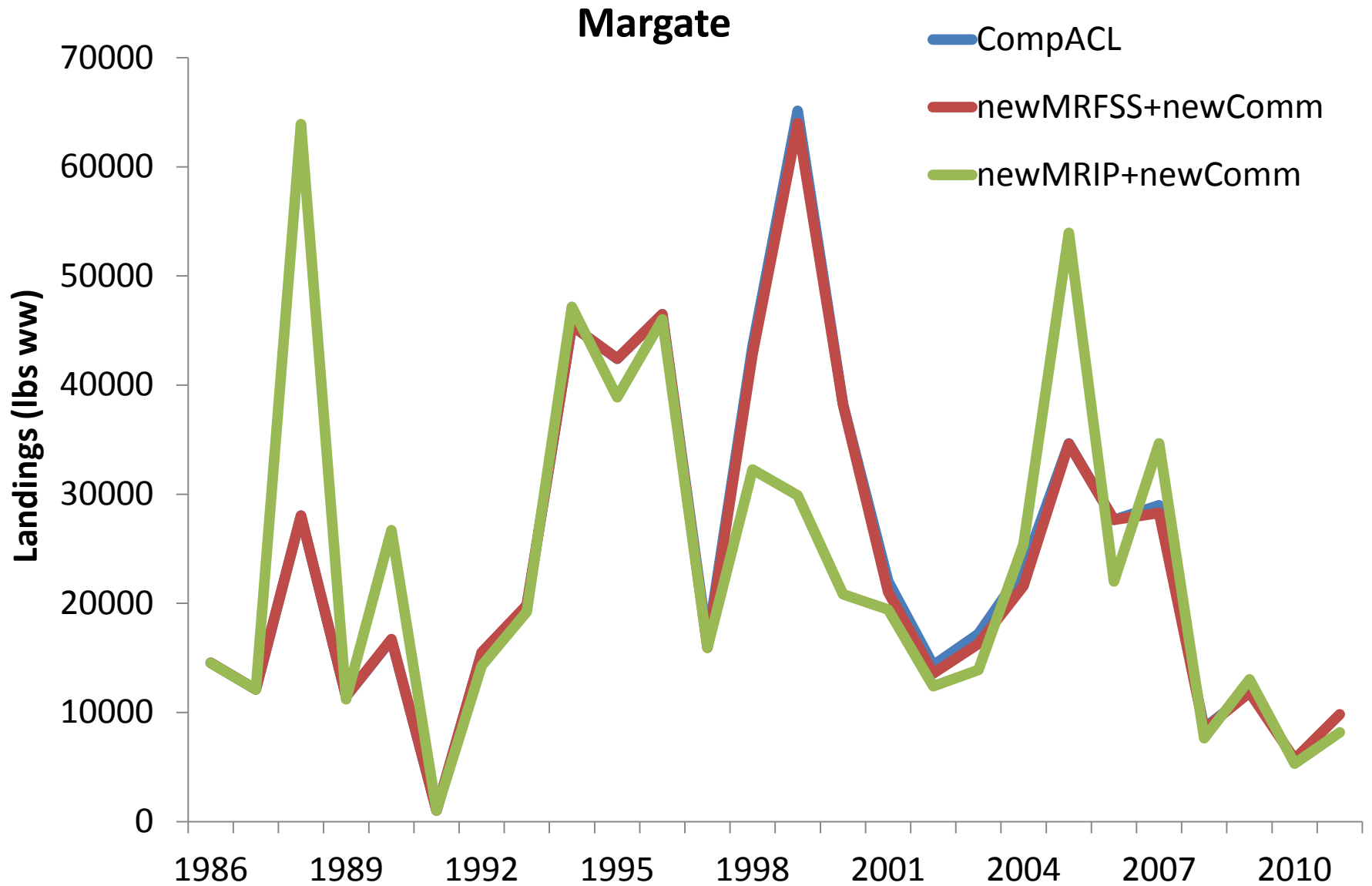
Sailors Choice



Tomtate



Margate

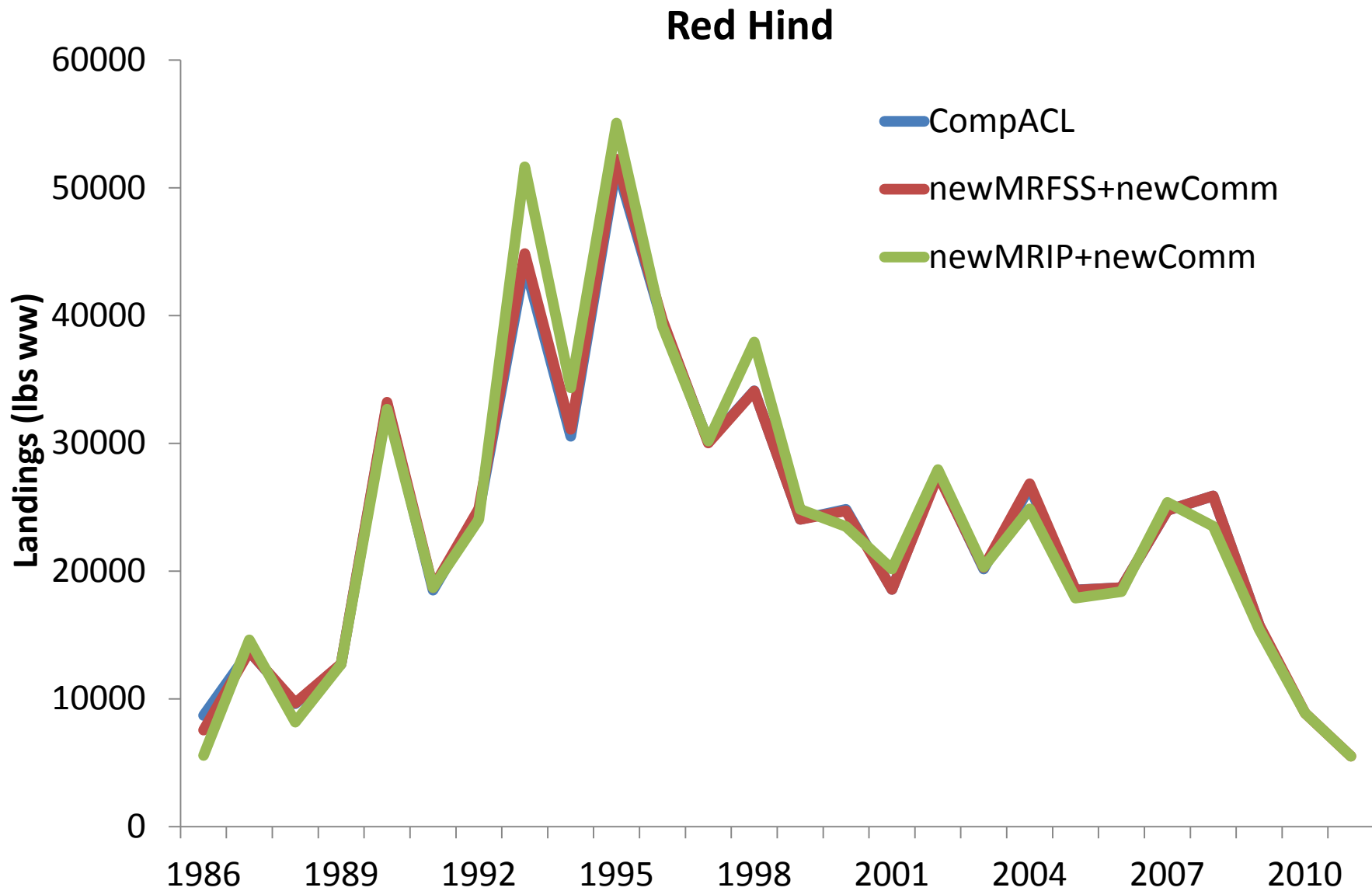


Grunts Complex

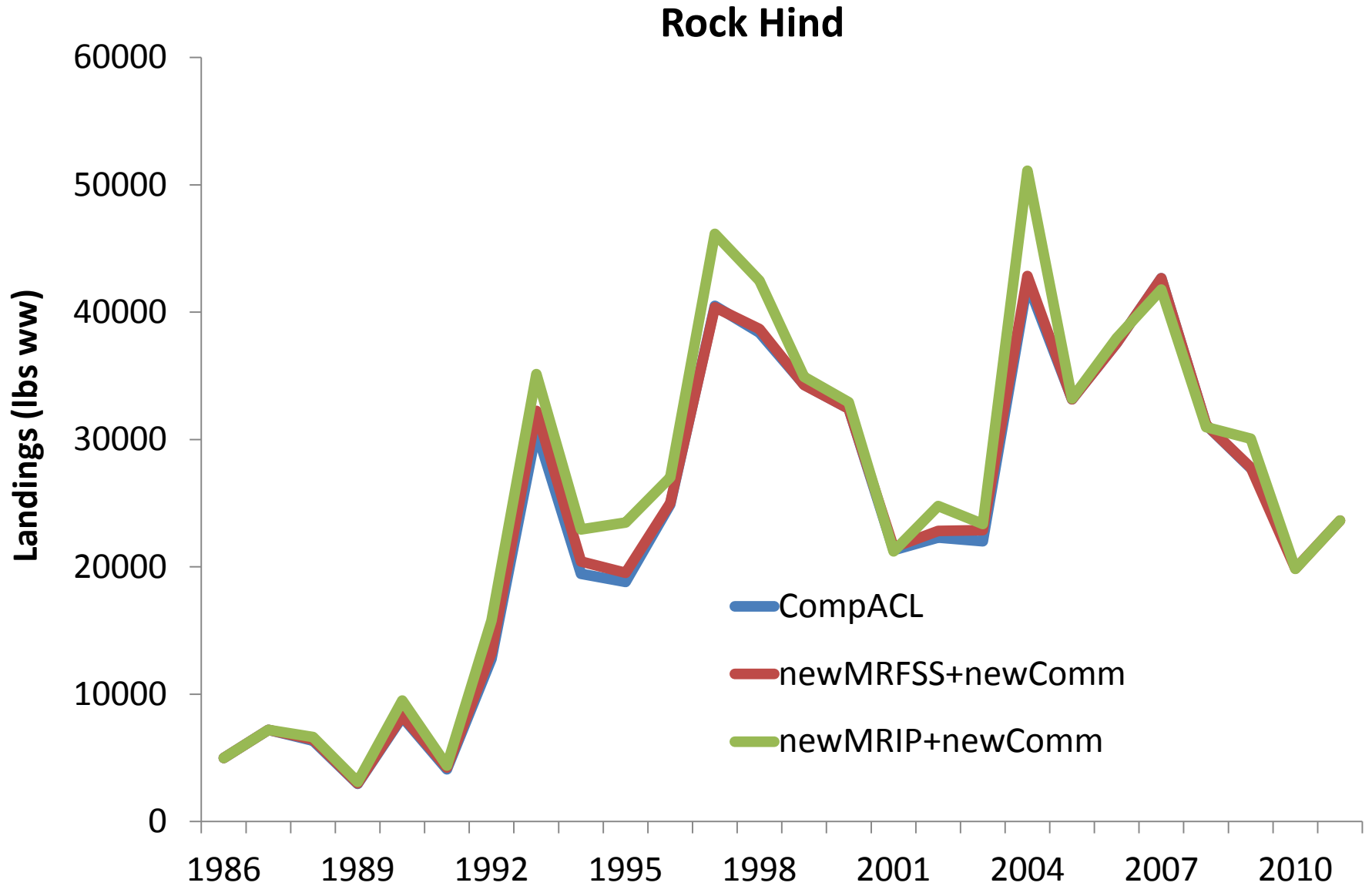
ABC proxy

STOCK OR STOCK COMPLEX NAME	ABC			How ABC was calculated
	ACL Amendment	New MRFSS & Commercial	MRIP & New Commercial	
GRUNTS	776,774	805,874	806,652	sum of individual ABCs
White grunt	635,899	663,390	674,033	median (99-08)
<i>Sailors choice</i>	<i>35,266</i>	<i>36,920</i>	<i>22,674</i>	<i>3rd highest (99-08)</i>
<i>Tomtate</i>	<i>70,948</i>	<i>70,948</i>	<i>80,056</i>	<i>3rd highest (99-08)</i>
<i>Margate</i>	<i>34,662</i>	<i>34,616</i>	<i>29,889</i>	<i>3rd highest (99-08)</i>

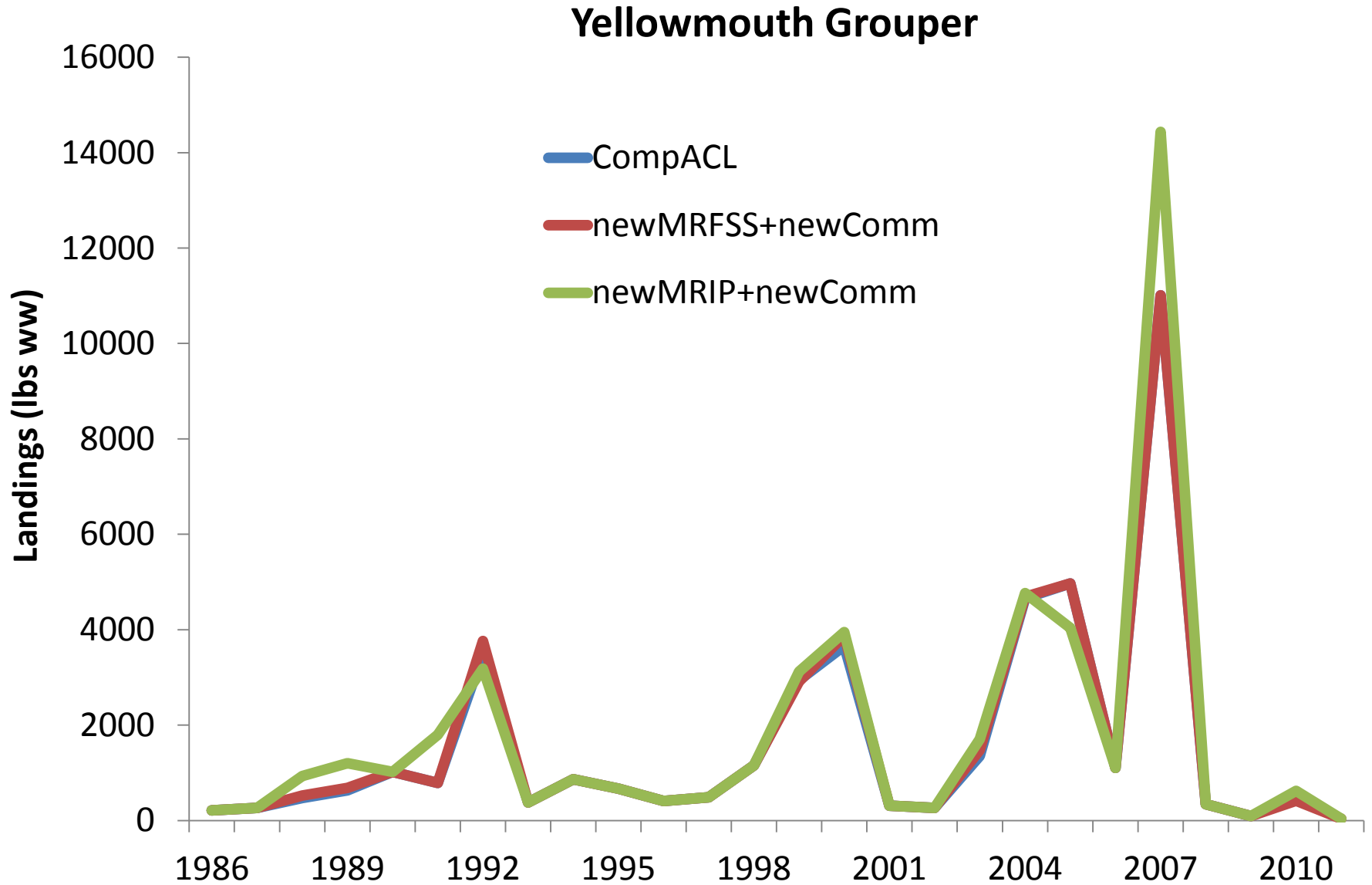
Red Hind



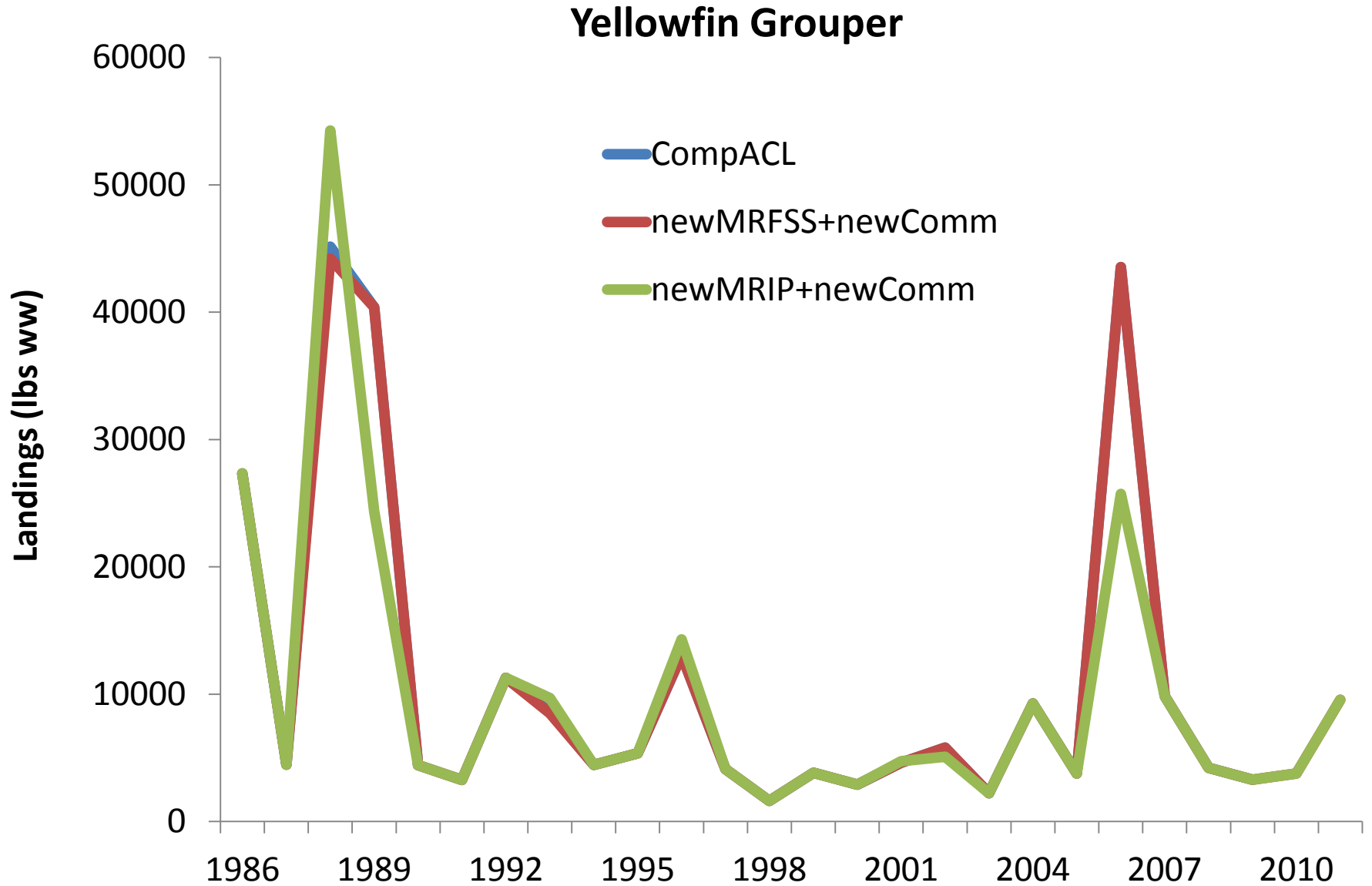
Rock Hind



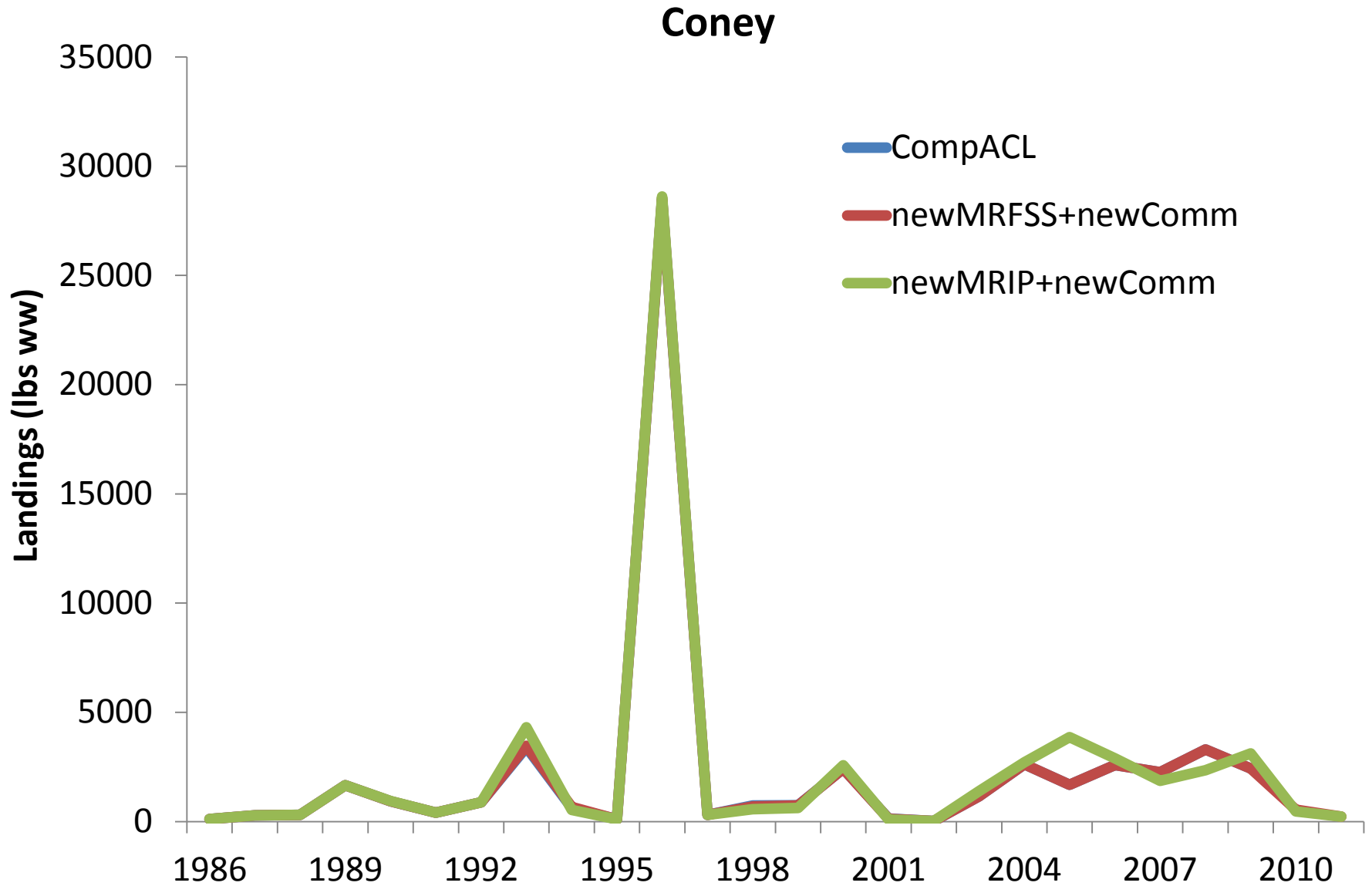
Yellowmouth Grouper



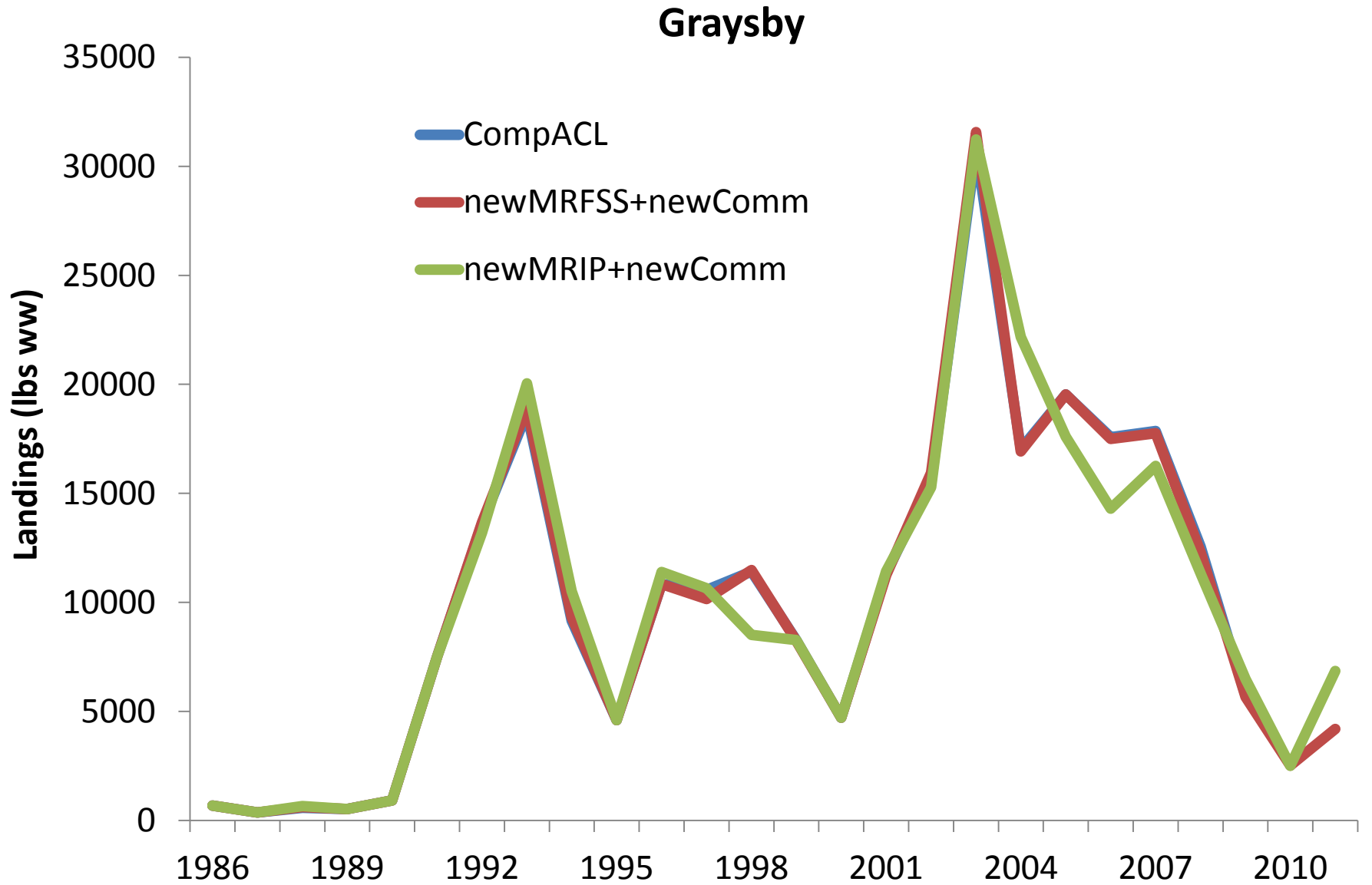
Yellowfin Grouper



Coney



Graysby

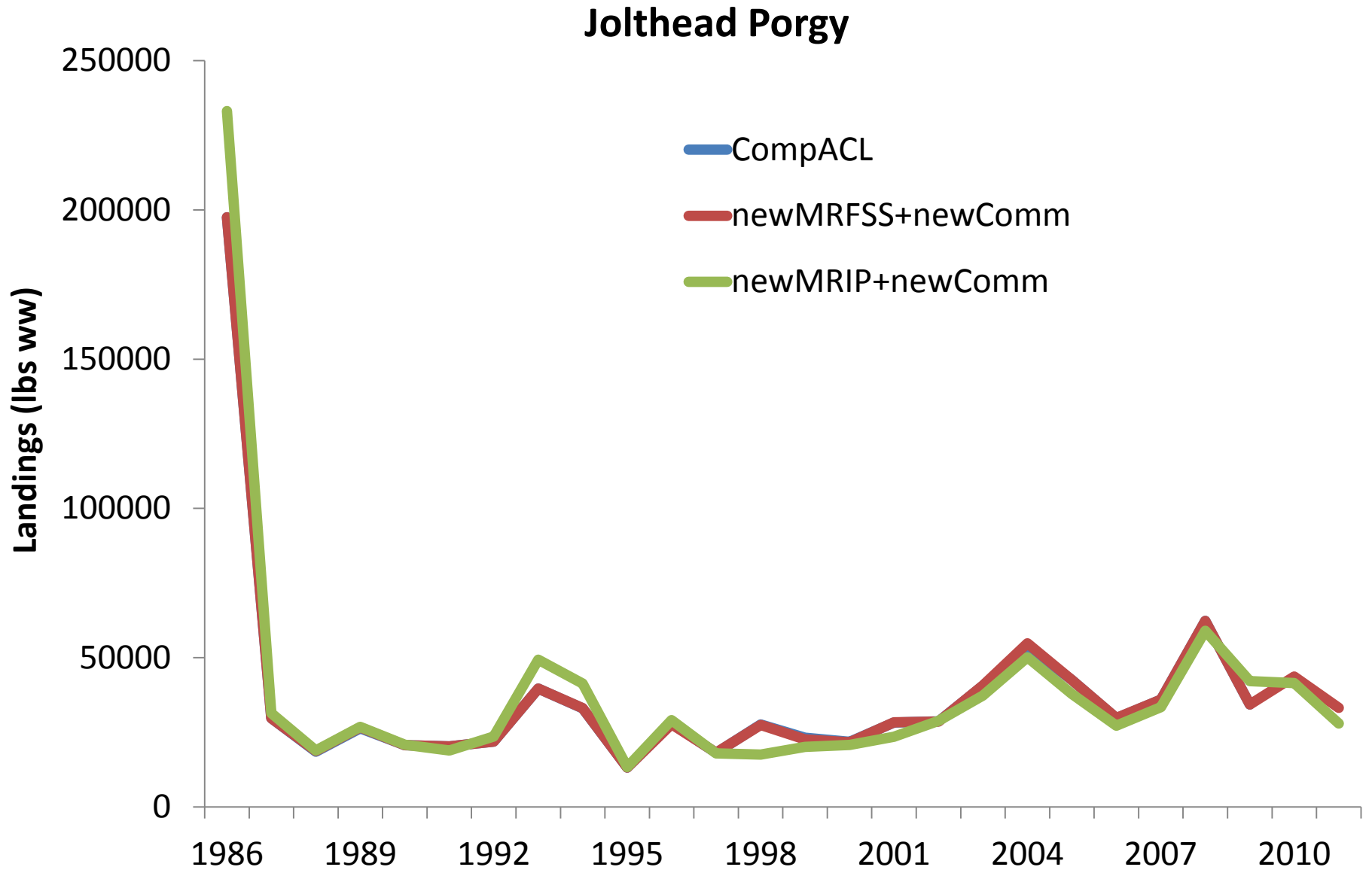


Shallow-water Grouper Complex

ABC proxy

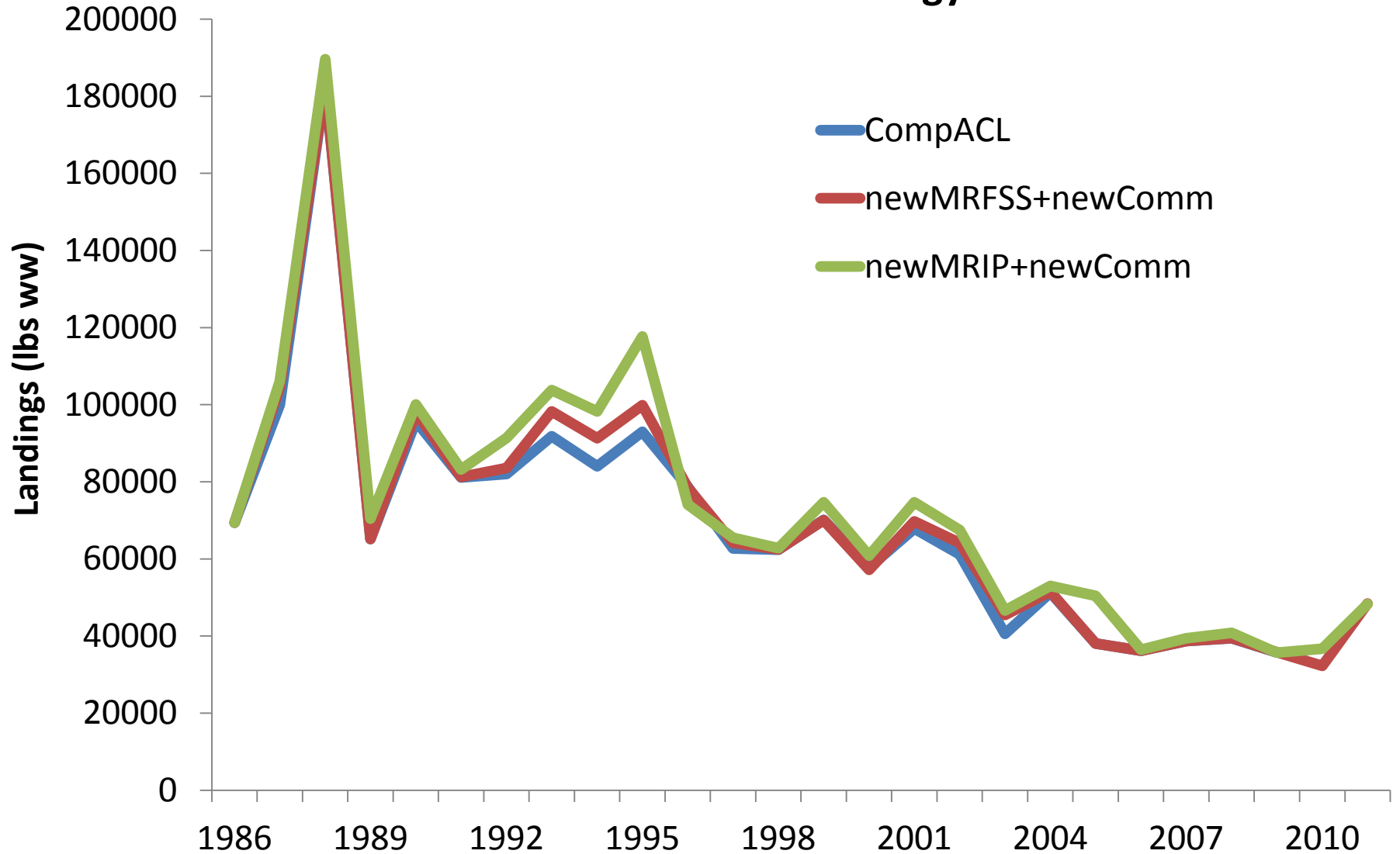
STOCK OR STOCK COMPLEX NAME	ABC			How ABC was calculated
	ACL Amendment	New MRFSS & Commercial	MRIP & New Commercial	
SHALLOW-WATER GROUPERS	97,817	97,745	96,432	sum of individual ABCs
Red hind	25,885	25,875	24,867	3rd highest (99-08)
Rock hind	37,569	37,577	37,953	3rd highest (99-08)
Yellowmouth grouper	4,661	4,692	4,040	3rd highest (99-08)
Yellowfin grouper	9,258	9,258	9,258	3rd highest (99-08)
Coney	2,589	2,584	2,718	3rd highest (99-08)
Graysby	17,856	17,757	17,597	3rd highest (99-08)

Jolthead Porgy

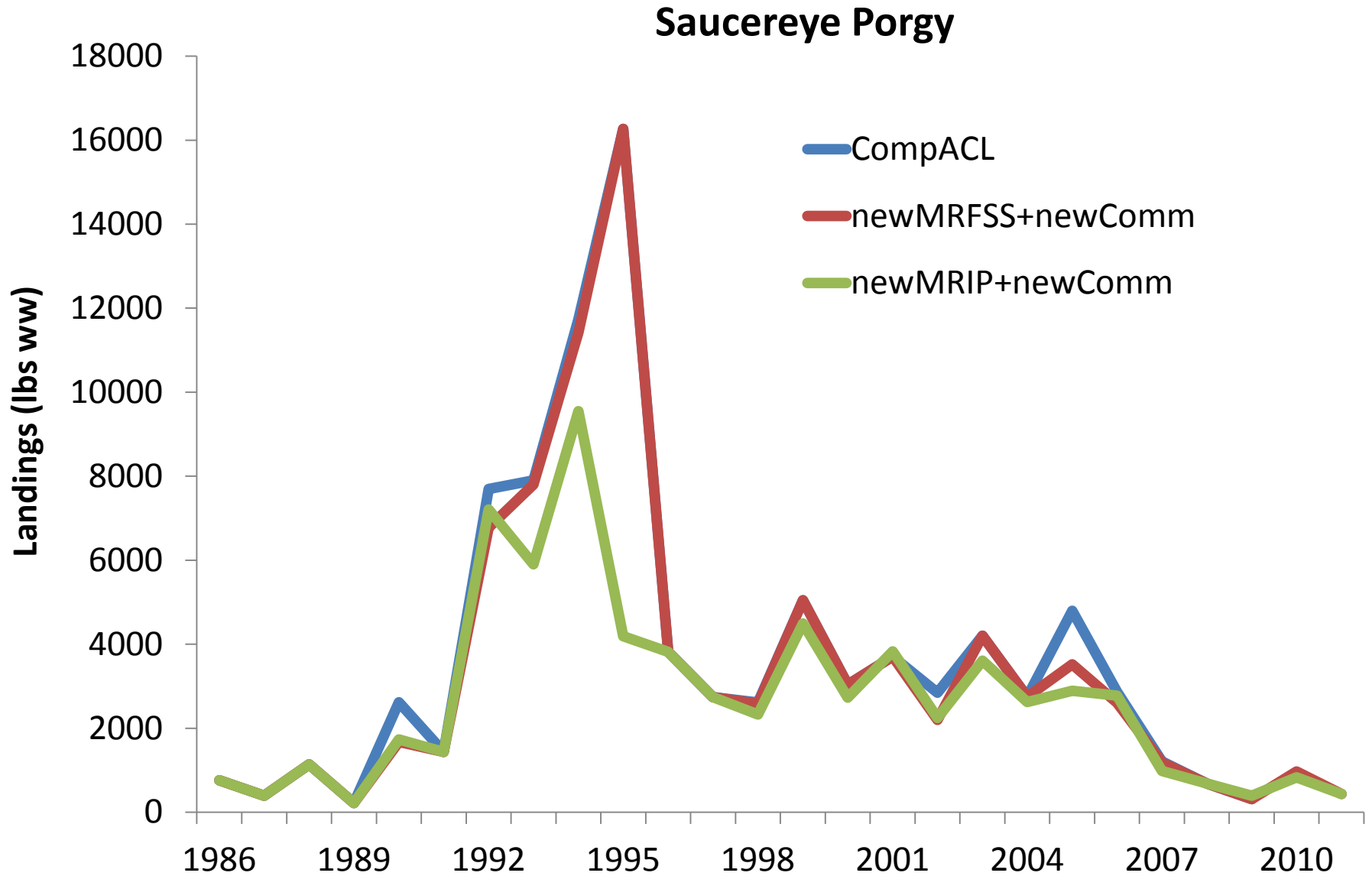


Knobbed Porgy

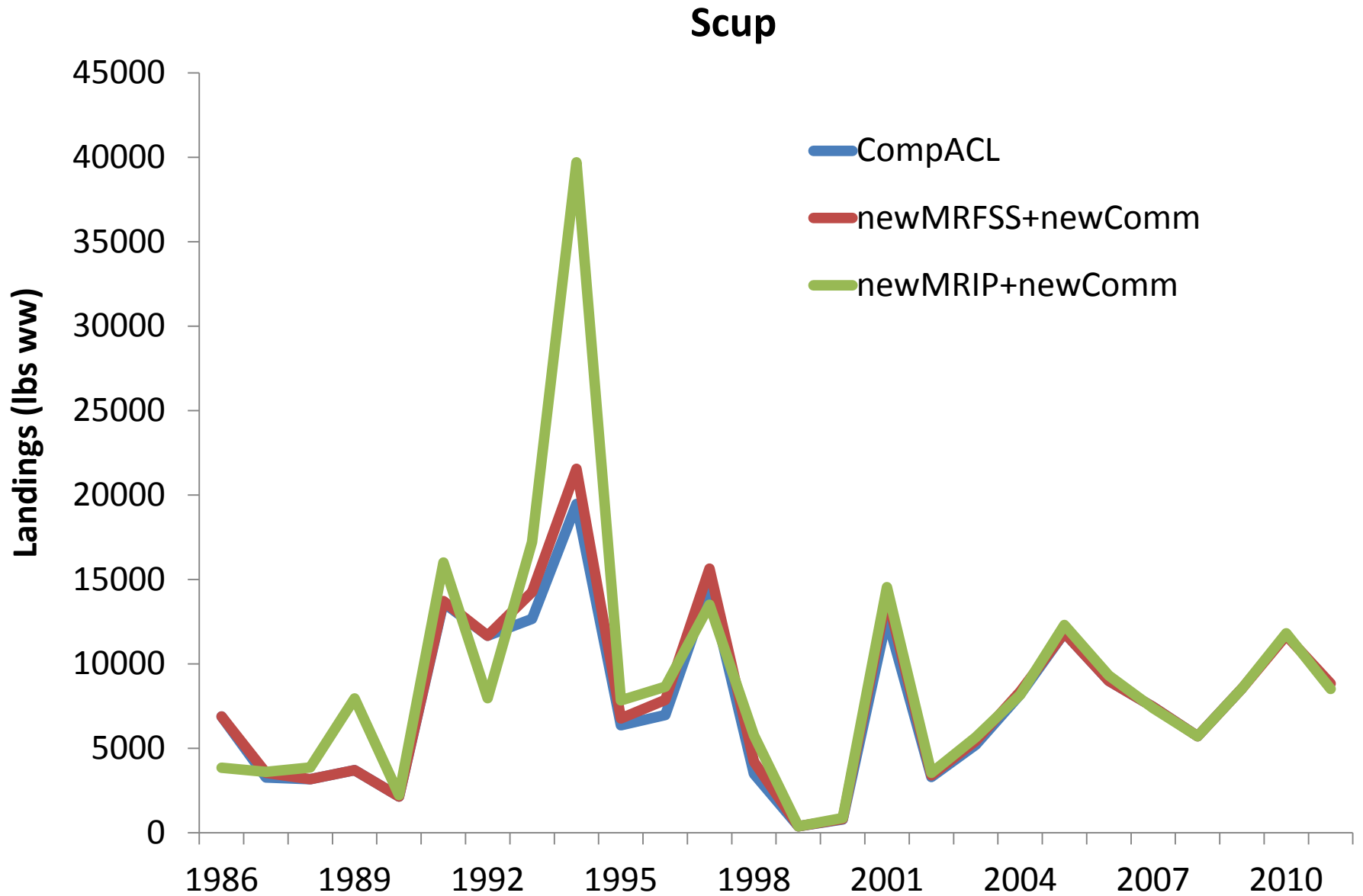
Knobbed Porgy



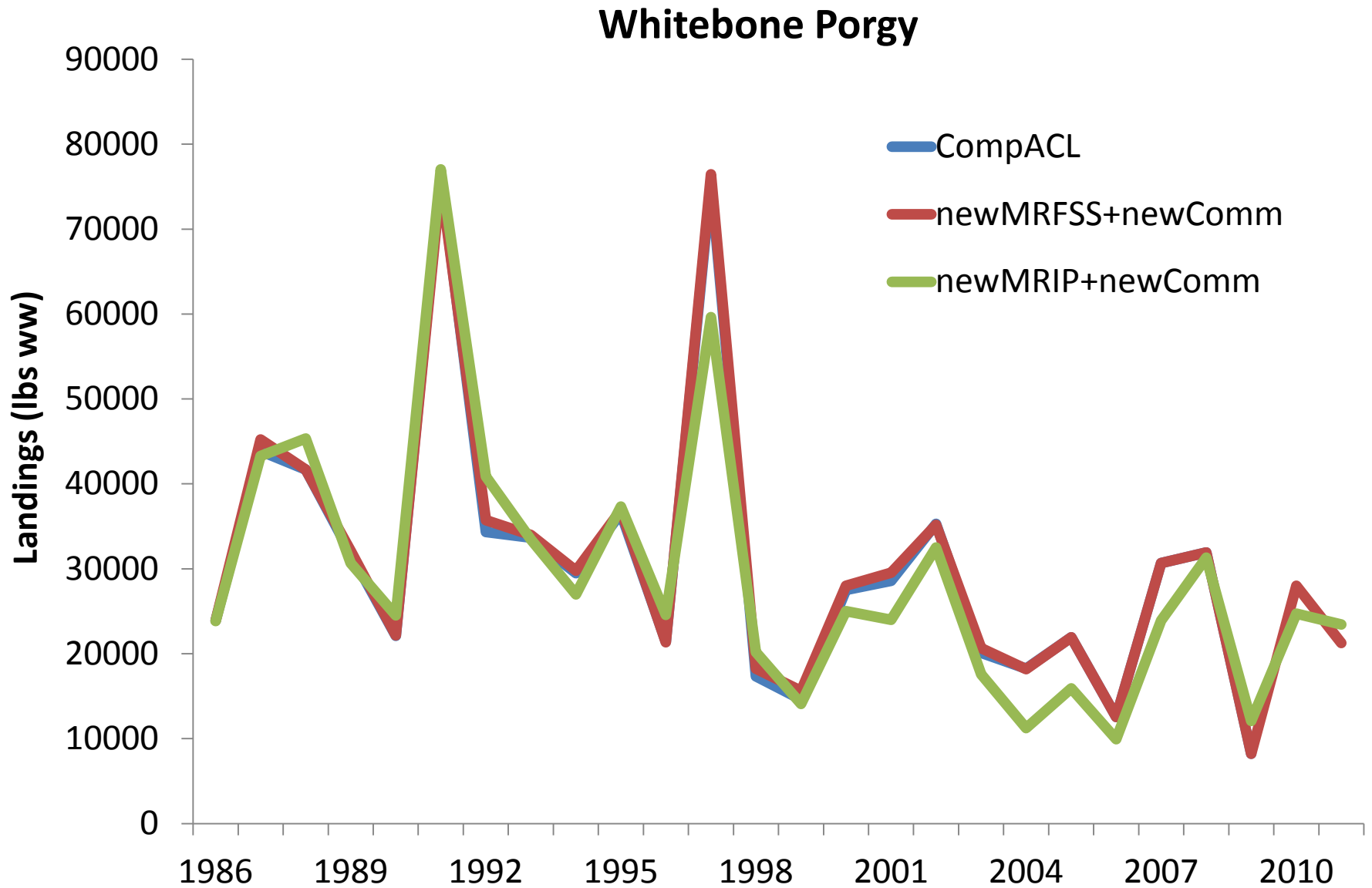
Saucereye Porgy



Scup



Whitebone Porgy

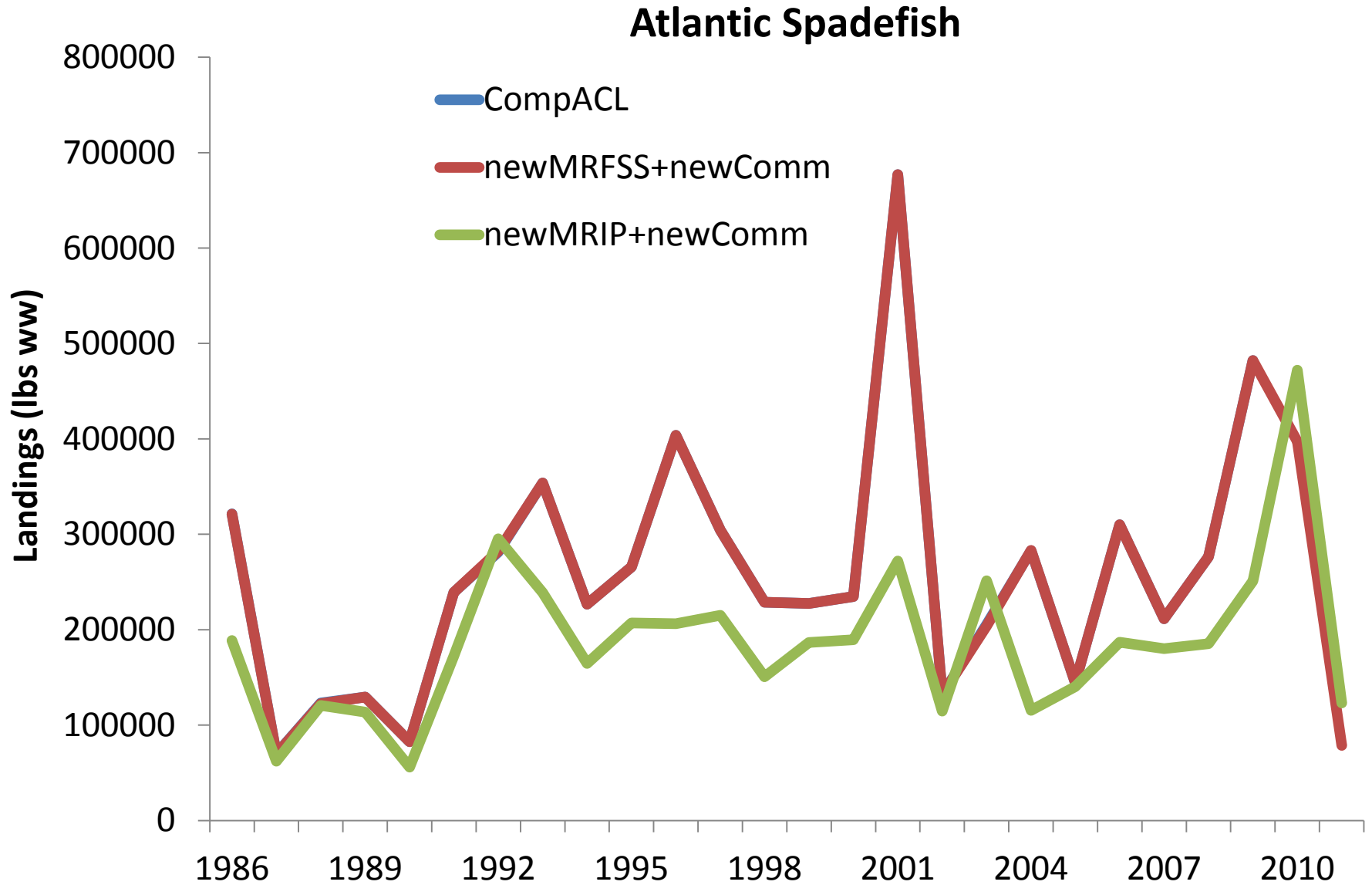


Porgies Complex

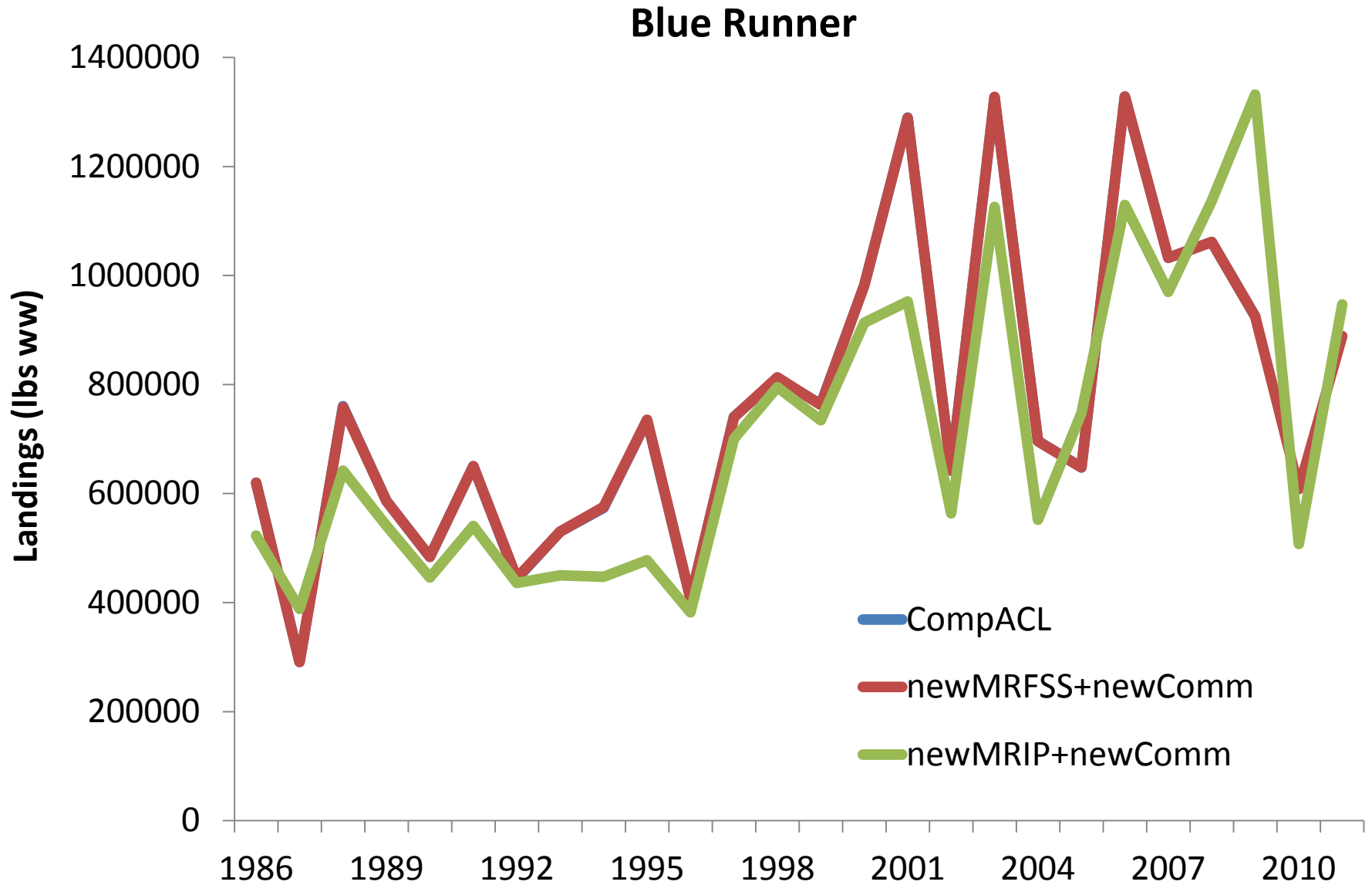
ABC proxy

STOCK OR STOCK COMPLEX NAME	ABC			How ABC was calculated
	ACL Amendment	New MRFSS & Commercial	MRIP & New Commercial	
PORGIES	147,614	150,041	143,263	sum of individual ABCs
Jolthead porgy	42,533	42,533	37,885	3rd highest (99-08)
Knobbed porgy	61,194	64,130	67,441	3rd highest (99-08)
Saucereye porgy	4,205	3,710	3,606	3rd highest (99-08)
Scup	8,999	8,999	9,306	3rd highest (99-08)
Whitebone porgy	30,684	30,671	25,024	3rd highest (99-08)

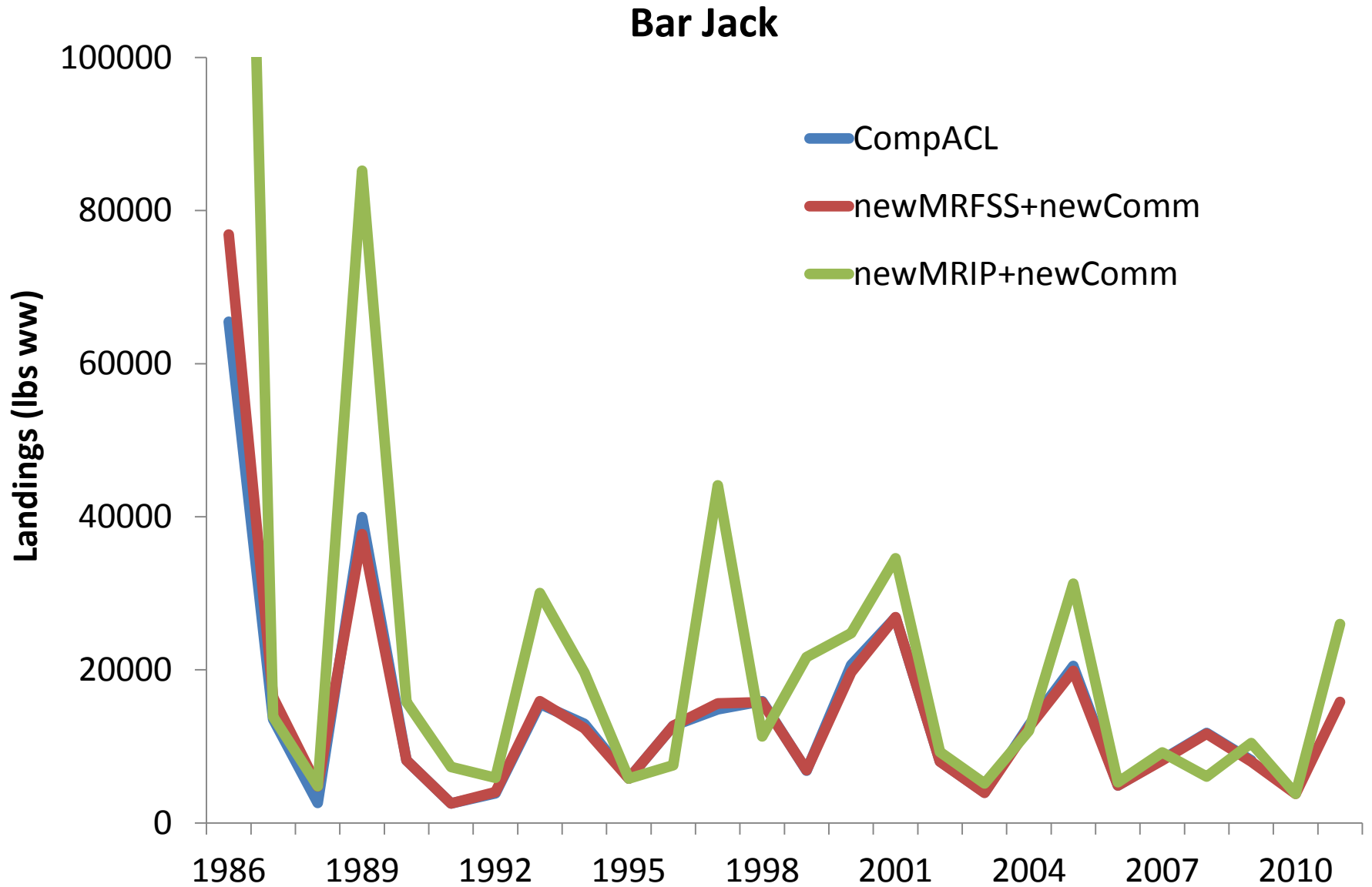
Atlantic Spadefish



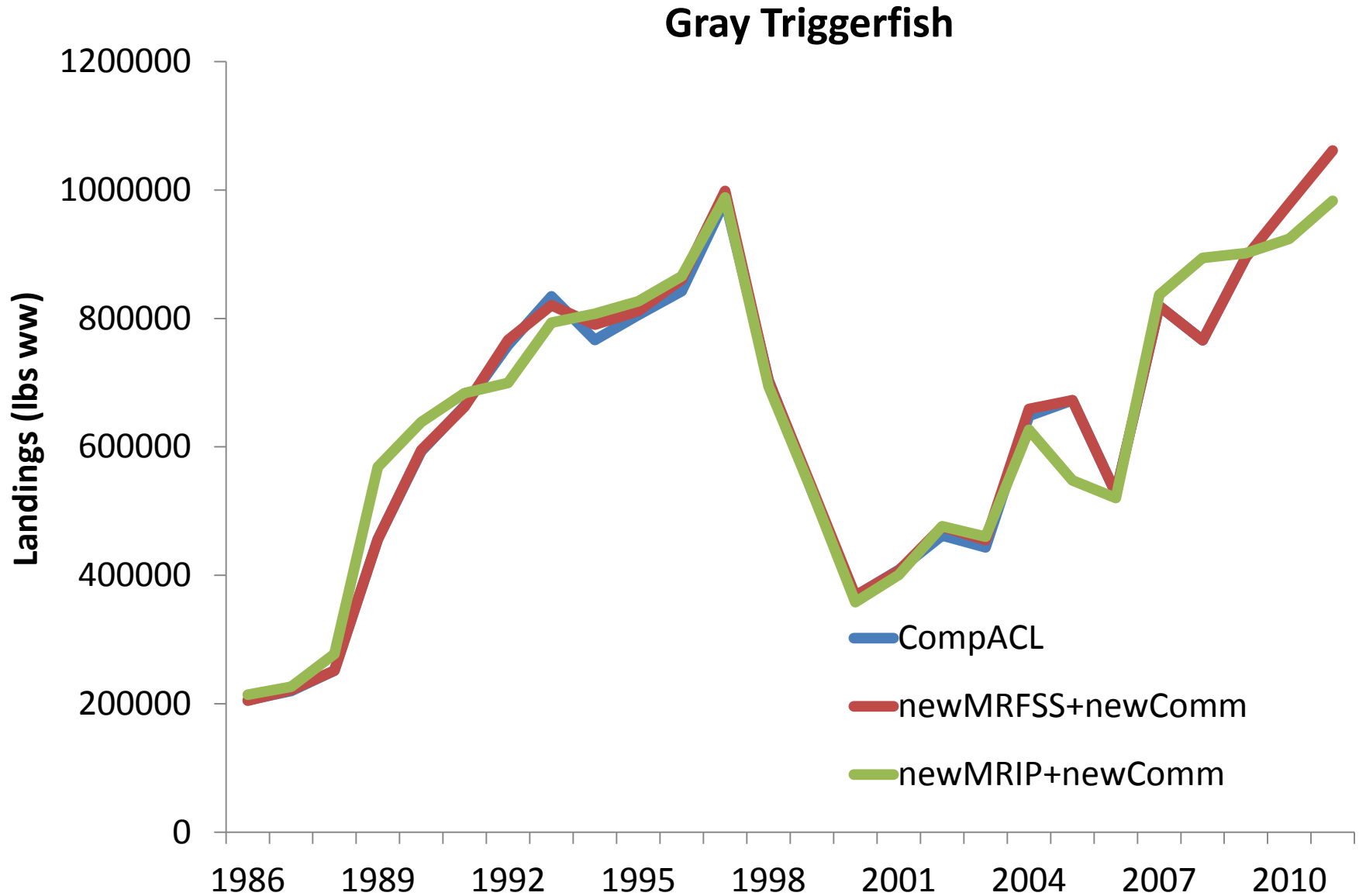
Blue Runner



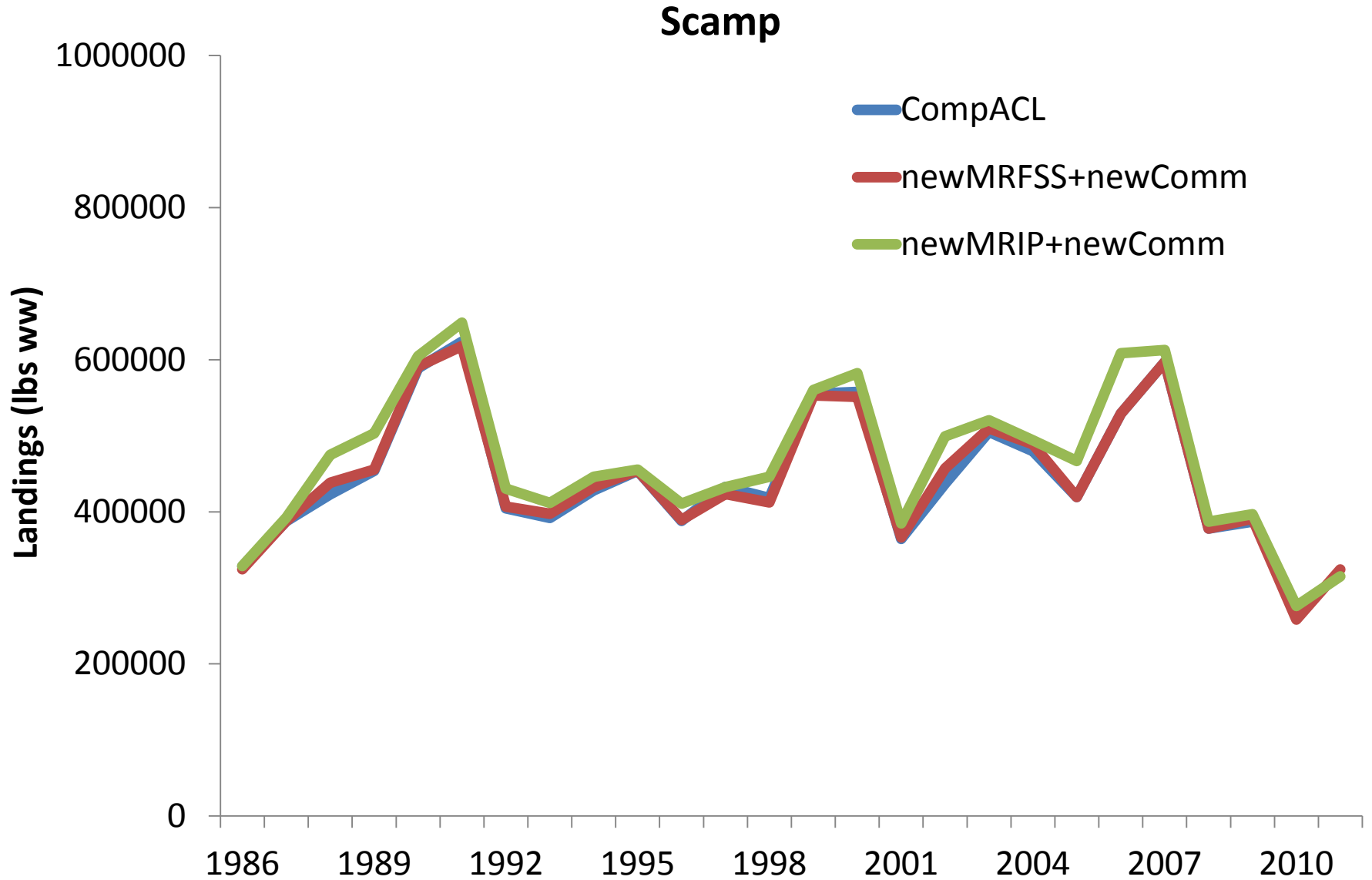
Bar Jack



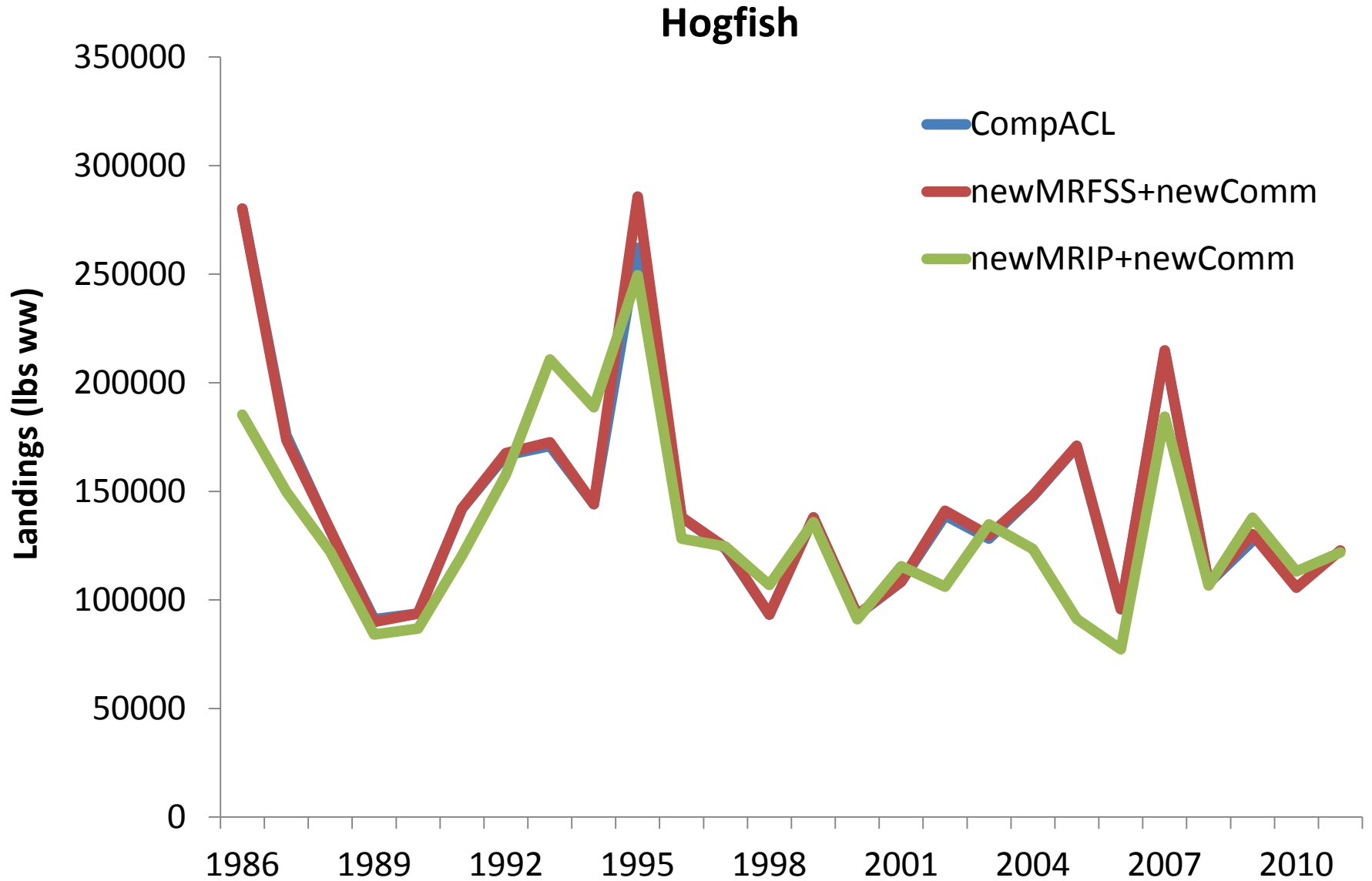
Gray Triggerfish



Scamp



Hogfish



Individual Stocks

ABC proxy

STOCK	ABC			How ABC was calculated
	ACL Amendment	New MRFSS & Commercial	MRIP & New Commercial	
Atlantic spadefish	282,841	283,177	189,460	3rd highest (99-08)
Blue runner	1,289,941	1,288,716	1,125,729	3rd highest (99-08)
Bar jack	20,520	19,684	24,780	3rd highest (99-08)
Gray triggerfish	672,565	672,565	626,518	3rd highest (99-08)
Scamp	492,572	499,255	509,788	median (99-08)
Hogfish	147,638	147,971	134,824	3rd highest (99-08)