




# Analysis of Fishing Effort in Statistical Area 514



Peabody, MA  
October 3, 2012

# Data

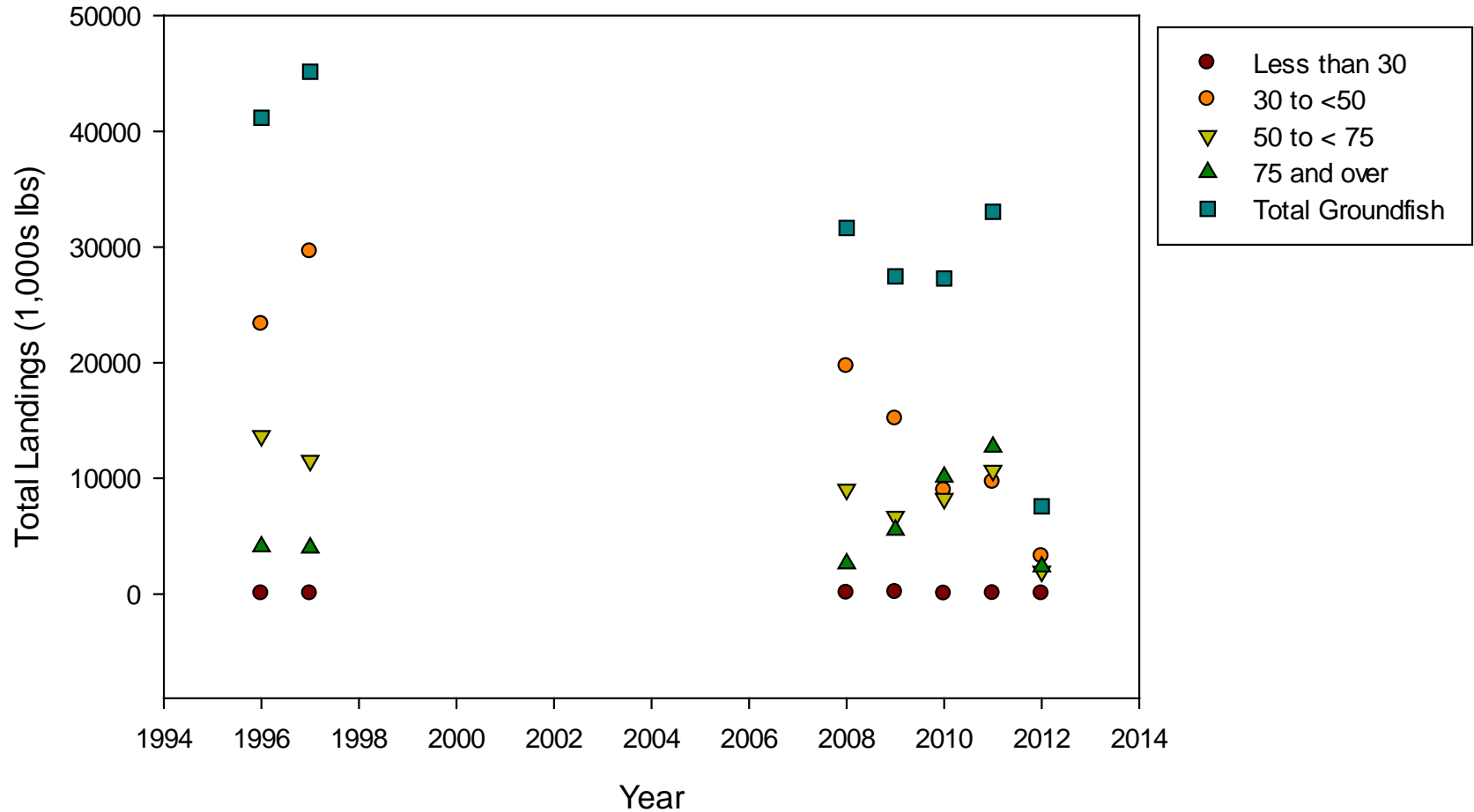
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- ▶ **VTR data**
  - ▶ SA 514
- ▶ **Time Periods**
  - ▶ Early: 1996 – 1997
  - ▶ Pre-sectors: 2008 – 2009
  - ▶ Post-sectors: 2010 – 2011
- ▶ **Vessel Size Classes**
  - ▶ Less than 30 ft
  - ▶ 30 to less than 50 ft
  - ▶ 50 to less than 75 ft
  - ▶ 75 ft and over



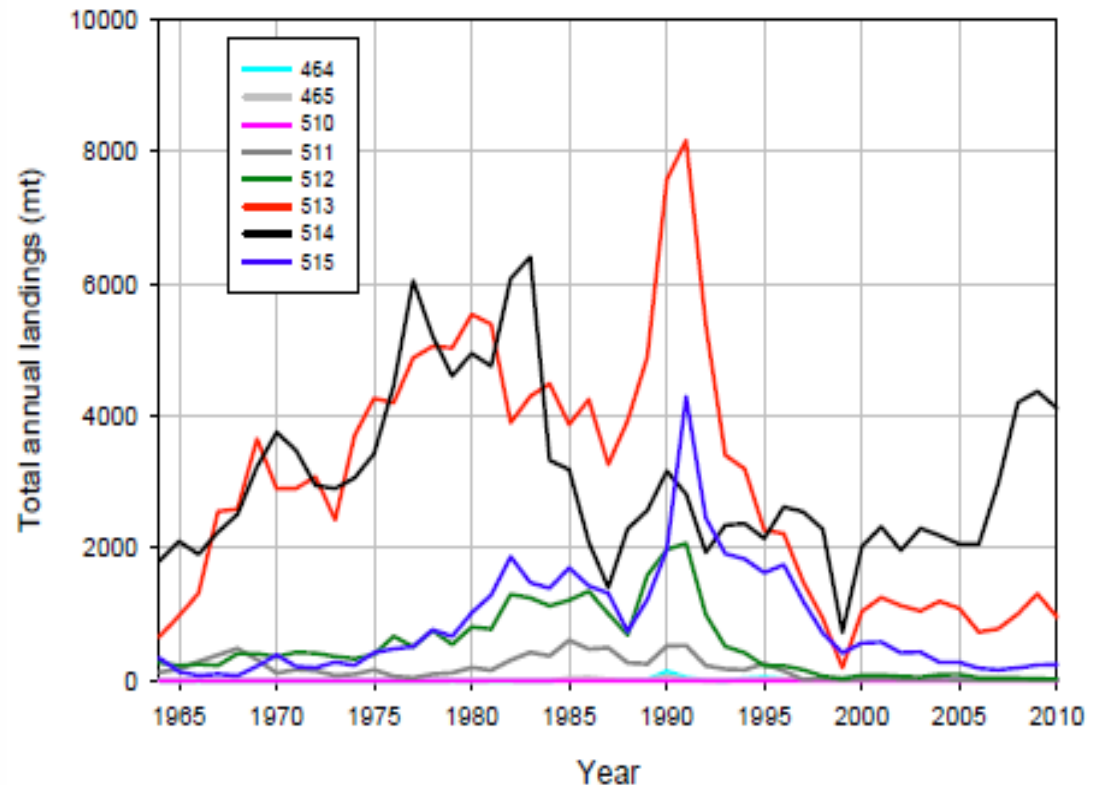
# Total Groundfish Landings in SA 514

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# Cod Landings in SA 514

- ▶ GOM cod landings by statistical area
- ▶ Landings increased in SA 514 after 2010
- ▶ Not seen in other SAs



# Cod Landings in SA 514

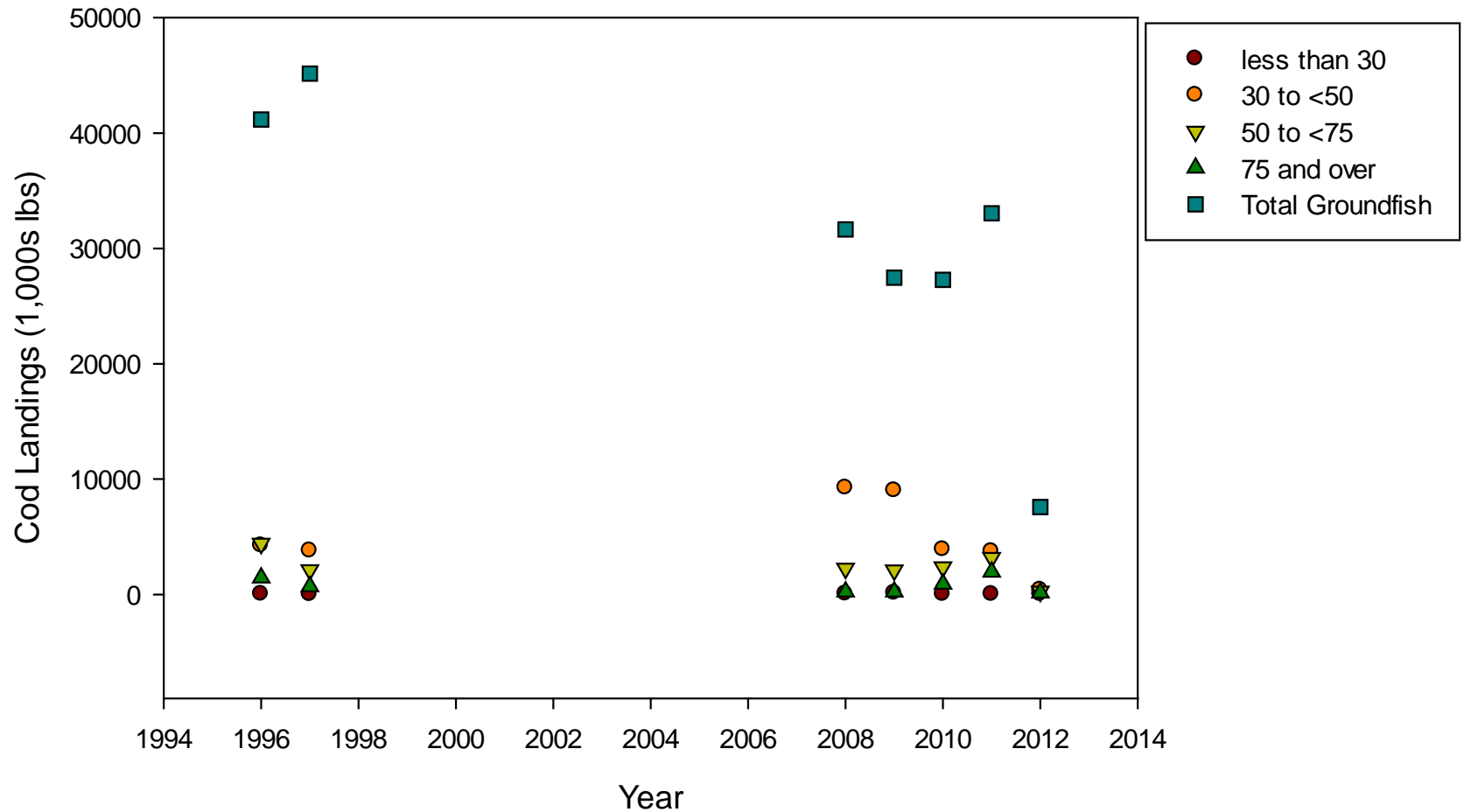
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- ▶ Cod landings appear to be increasing after 2010
- ▶ Increased landings similar to those in late 1990s
- ▶ Response to removal of trip limits varies by vessel size category
- ▶ Recent landings fairly consistent
- ▶ Monthly trends vary by vessel size and year



# Cod Landings in SA 514

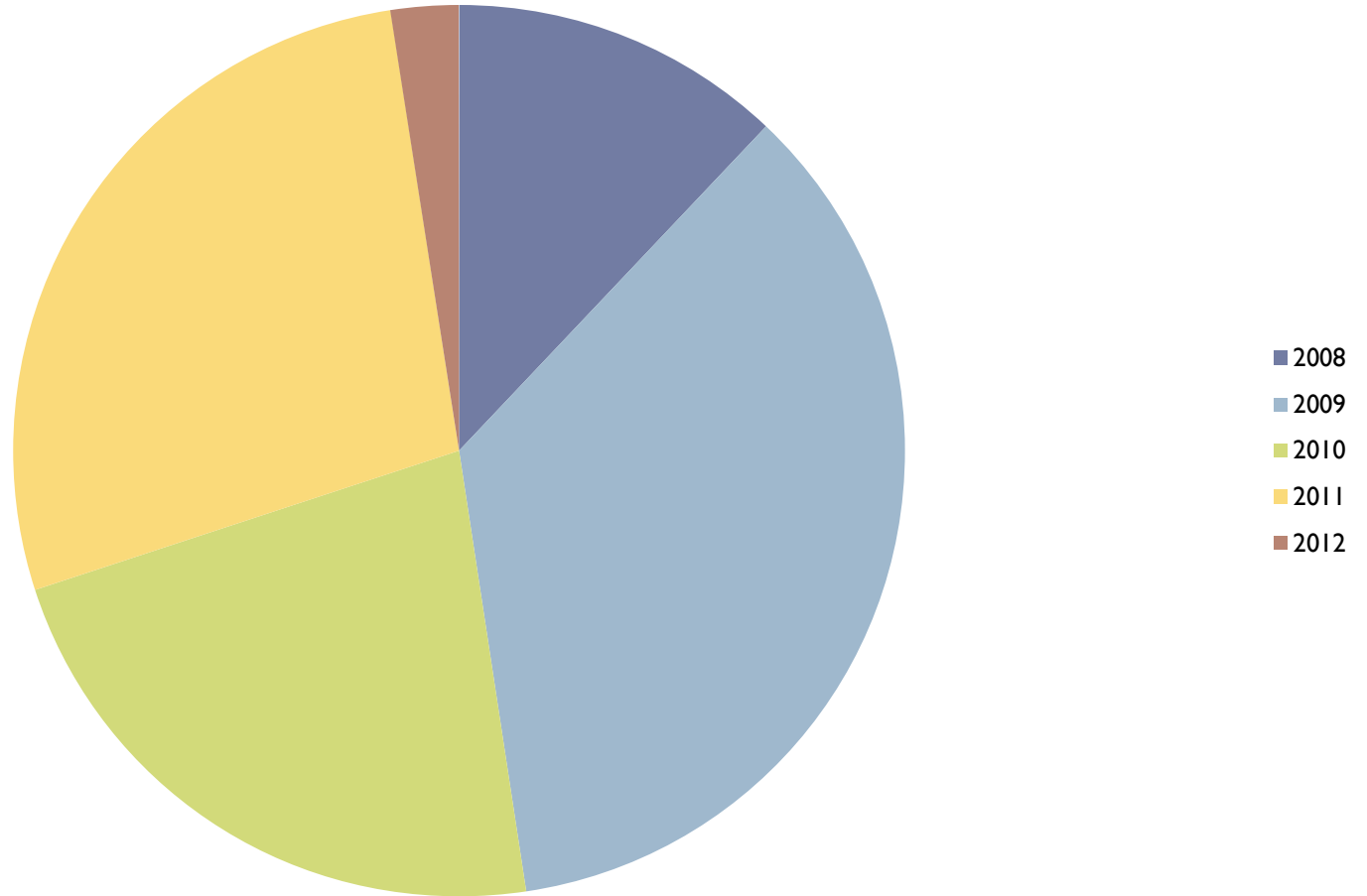
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# Cod Landings in SA 514

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**Cod**



# Cod Percentage by Vessel Size

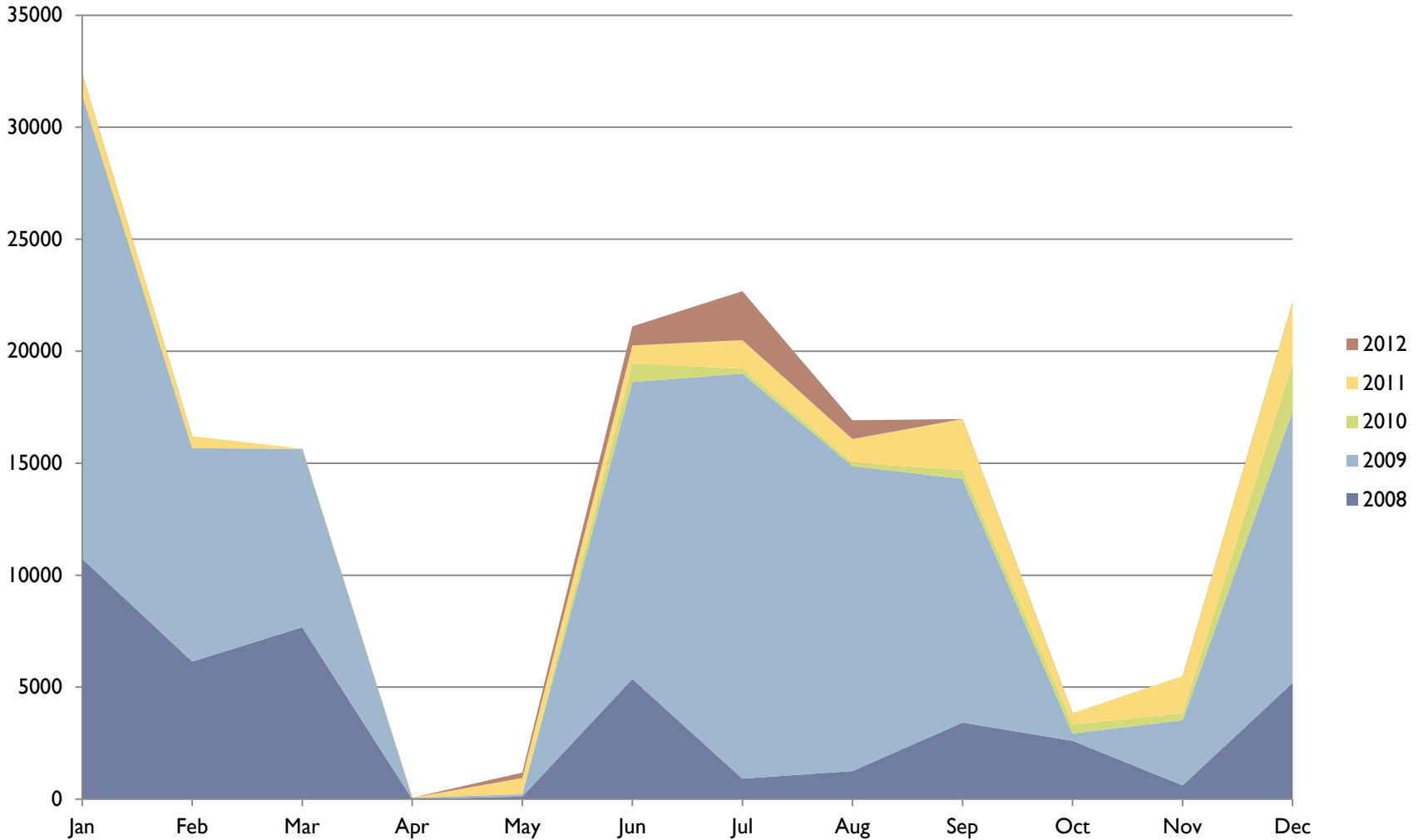
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Vessel Length	1996	1997	2008	2009	2010	2011	2012
Less than 30	0.6%	0.6%	0.4%	1%	0.1%	0.1%	0.5%
30 to less than 50	41.7%	57.3%	77.9%	78.7%	54.2%	41.9%	48.5%
50 to less than 70	43.4%	31.9%	19.8%	18.4%	33.1%	35.9%	33.7%
75 and over	14.3%	10.3%	2%	2%	12.7%	22%	17.3%

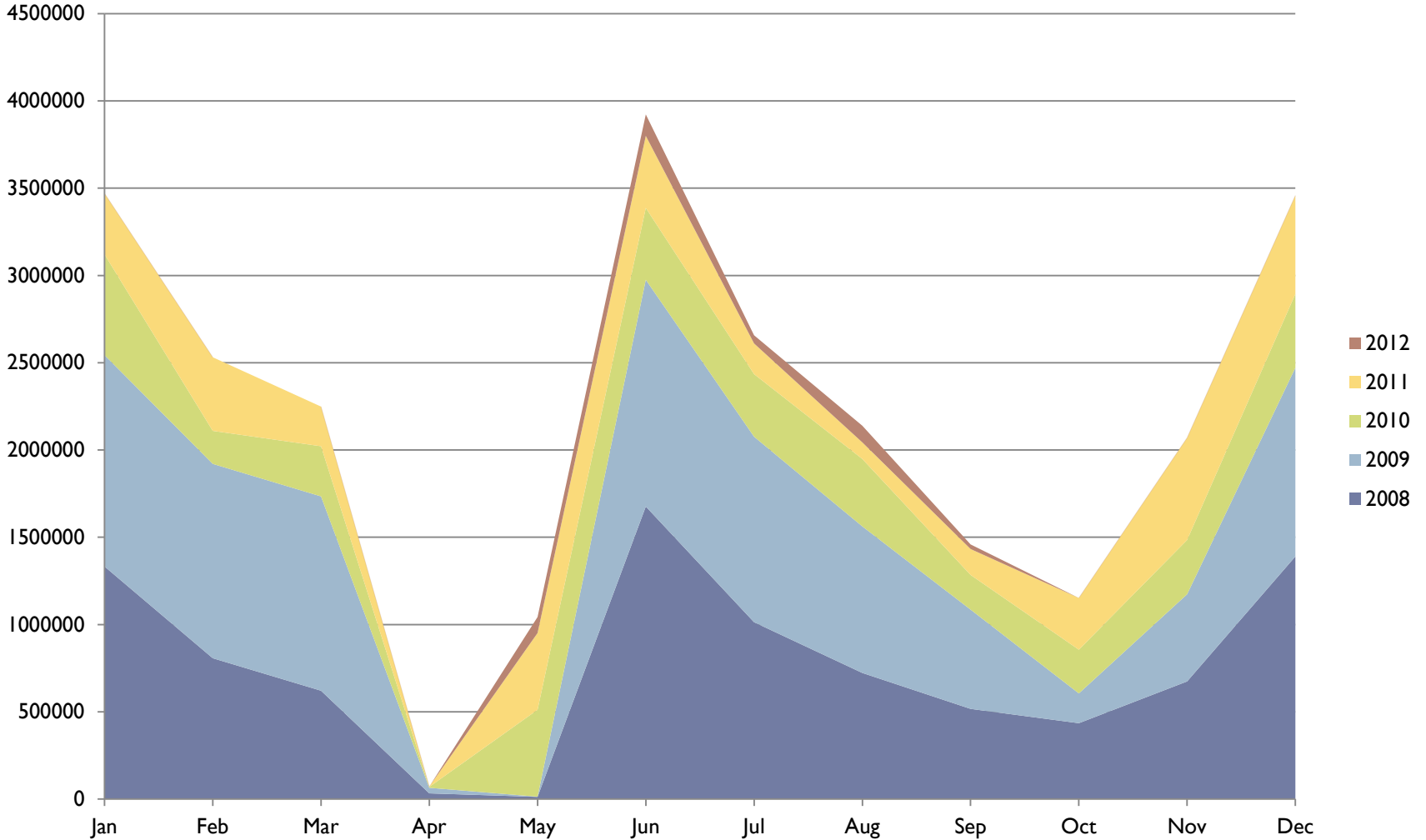




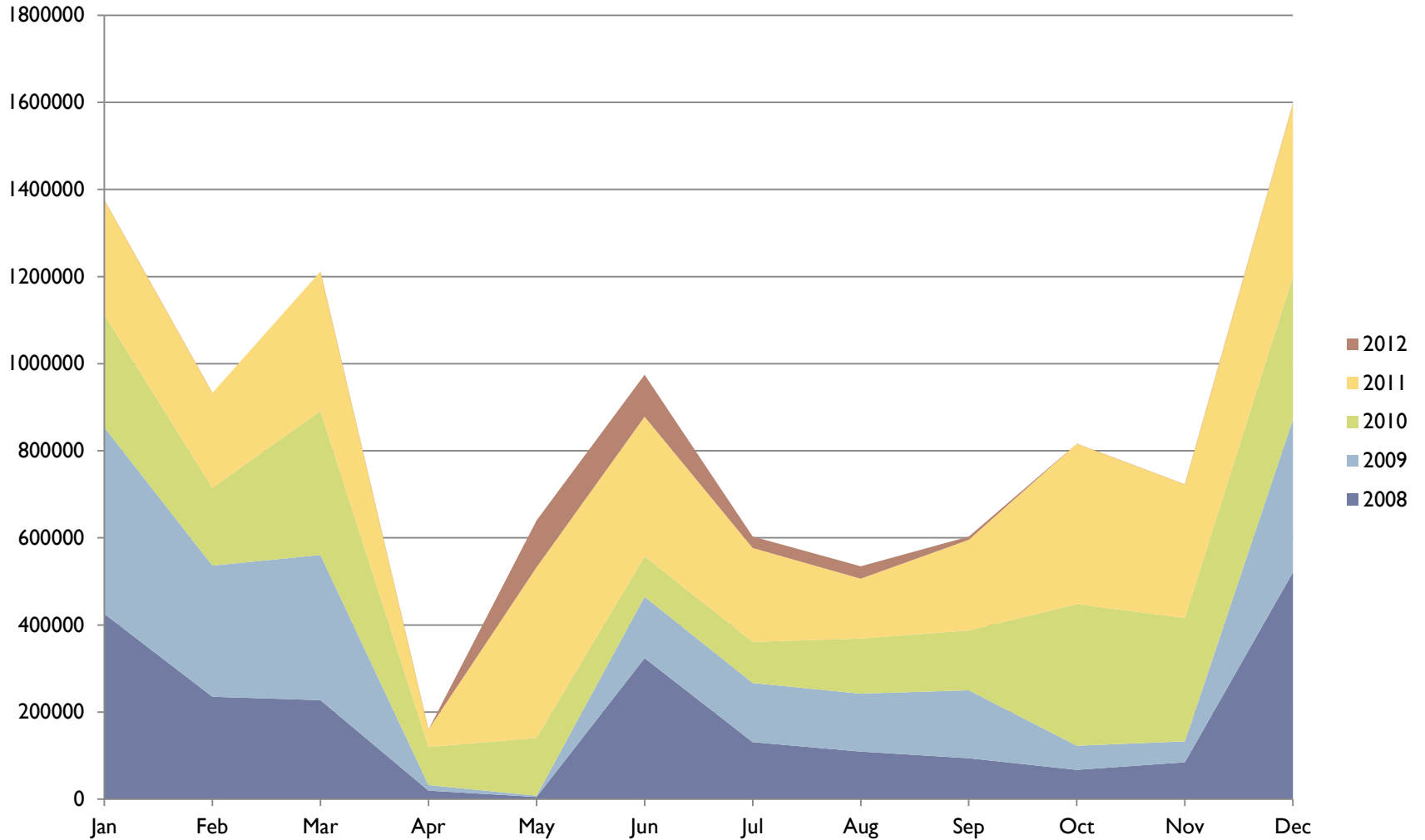
# Monthly Cod Landings: less than 30



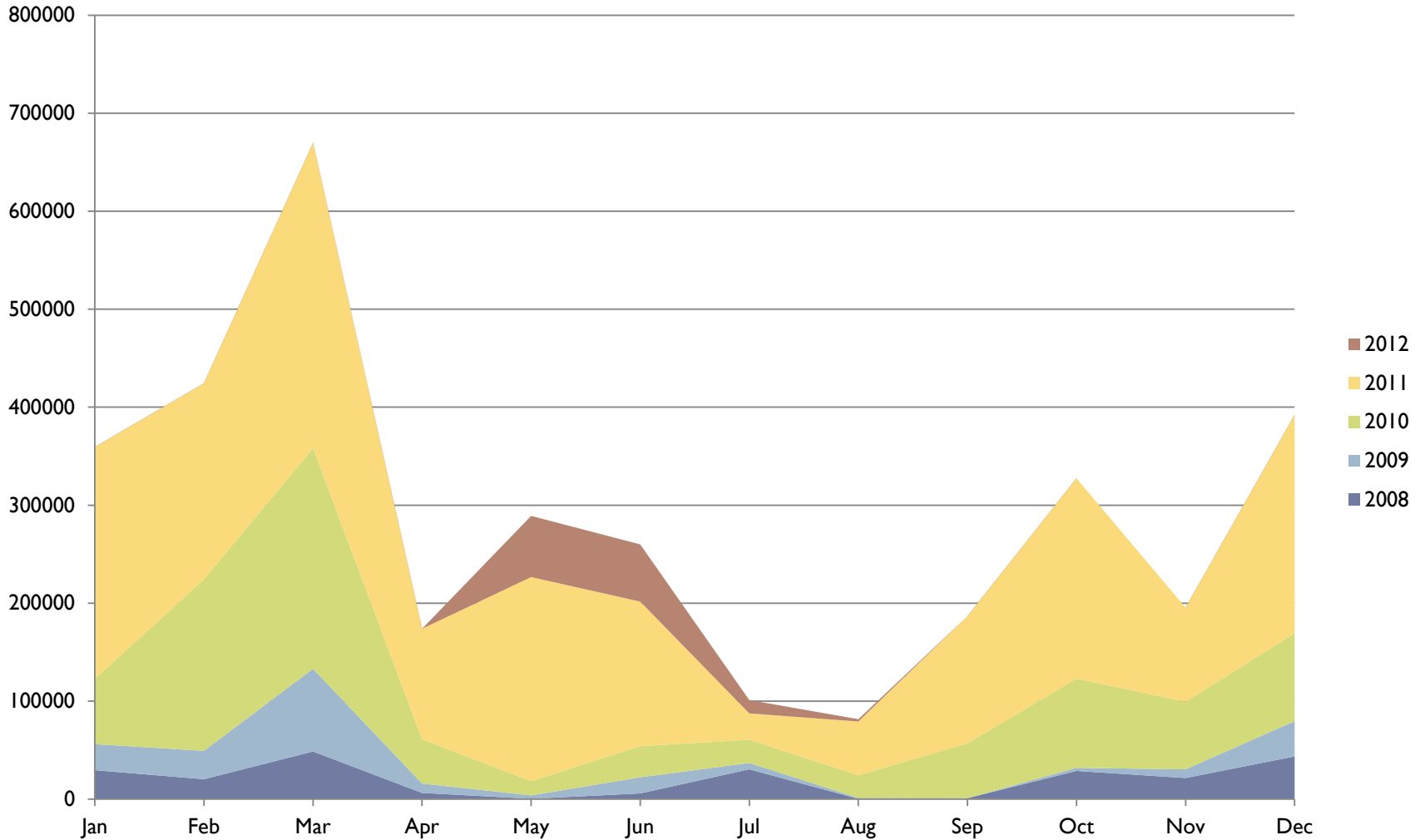
# Monthly Cod Landings: 30 to < 50ft



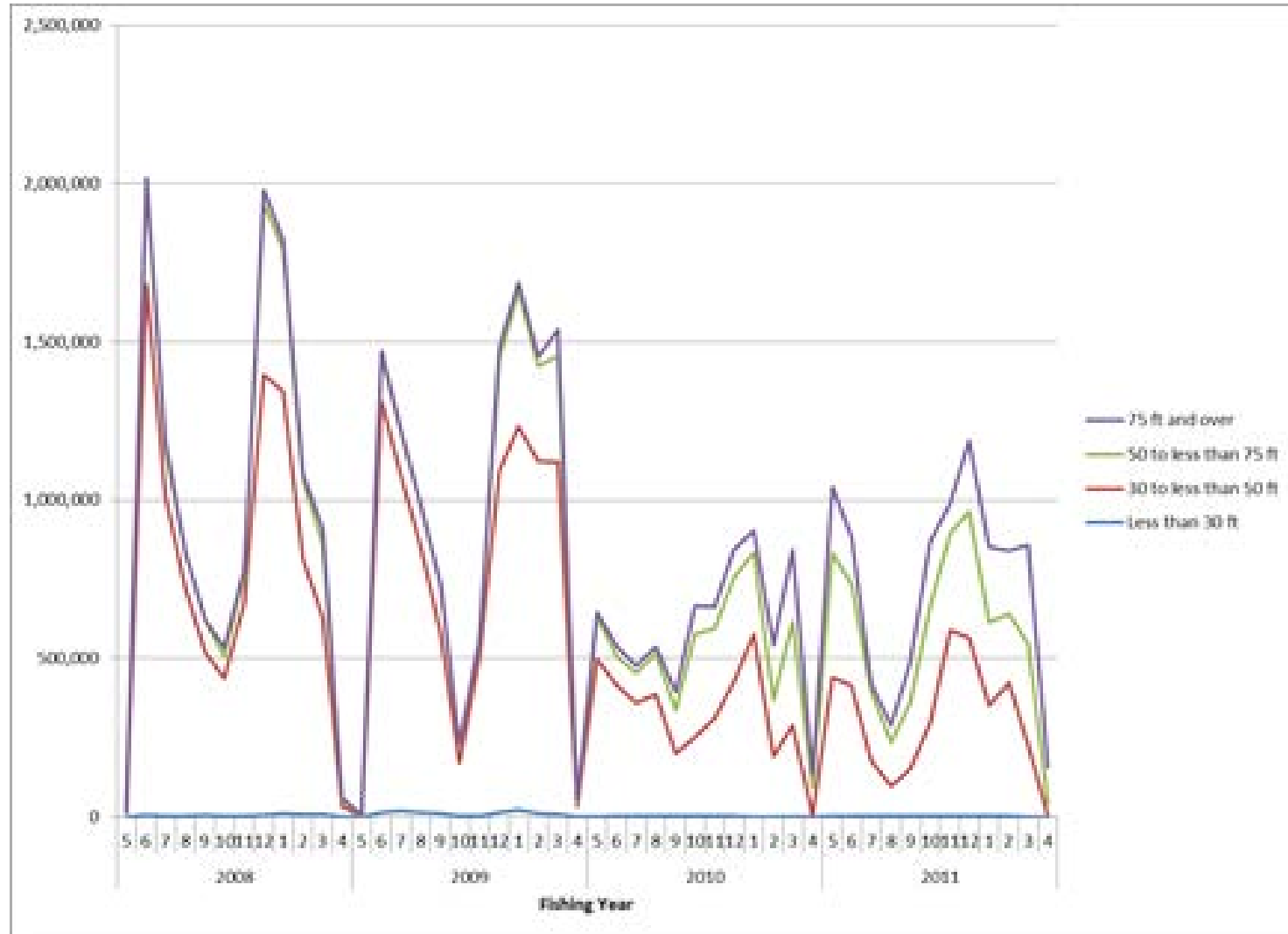
# Monthly Cod Landings: 50 to <75ft



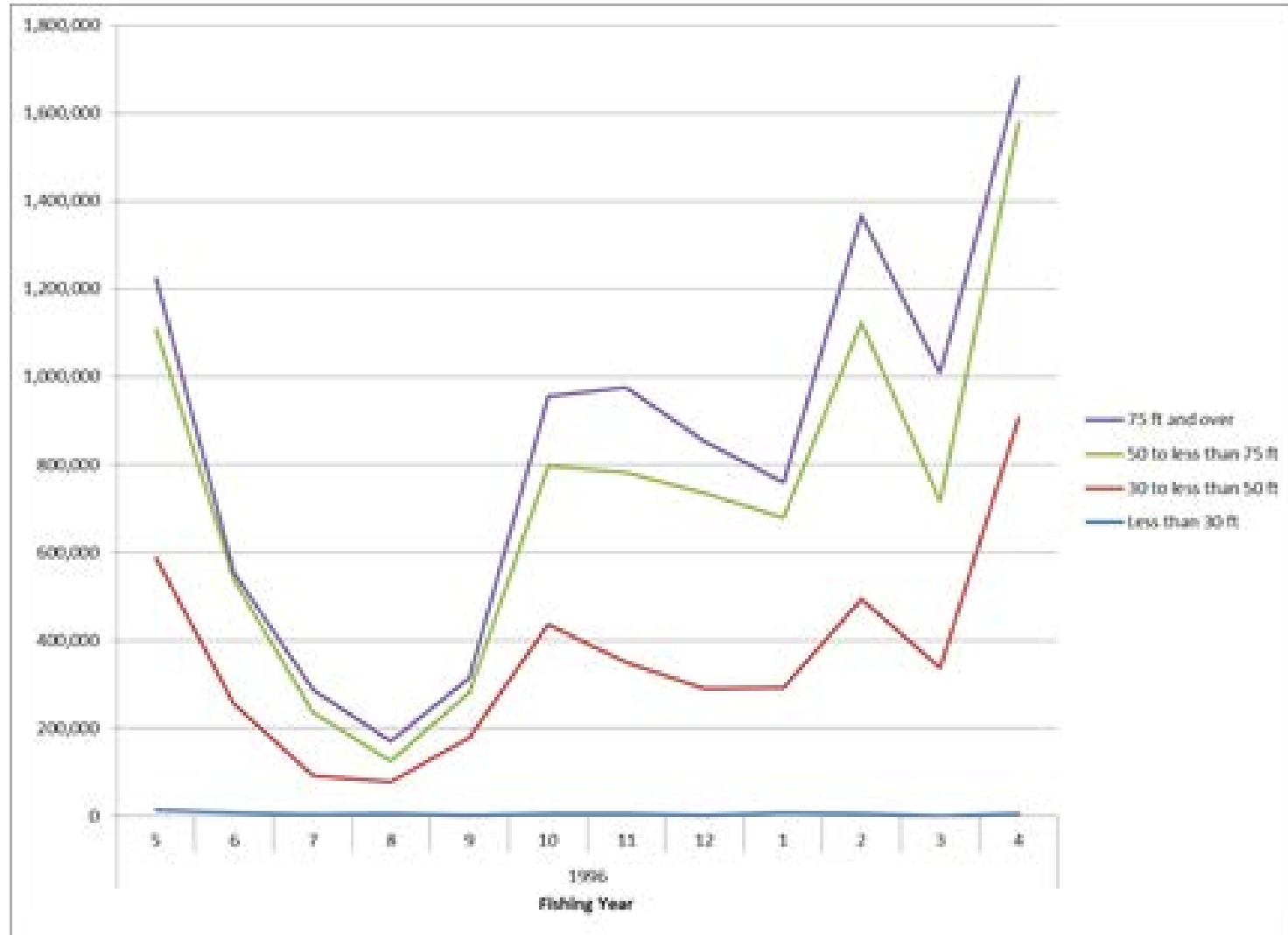
# Monthly Cod Landings: 75 ft and over



# Cod Landings by Size 2008 - 2011



# Cod Landings by Size: 1996



# Haddock Landings in SA 514

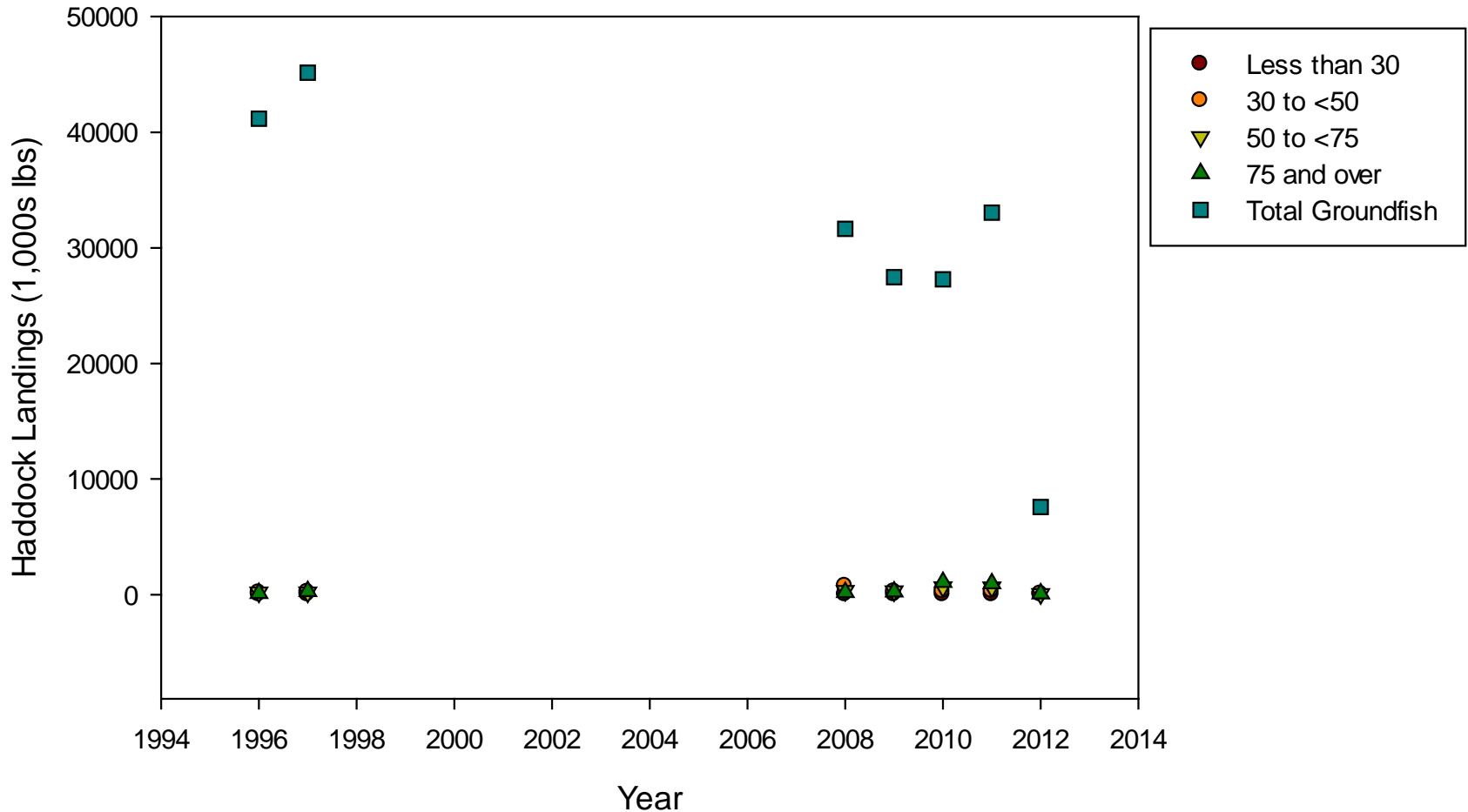
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- ▶ Landings increased after sector implementation
- ▶ Post-sector landings higher than late 1990s
- ▶ Response to removal of trip limits varies by vessel size category
- ▶ Recent landings have increased
- ▶ Monthly trends vary by vessel size and year



# Haddock Landings in SA 514

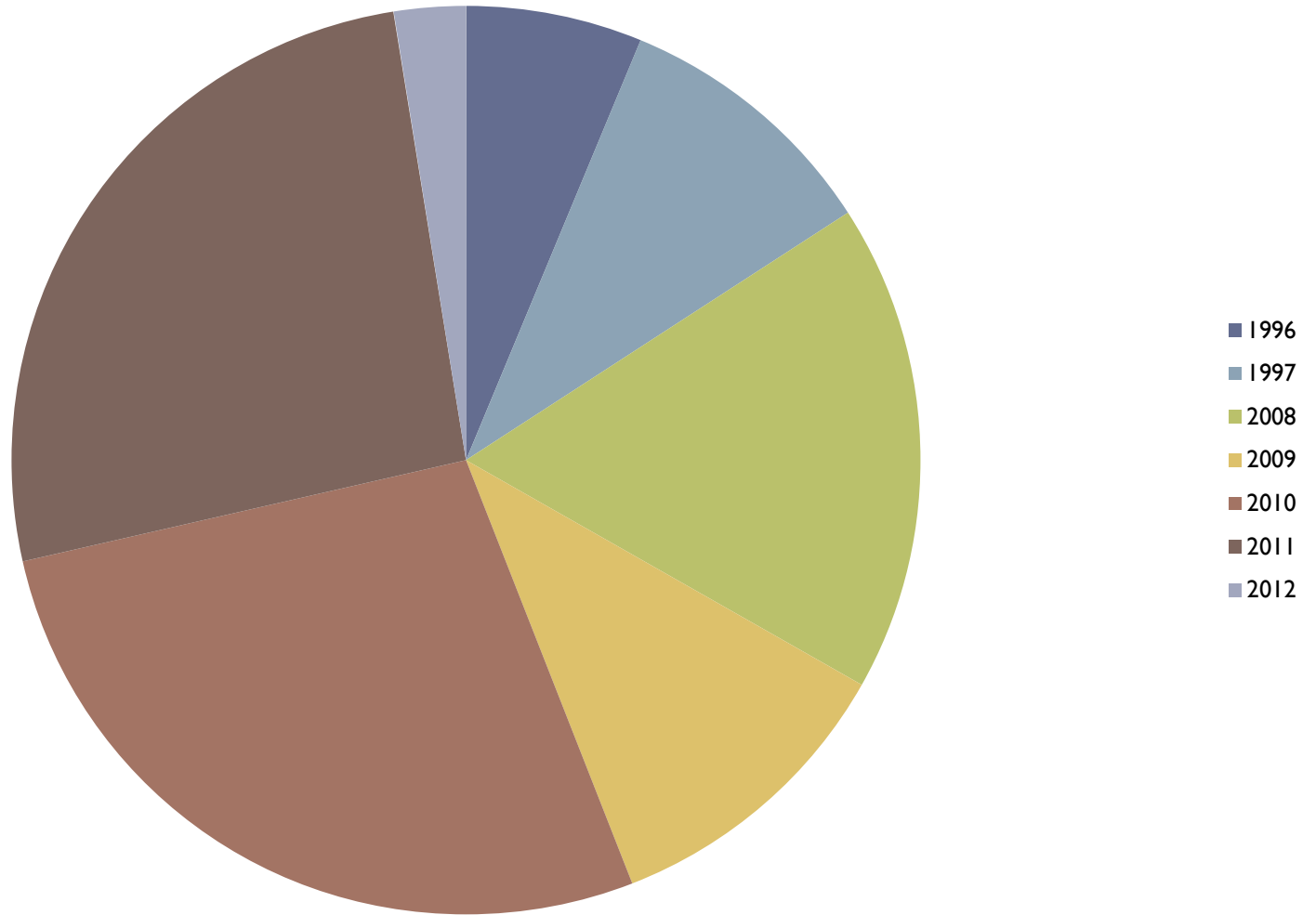
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# Haddock Landings in SA 514

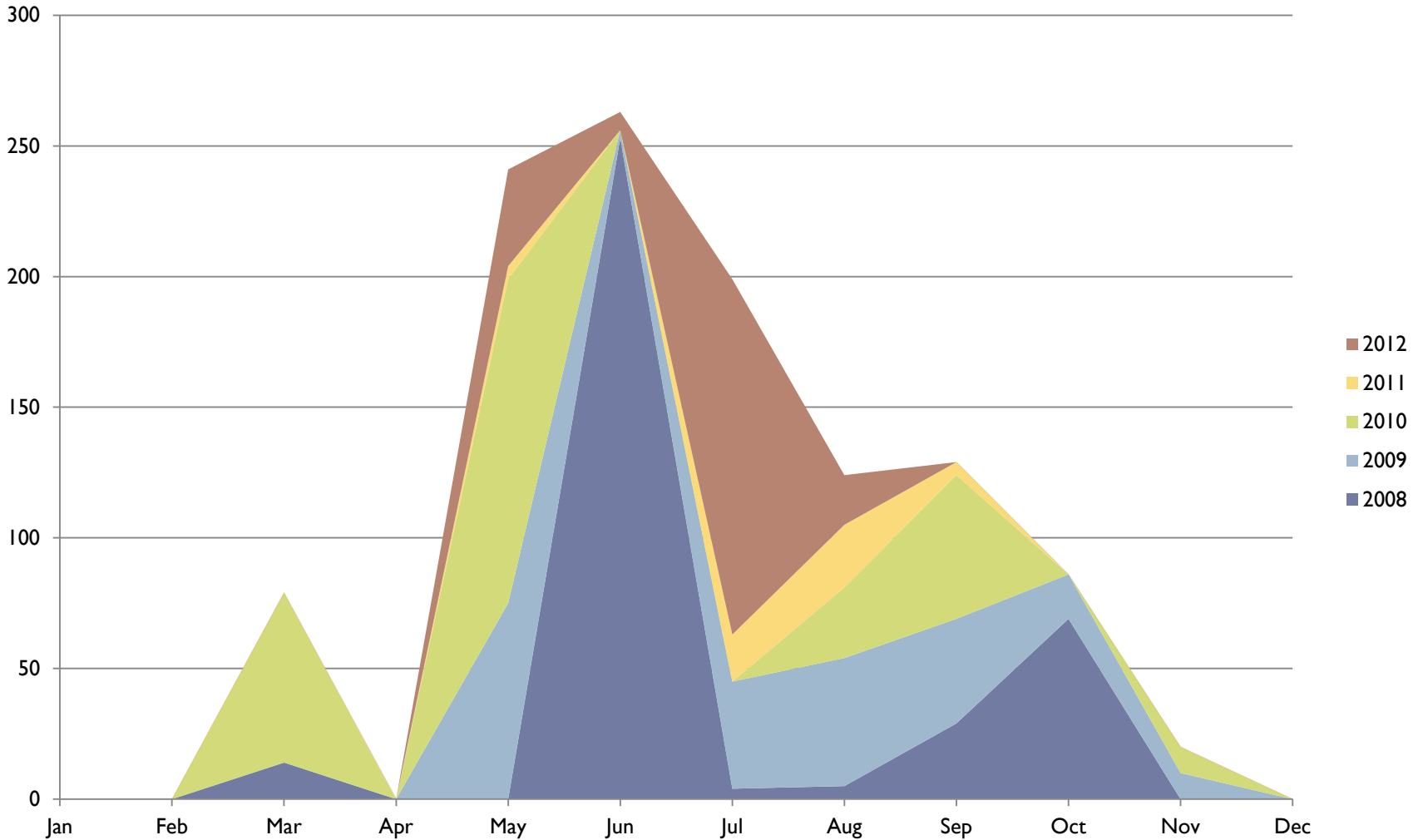
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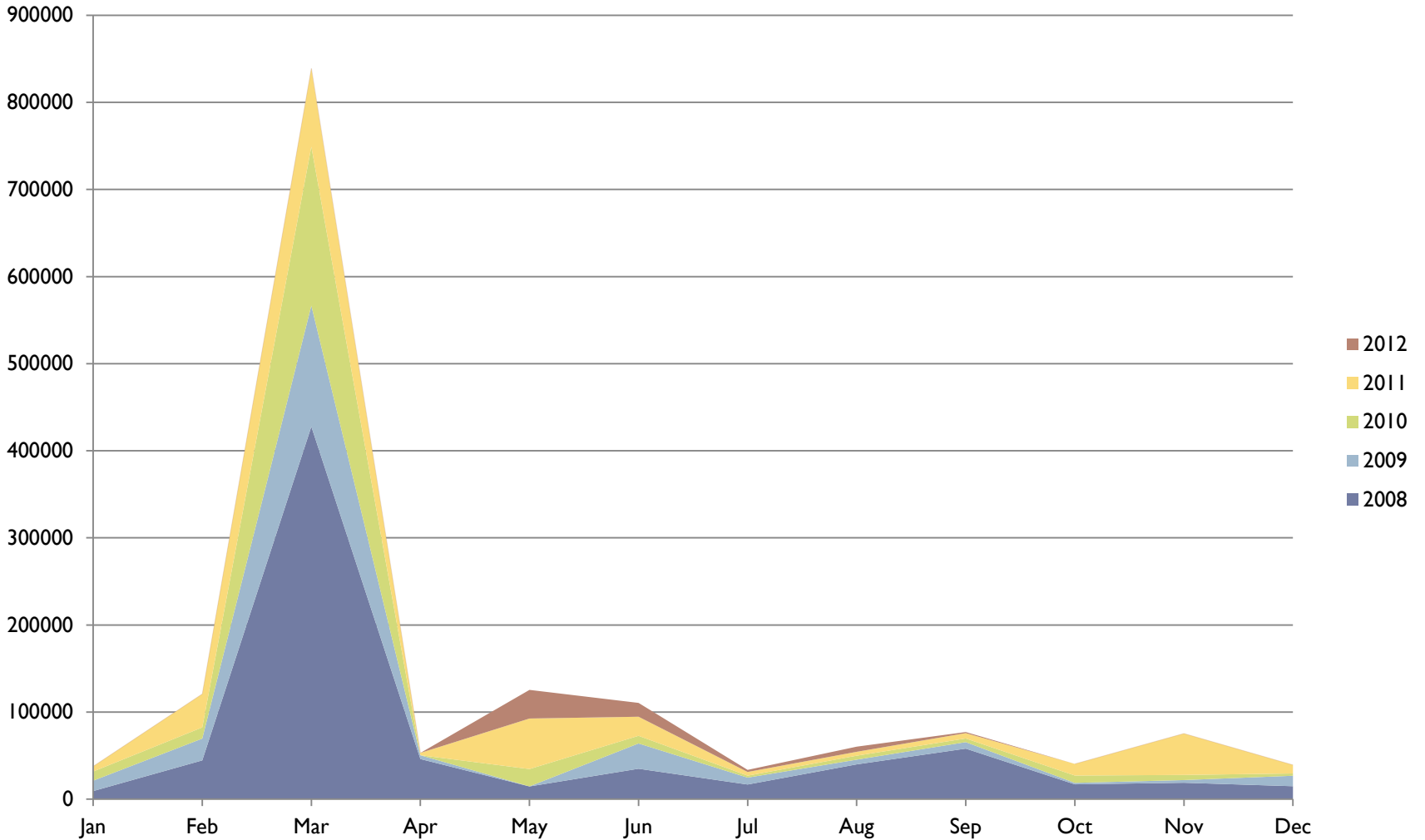
# Haddock Percentage by Vessel Size

Vessel Size Class	1996	1997	2008	2009	2010	2011	2012
less than 30	0.2%	0.4%	0.03%	0.03%	0.01%	0.00%	0.1%
30 to less than 50	34.4%	31.2%	58.6%	31.5%	13.3%	16.1%	31.5%
50 to less than 75	41.4%	27.9%	26.2%	38.1%	32.8%	33.7%	30.5%
75 and over	23.9%	40.5%	15.1%	30.4%	54%	50.3%	37.9%

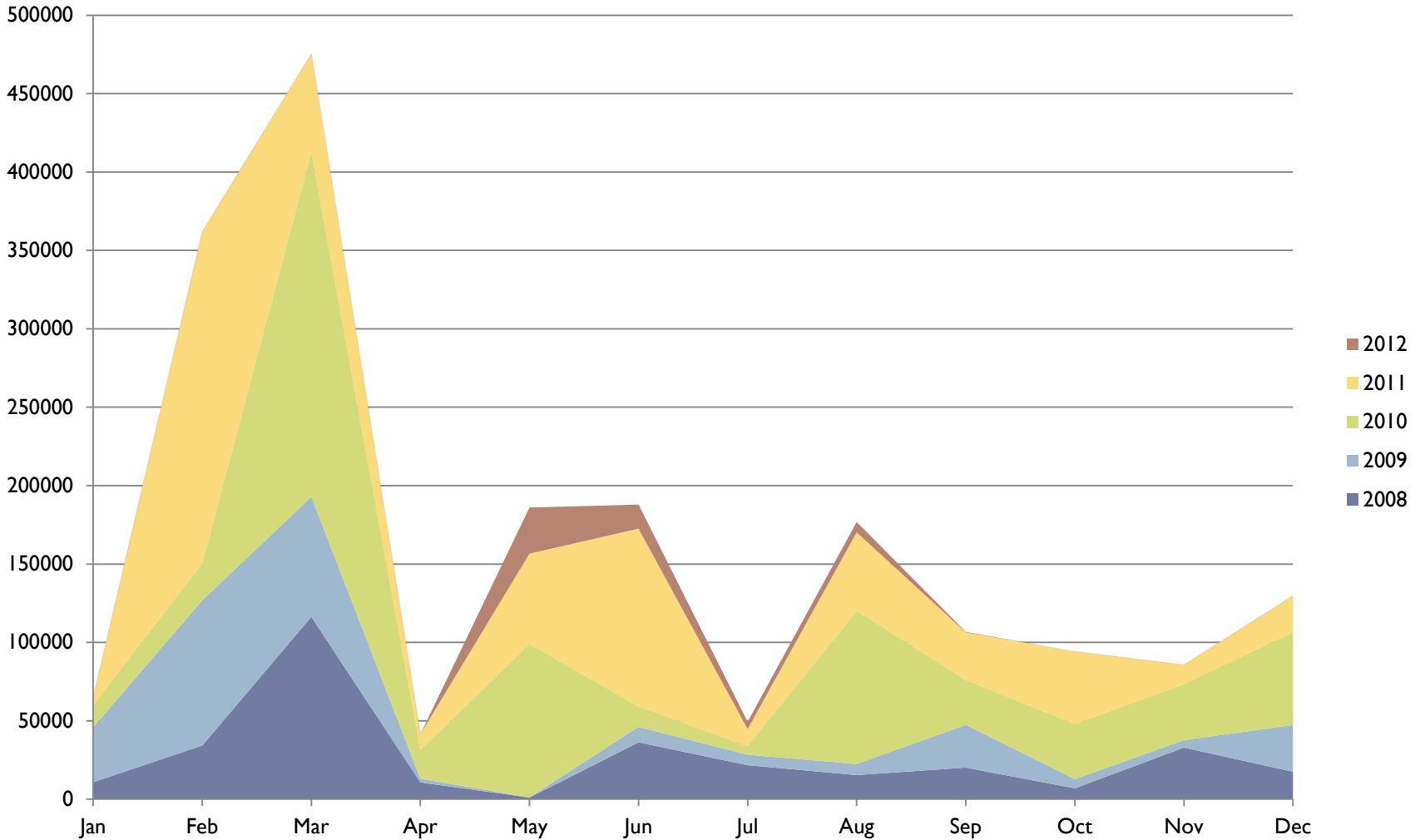
# Monthly Haddock Landings: less than 30



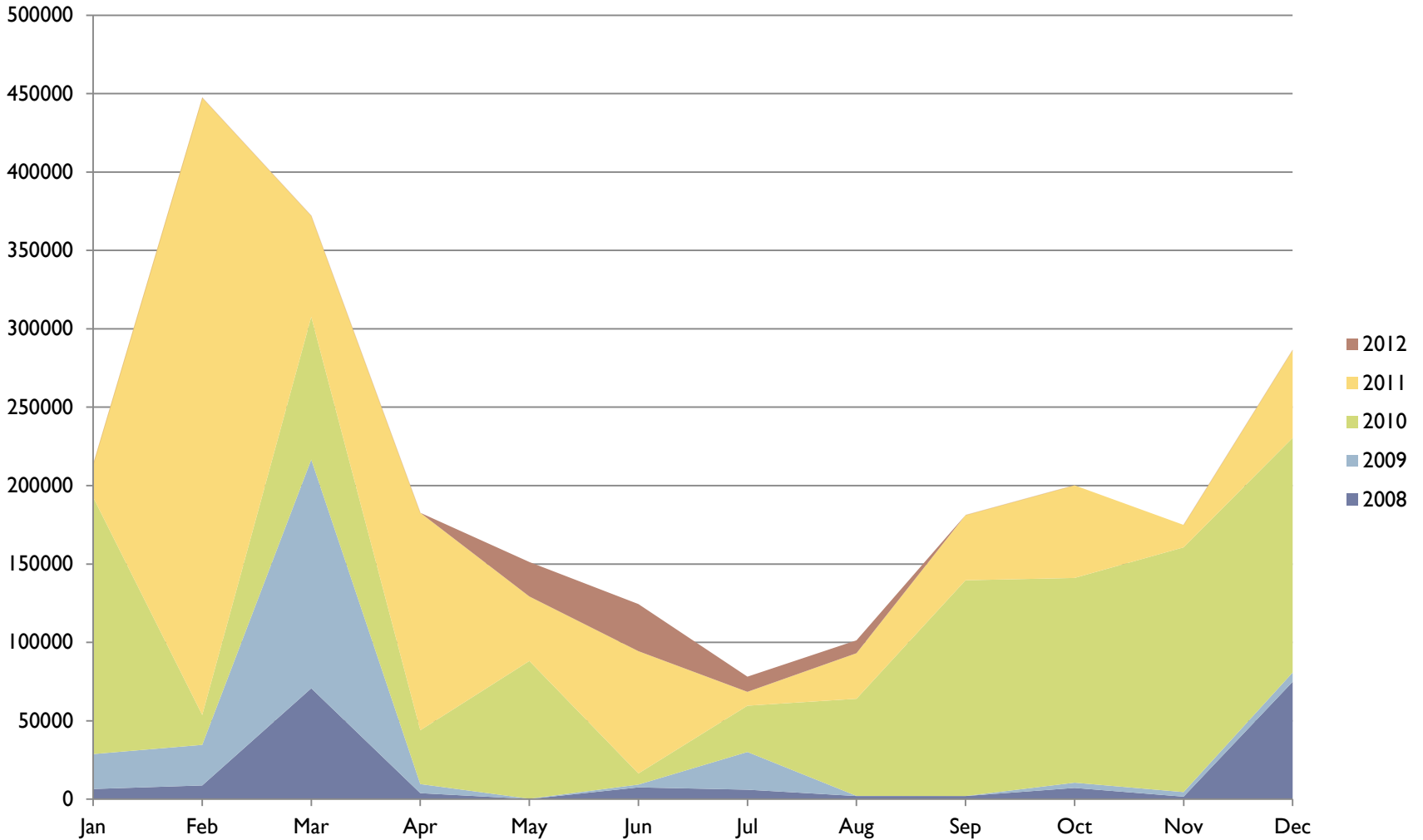
# Monthly Haddock Landings: 30 to <50



# Monthly Haddock Landings: 50 to <75

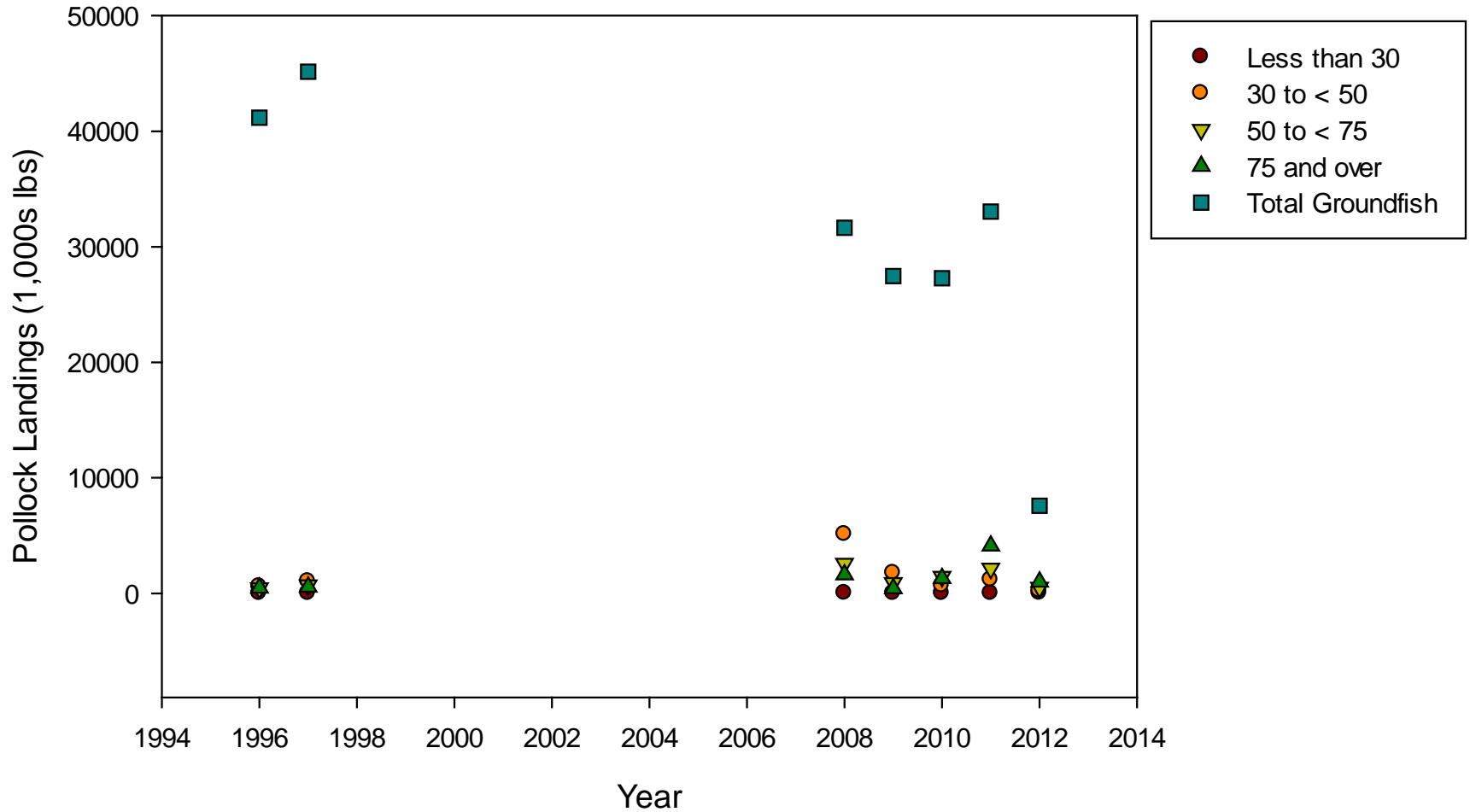


# Monthly Haddock Landings: 75 and over



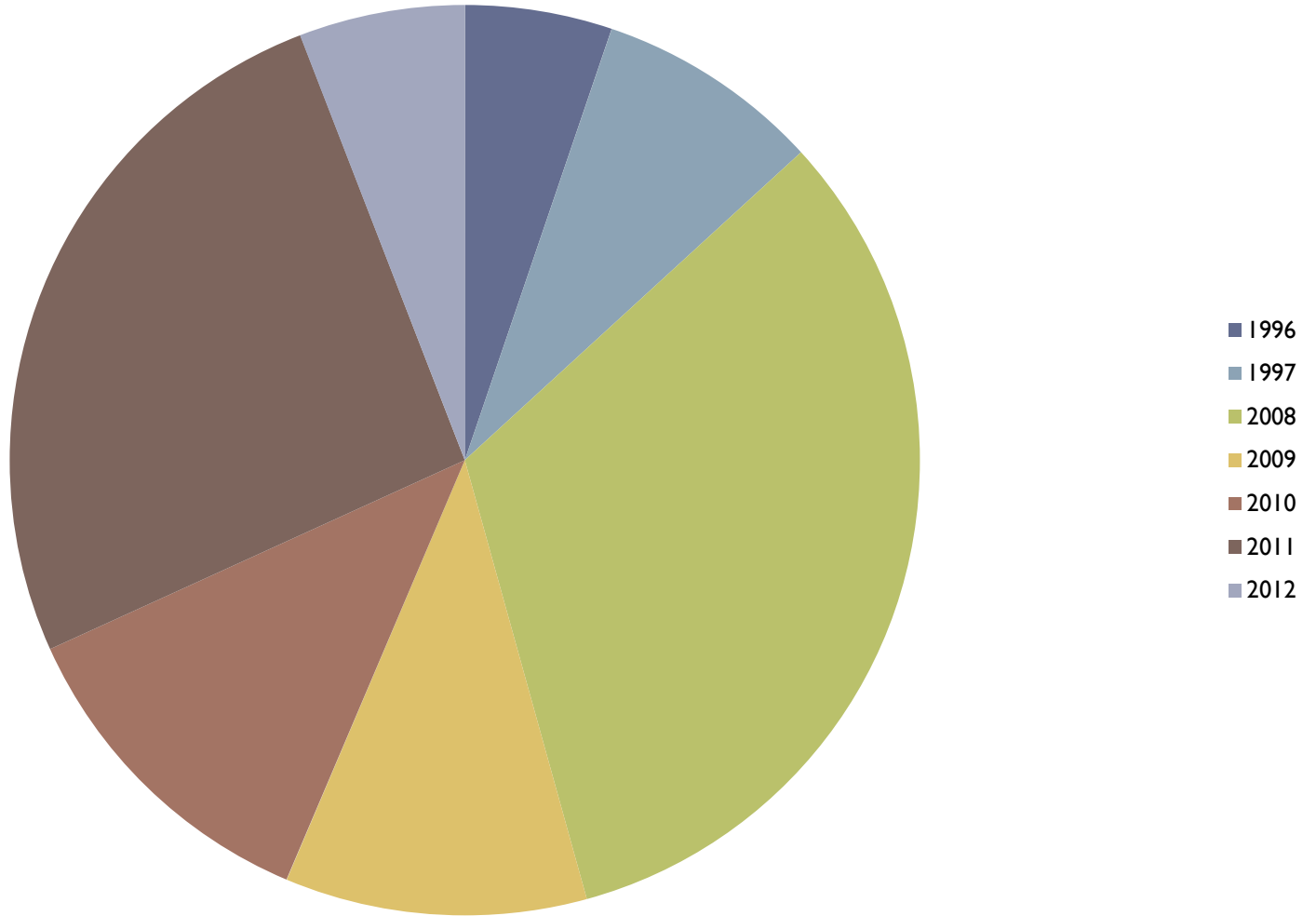
# Pollock Landings in SA 514

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# Pollock Landings in SA 514

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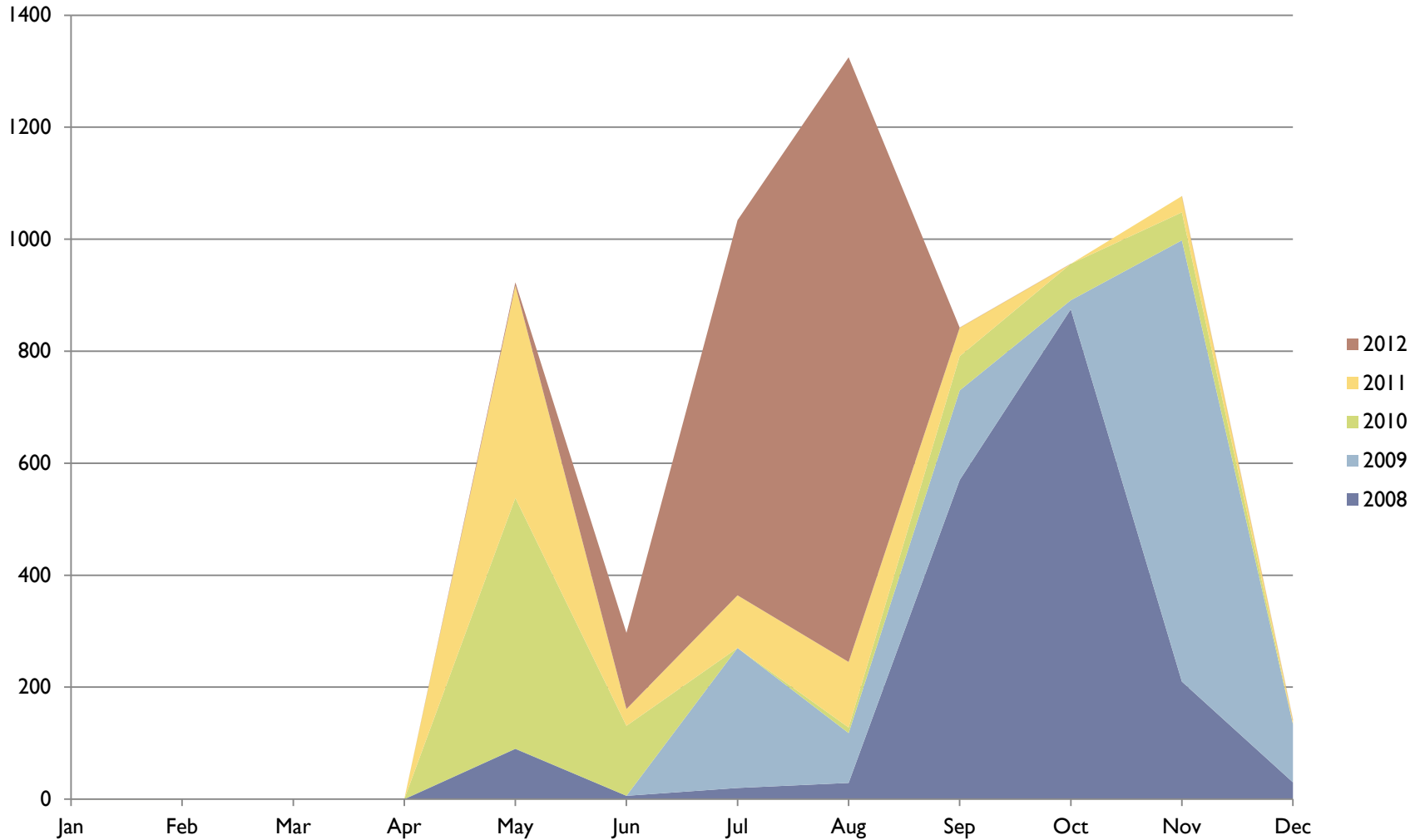


# Pollock Percentage by Vessel Size

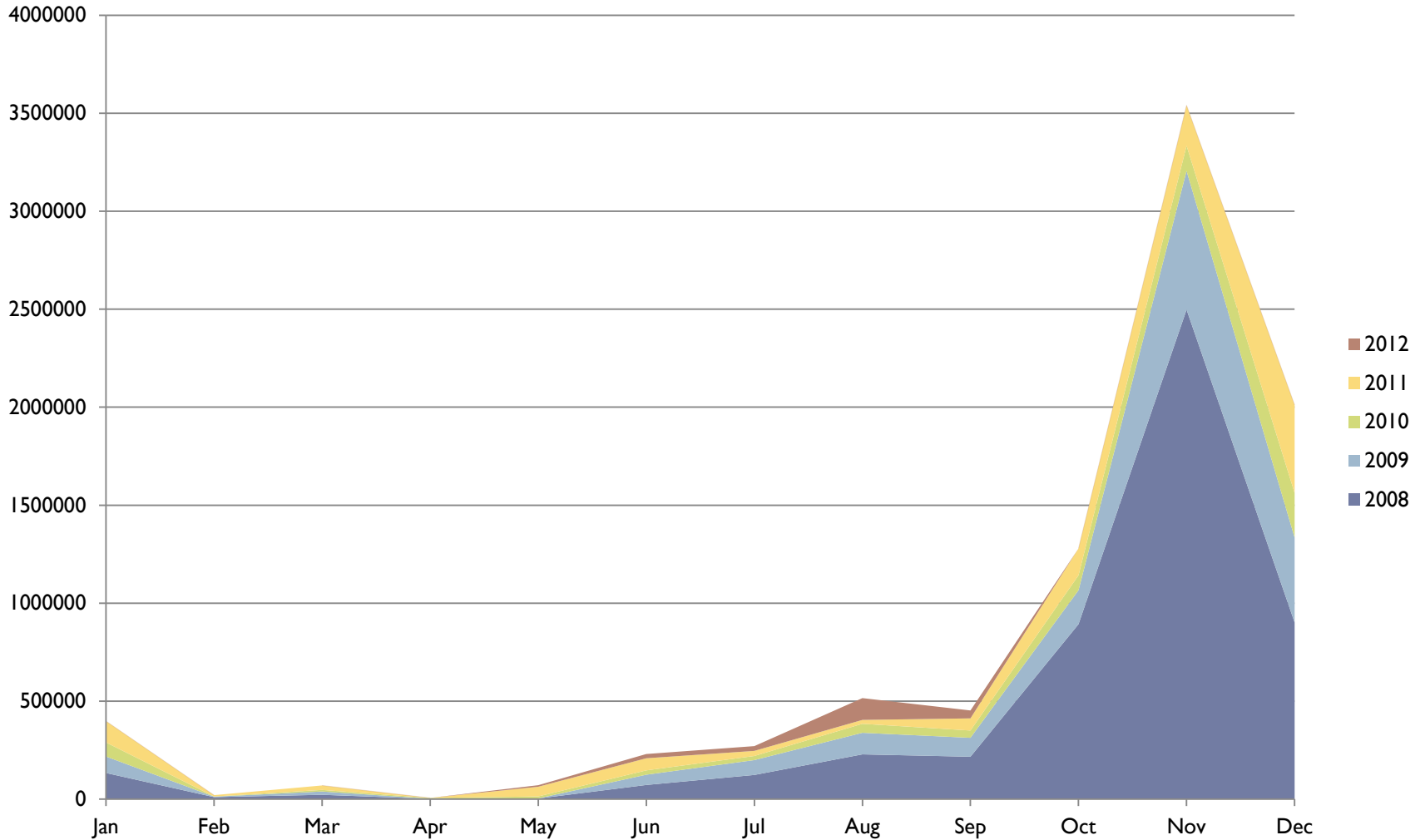
Year	1996	1997	2008	2009	2010	2011	2012
less than 30	0.03%	0.02%	0.02%	0.1%	0.02%	0.01%	0.1%
30 to less than 50	39.0%	45.1%	54.9%	57.2%	19.3%	15.5%	12.2%
50 to less than 75	30%	30.8%	27.7%	29.5%	42.6%	29.0%	29.5%
75 and over	31%	24.1%	17.4%	13.3%	38.0%	55.5%	58.2%



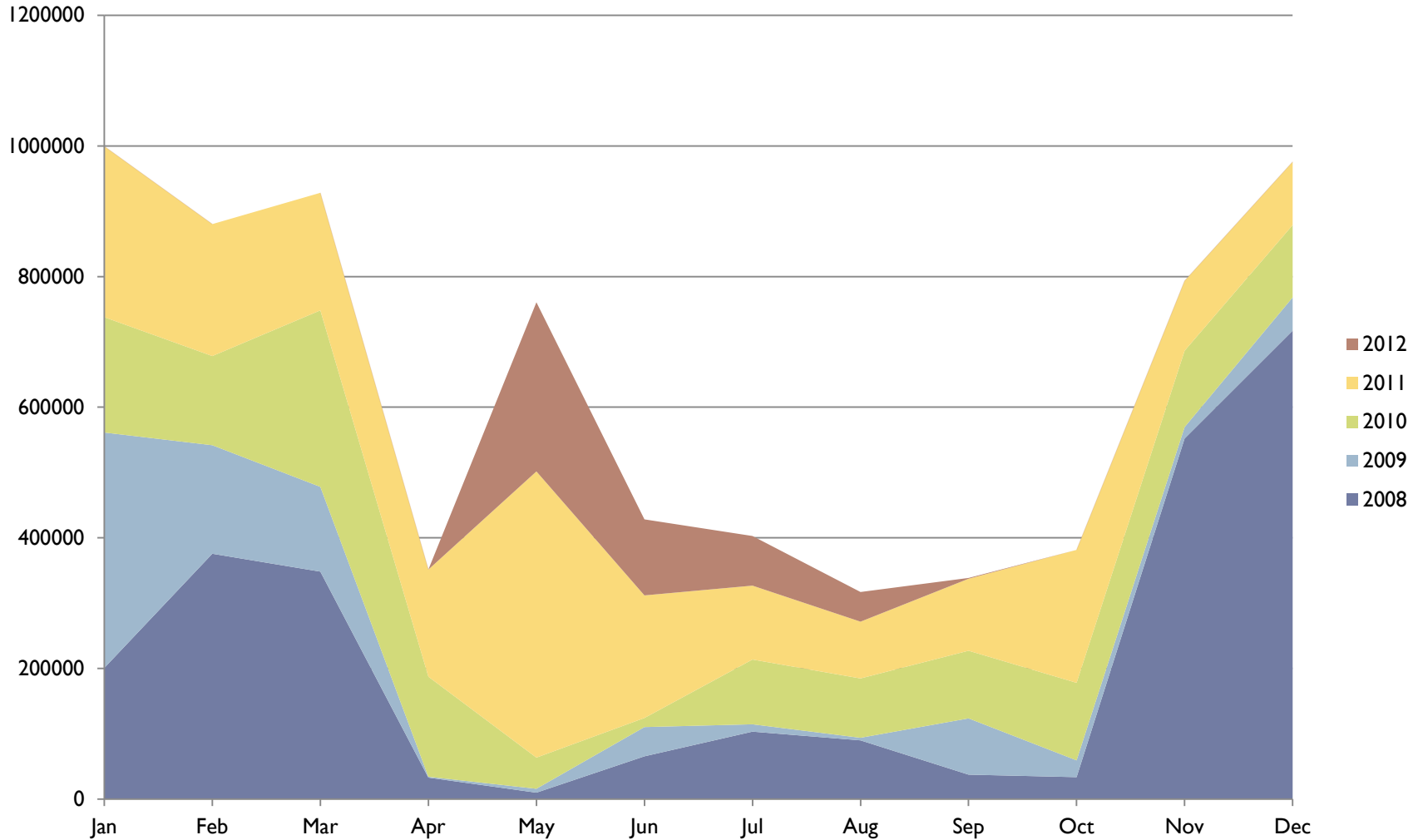
# Monthly Pollock Landings: less than 30



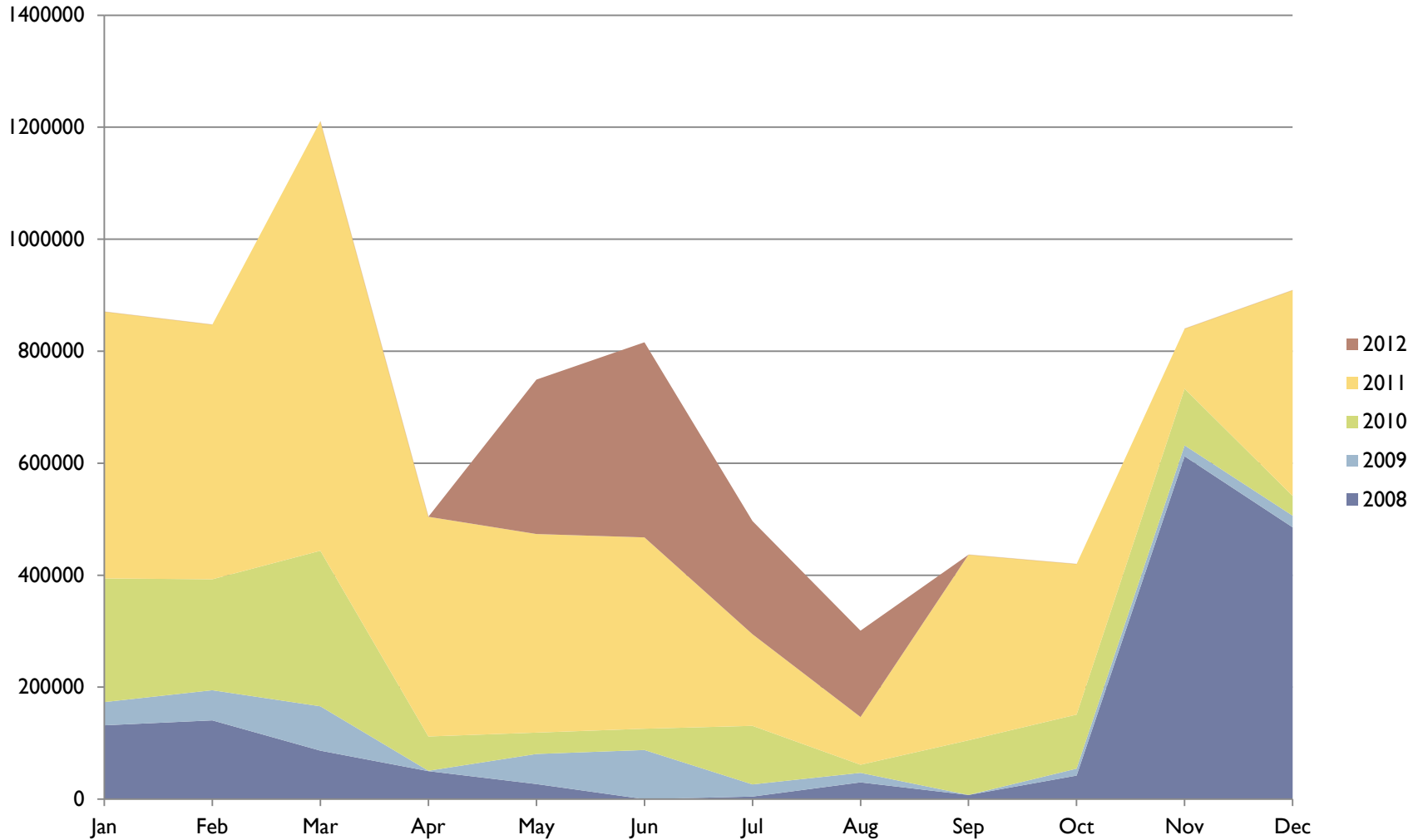
# Monthly Pollock Landings: 30 to <50



# Monthly Pollock Landings: 50 to <75



# Monthly Pollock Landings: less than 75



# Trip Numbers and Primary Ports

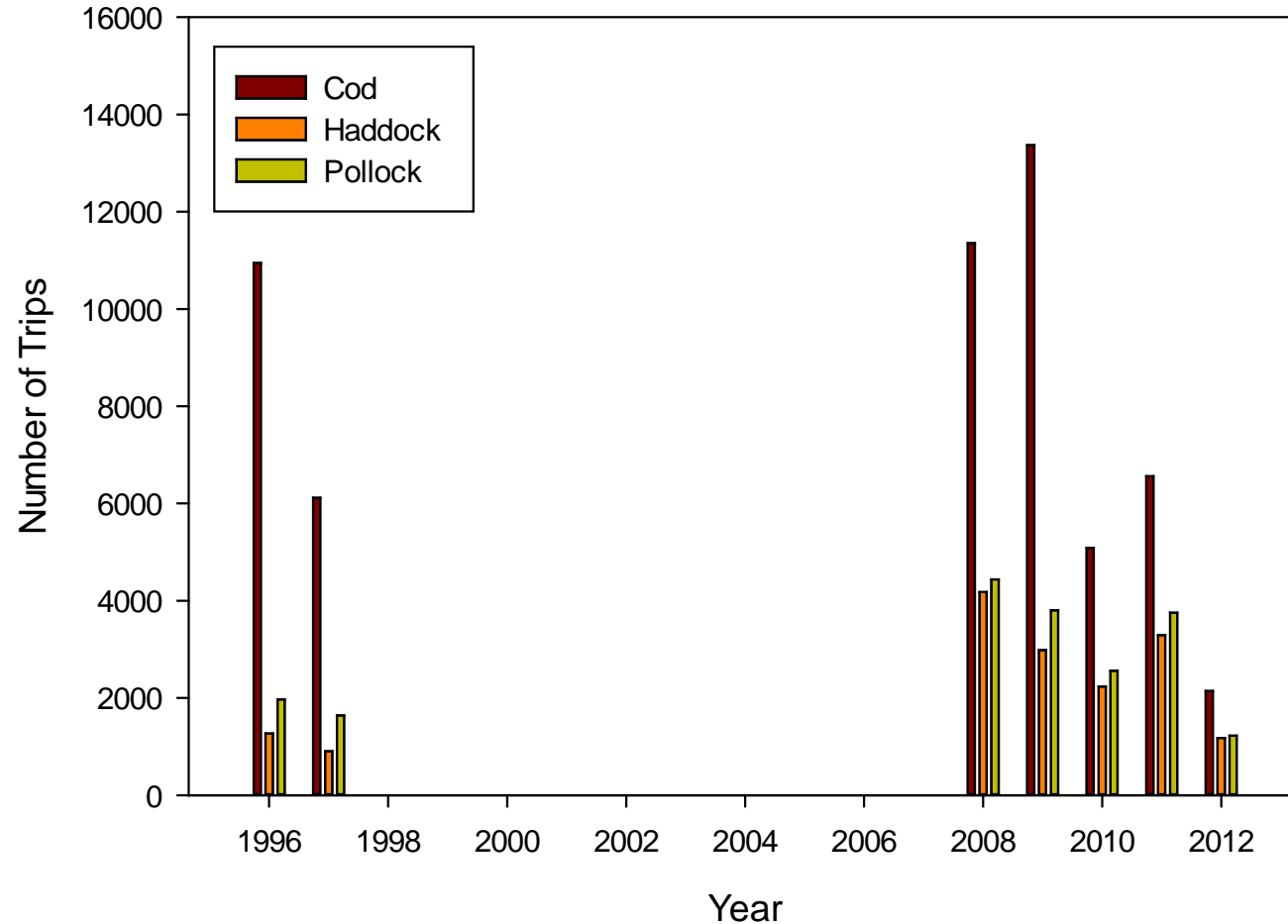
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- ▶ **Number of trips landing cod has decrease post sectors**
  - ▶ Haddock and pollock have not shown same level of fluctuations
- ▶ **Number of trips landing over 3200 lbs increased**
- ▶ **Some regional shifts in landings**
  - ▶ Gloucester remains dominant port



# Annual trips landing cod, pollock and haddock

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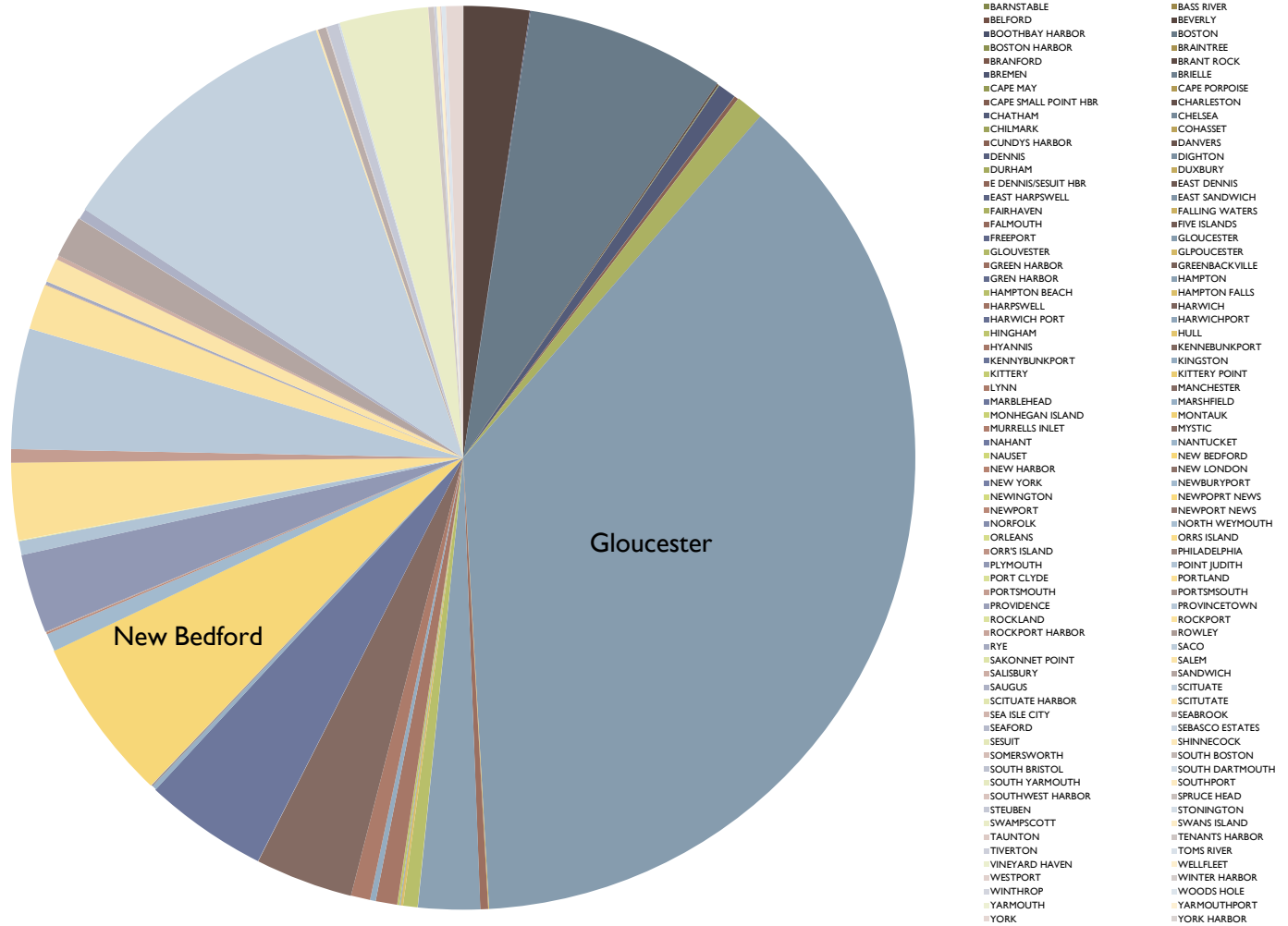


# Number of Trips by landed pounds

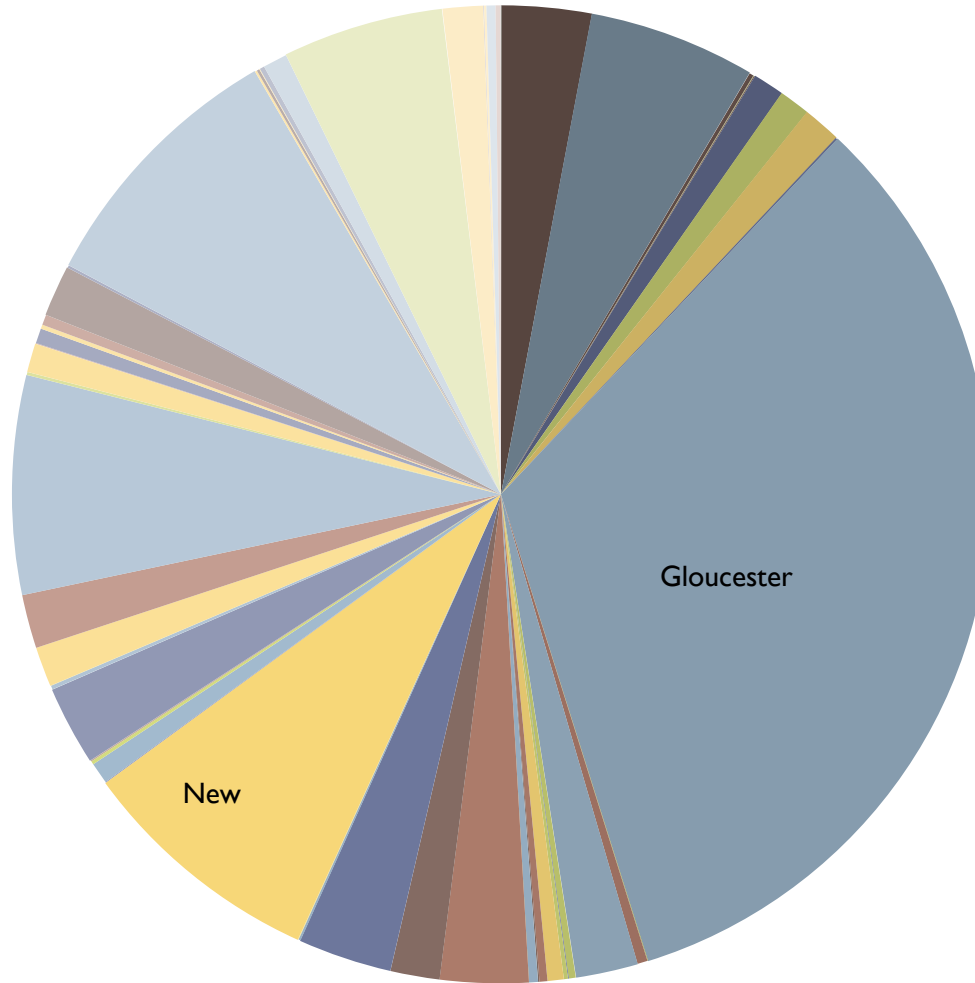
Cod Landings classes (lbs)	1996	1997	2008	2009	2010	2011	2012
0 to less than 400	7294	3784	2594	2360	1919	2769	1709
400 to less than 800	1493	886	2272	2776	862	1344	300
800 to less than 1200	804	521	2888	6352	763	818	84
1200 to less than 1600	433	341	934	274	367	431	35
1600 to less than 2000	296	273	1532	952	278	280	16
2000 to less than 2400	218	132	185	74	185	207	11
2400 to less than 2800	162	115	596	407	162	150	5
2800 to less than 3200	125	134	118	21	100	98	9
3200 and over	614	369	438	227	620	653	42



# FY 1996



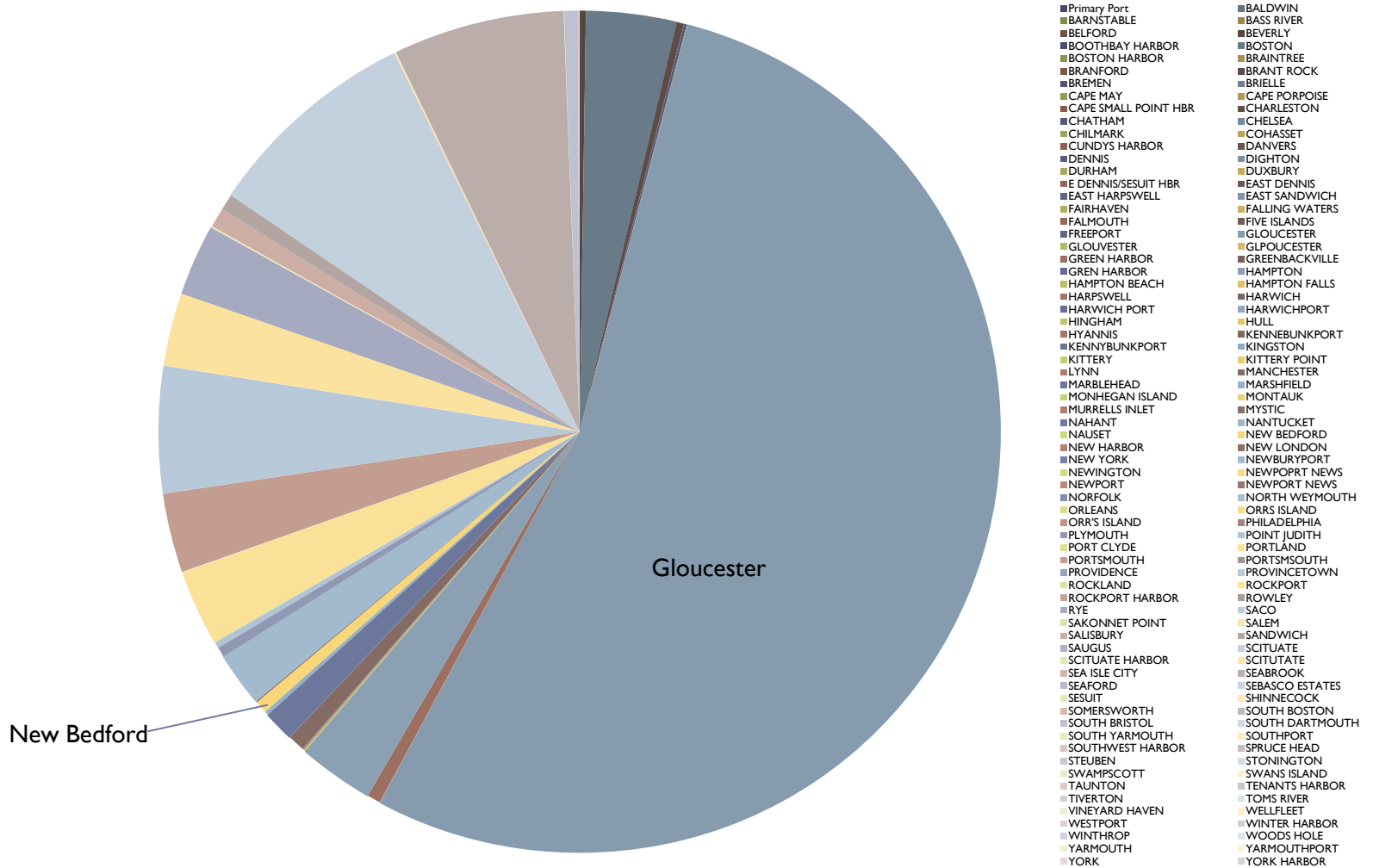
# FY 1997



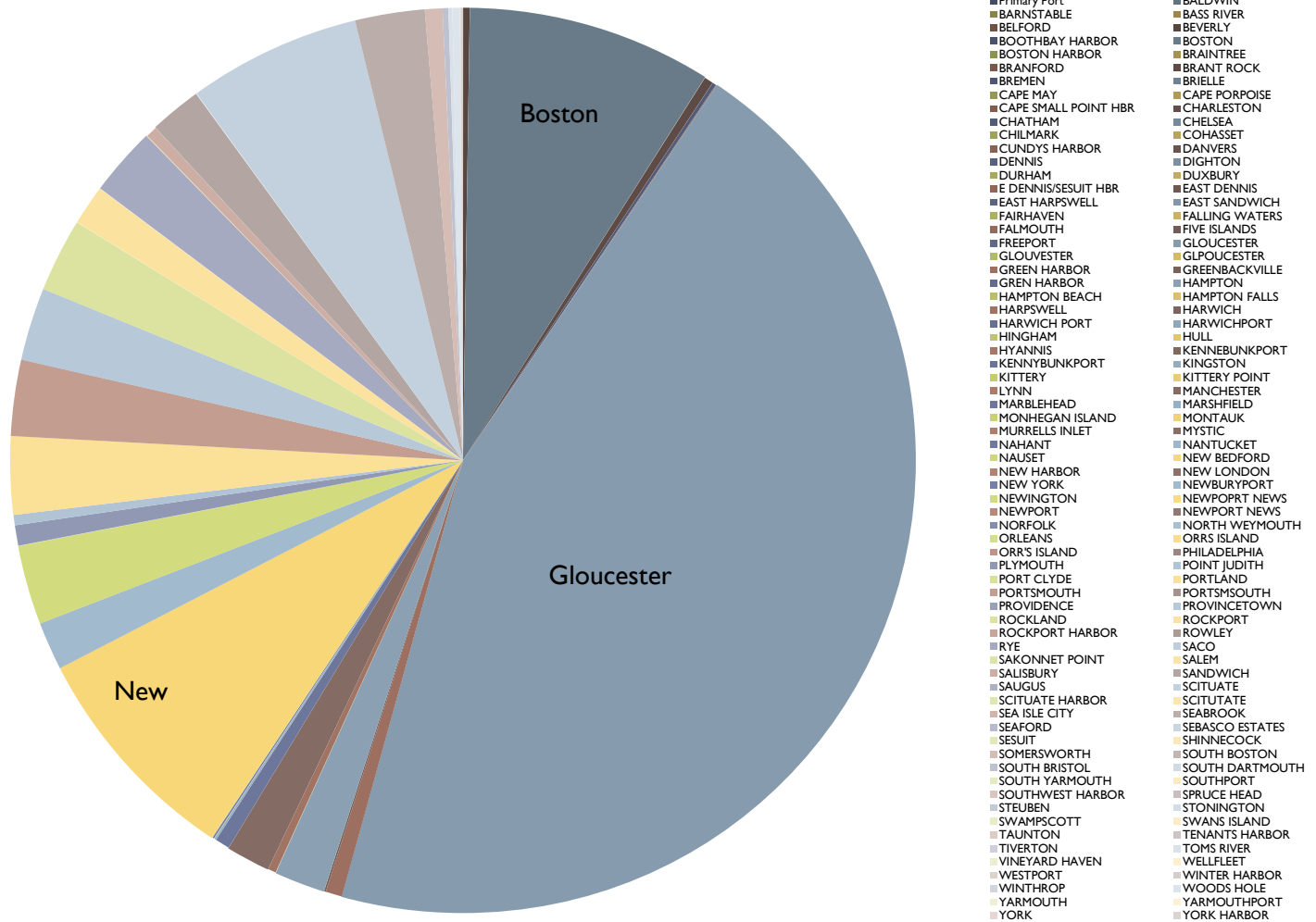
- Primary Port
- BARNSTABLE
- BELFORD
- BOOTHBAY HARBOR
- BOSTON HARBOR
- BRANFORD
- BREMEN
- CAPE MAY
- CAPE SMALL POINT HBR
- CHATHAM
- CHILMARK
- CUNDYS HARBOR
- DENNIS
- DURHAM
- E DENNIS/SESUIT HBR
- EAST HARPSWELL
- FAIRHAVEN
- FALMOUTH
- FREEPORT
- GLOUCESTER
- GLOUCESTER
- GREEN HARBOR
- GREN HARBOR
- HAMPTON BEACH
- HARPSWELL
- HARWICH PORT
- HINGHAM
- HYANNIS
- KENNEBUNKPORT
- KITTERY
- LYNN
- MARBLEHEAD
- MONHEGAN ISLAND
- MURRELLS INLET
- NAHANT
- NAUSET
- NEW HARBOR
- NEW YORK
- NEWINGTON
- NEWPORT
- NORFOLK
- ORLEANS
- ORR'S ISLAND
- PLYMOUTH
- PORT CLYDE
- PORTSMOUTH
- PROVIDENCE
- ROCKLAND
- ROCKPORT HARBOR
- RYE
- SAKONNET POINT
- SALISBURY
- SAUGUS
- SCITUATE HARBOR
- SEA ISLE CITY
- SEAFORD
- SESUIT
- SOMERSWORTH
- SOUTH BRISTOL
- SOUTH YARMOUTH
- SOUTHWEST HARBOR
- STEUBEN
- SWAMPSCOTT
- TAUNTON
- TIVERTON
- VINEYARD HAVEN
- WESTPORT
- WINTHROP
- YARMOUTH
- YORK
- BALDWIN
- BASS RIVER
- BEVERLY
- BOSTON
- BRAINTREE
- BRANT ROCK
- BRIELLE
- CAPE PORPOISE
- CHARLESTON
- CHELSEA
- CHASSET
- DANVERS
- DIGHTON
- DUXBURY
- EAST DENNIS
- EAST SANDWICH
- FALLING WATERS
- FIVE ISLANDS
- GLOUCESTER
- GLOUCESTER
- GREENBACKVILLE
- HAMPTON
- HAMPTON FALLS
- HARWICH
- HARWICHPORT
- HULL
- KENNEBUNKPORT
- KINGSTON
- KITTERY POINT
- MANCHESTER
- MARSHFIELD
- MONTAUK
- MYSTIC
- NANTUCKET
- NEW BEDFORD
- NEW LONDON
- NEWBURYPORT
- NEWPORT NEWS
- NEWPORT NEWS
- NORTH WEYMOUTH
- ORRS ISLAND
- PHILADELPHIA
- POINT JUDITH
- PORTLAND
- PORTSMOUTH
- PROVINCETOWN
- ROCKPORT
- ROWLEY
- SACO
- SALEM
- SANDWICH
- SCITUATE
- SEABROOK
- SEBASCO ESTATES
- SHINNECOCK
- SOUTH BOSTON
- SOUTH DARTMOUTH
- SOUTHPORT
- SPRUCE HEAD
- STONINGTON
- SWANS ISLAND
- TENANTS HARBOR
- TOMS RIVER
- WELFLEET
- WINTER HARBOR
- WOODS HOLE
- YARMOUTHPORT
- YORK HARBOR



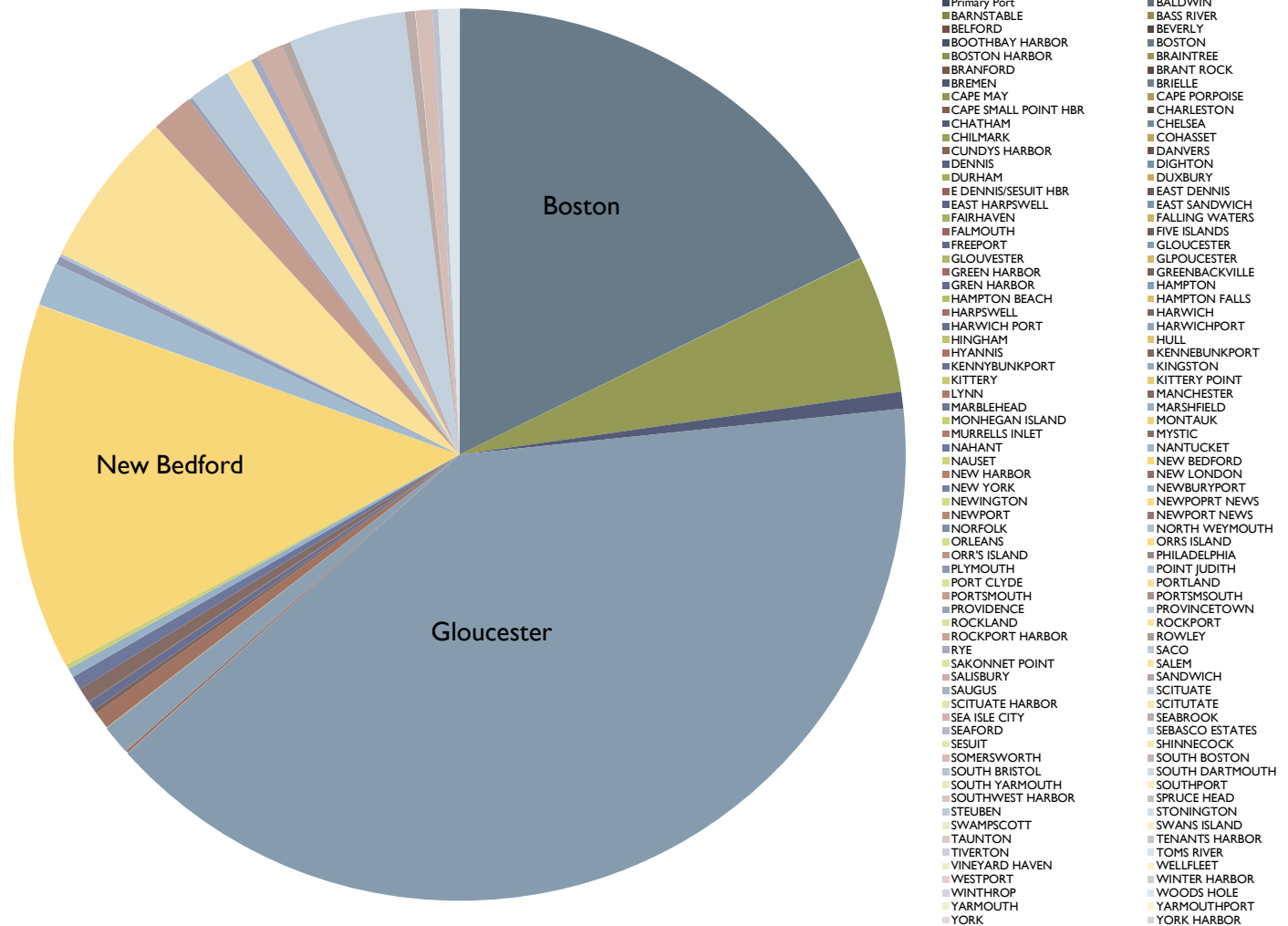
# FY 2008



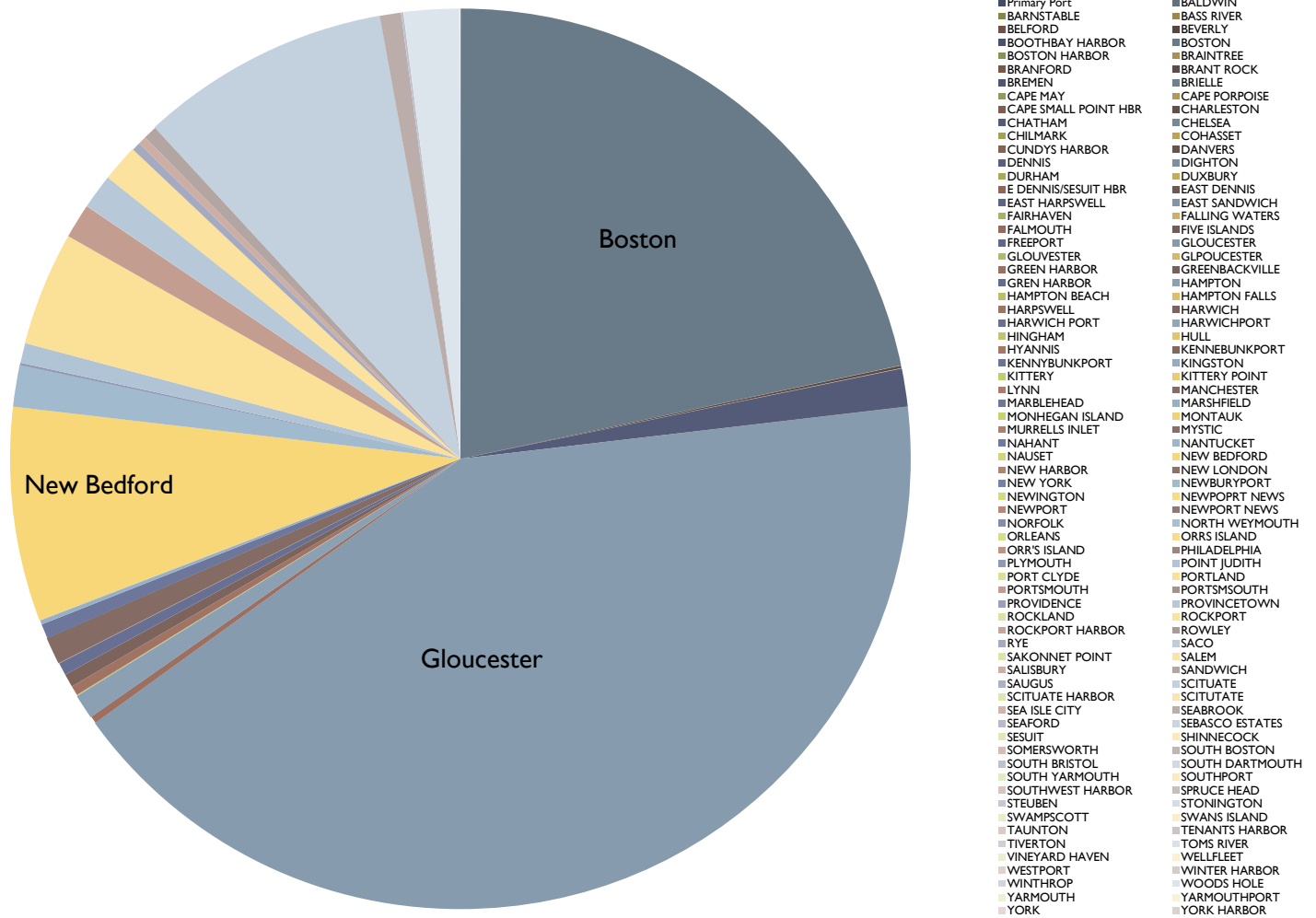
# FY 2009



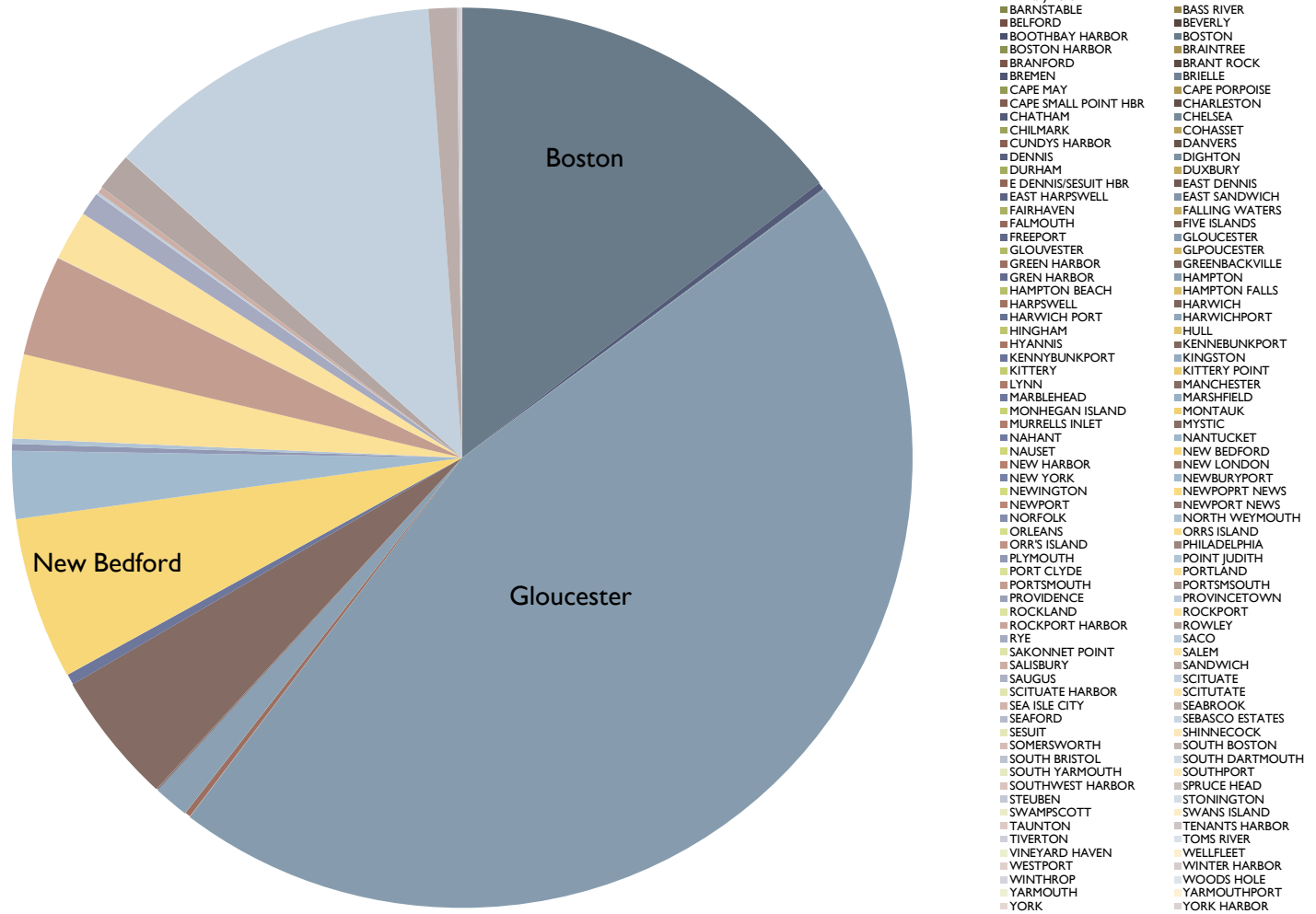
# FY 2010



# FY 2011



# FY 2012



# Conclusions

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- ▶ Some evidence of change in behavior after sectors
  - ▶ Not consistent change across all vessels
- ▶ Comparison with late 1990s
  - ▶ Most recent trends consistent with late 1990s
- ▶ Difficult to separate results with fish behavior and population dynamics
  - ▶ E.g. aggregation

