



April 2016 Blue Crab Update

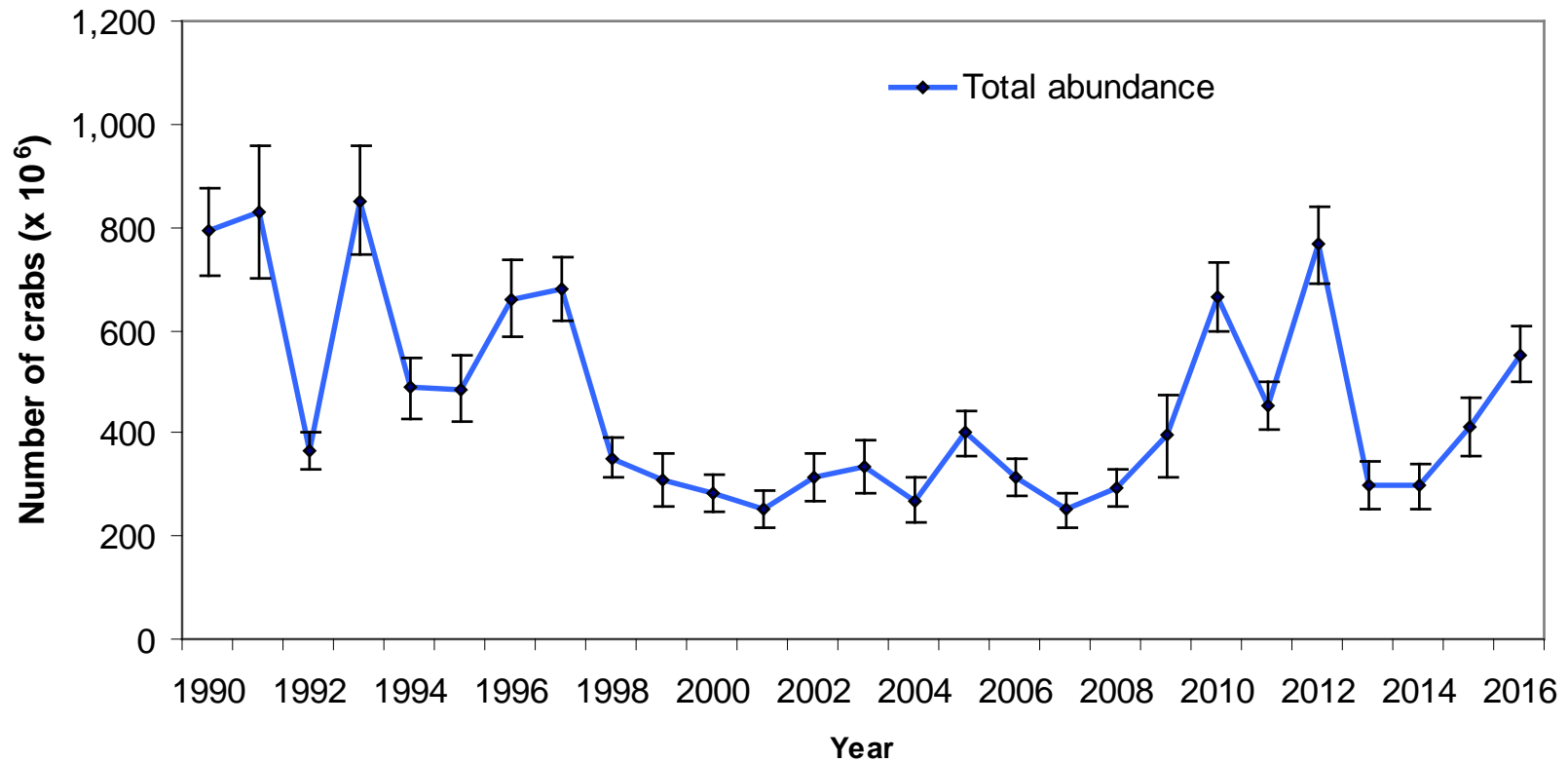
2016 Bay wide Winter Dredge Survey Results

2015 Blue Crab Harvest



Bay wide winter crab dredge survey results – April, 2016

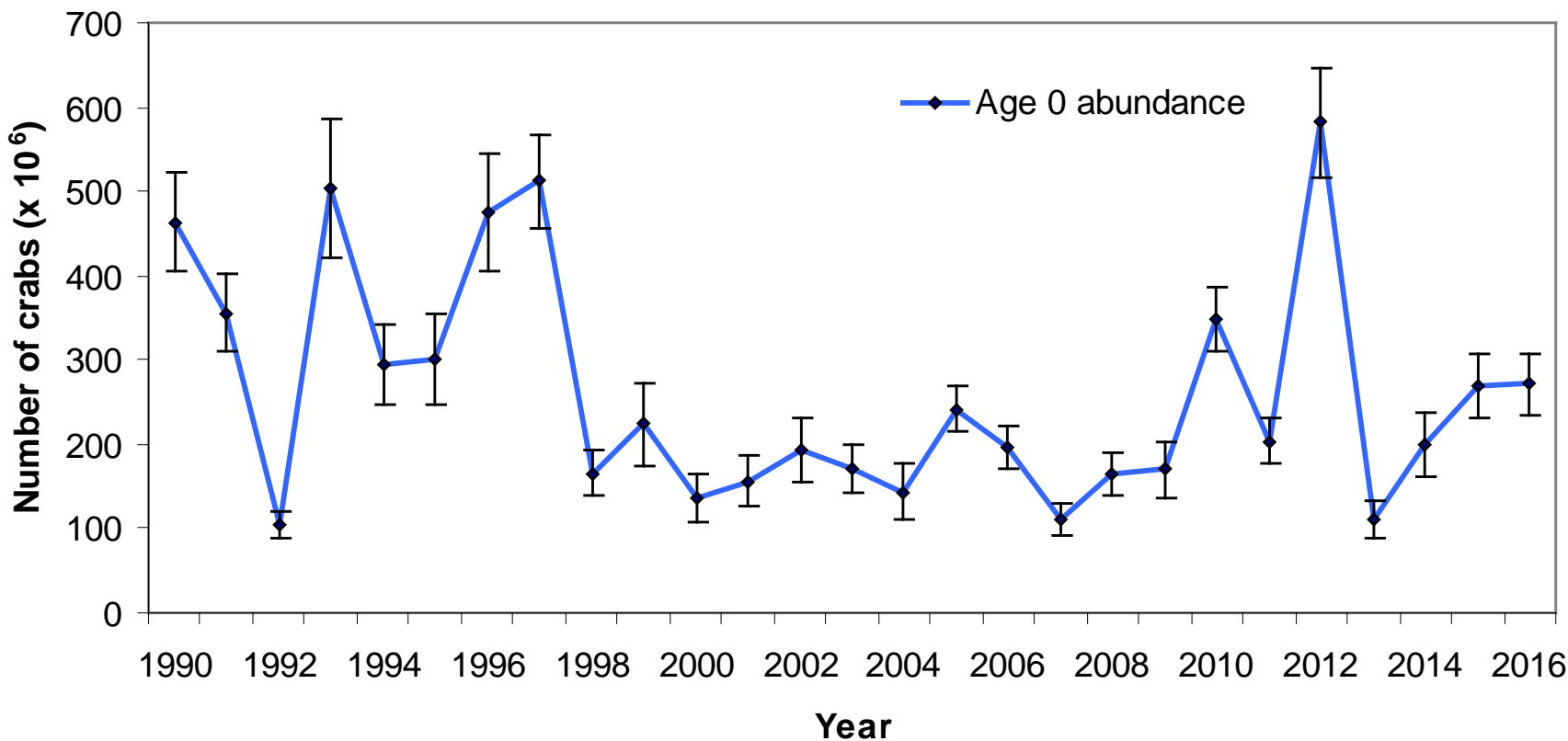
Figure 1. Winter dredge survey estimate of **total blue crab abundance (males and females)** 1990-2016. Error bars represent 95% confidence intervals. Abundance in 2016 is estimated to be 553 million crabs.





Bay wide winter crab dredge survey results – April, 2016

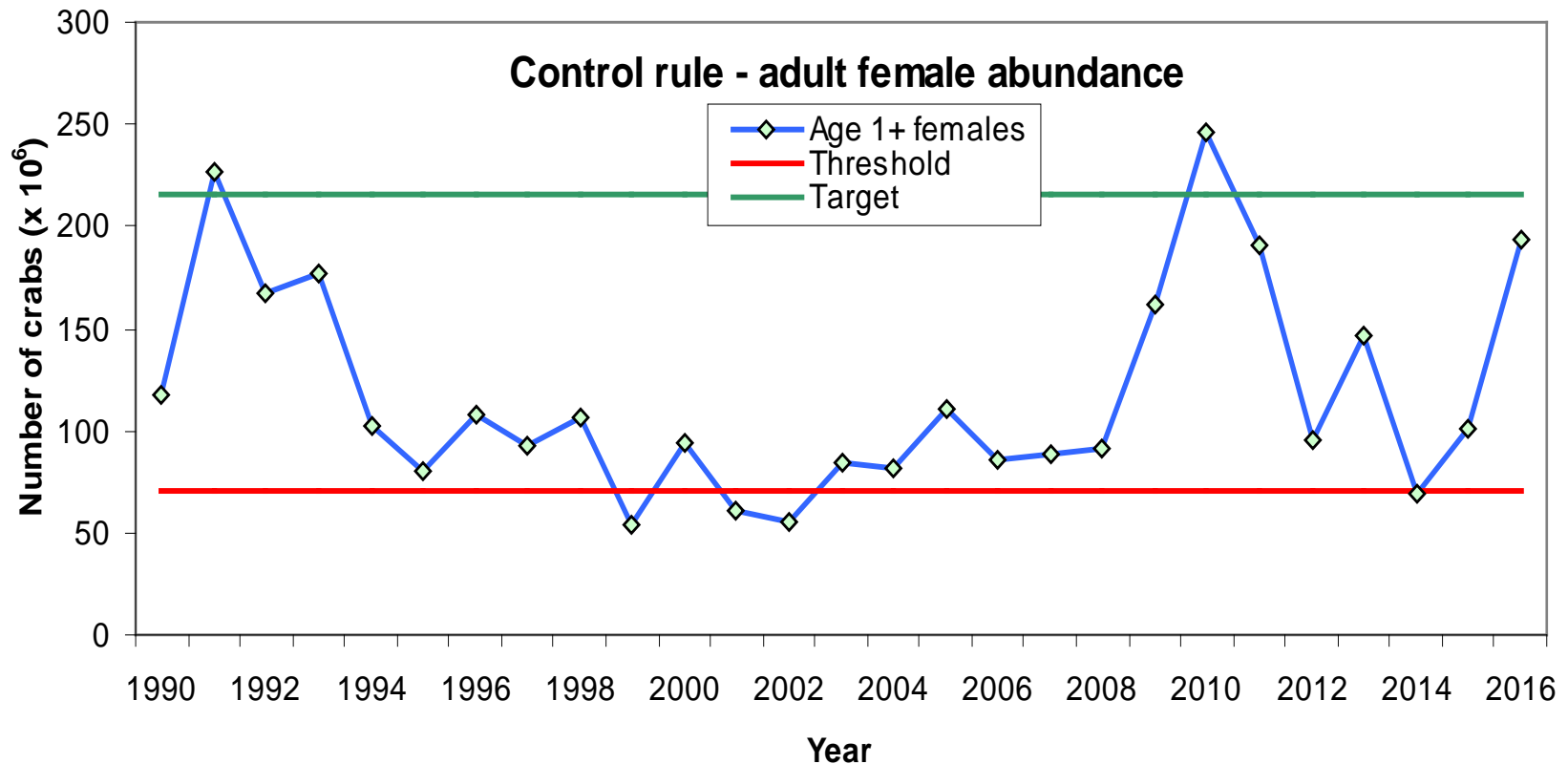
Figure 2. Winter dredge survey estimate of **abundance of juvenile blue crabs (age 0)**, 1990-2016. These are male and female crabs measuring less than 60mm across the carapace. Error bars represent 95% confidence intervals. Juvenile abundance in 2016 is estimated to be 271 million crabs.





Bay wide winter crab dredge survey results – April, 2016

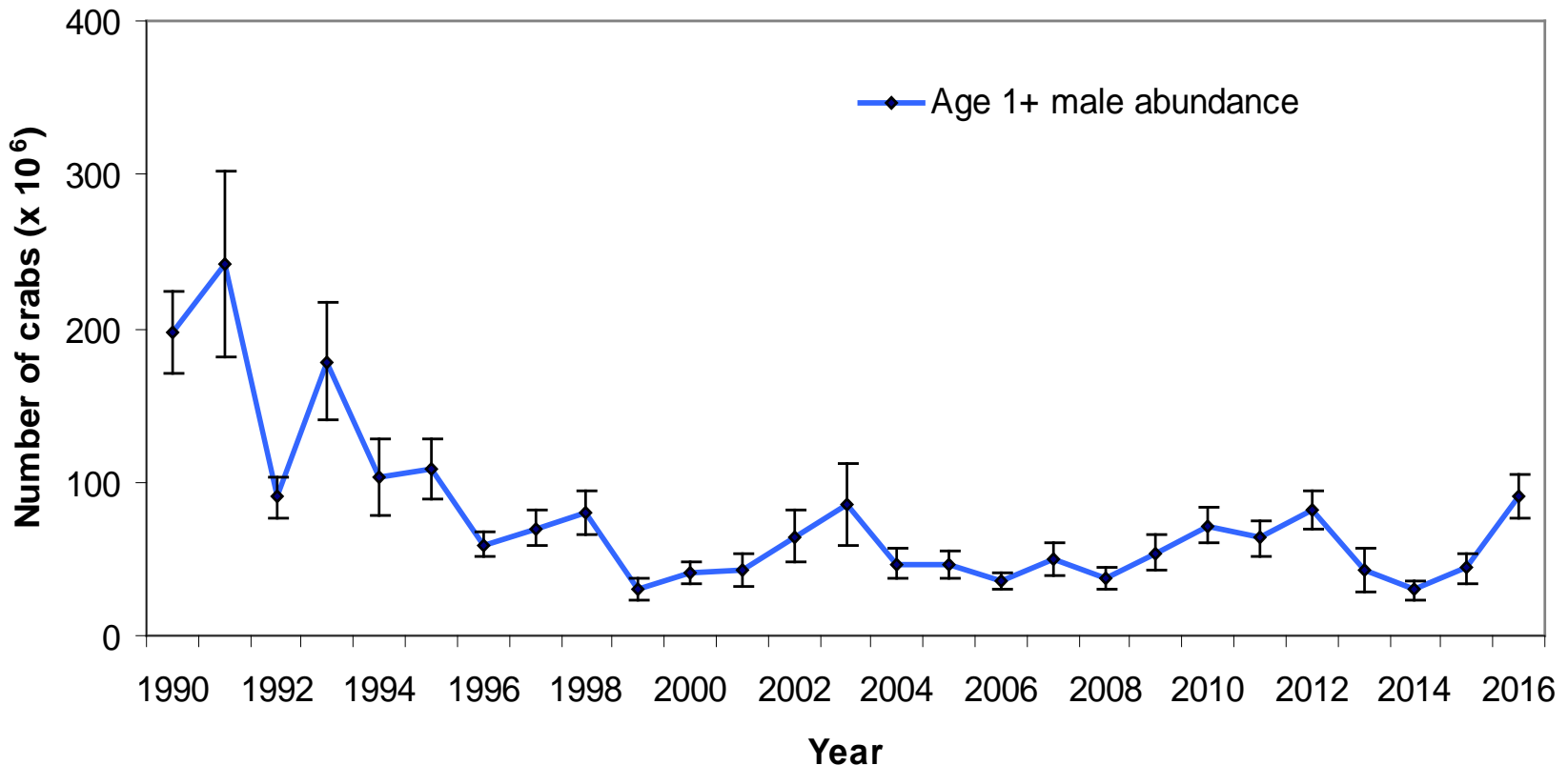
Figure 3. Winter dredge survey estimate of **abundance of age 1+ female blue crabs (≥ 60 mm carapace width)** 1990-2016 with female-specific reference points. These are female crabs considered the ‘exploitable stock’ that will spawn within the coming year. The minimum safe threshold is set at 70 million and the target is 215 million age 1+ female crabs. Age 1+ female abundance in 2016 is estimated to be 194 million crabs.





Bay wide winter crab dredge survey results – April, 2016

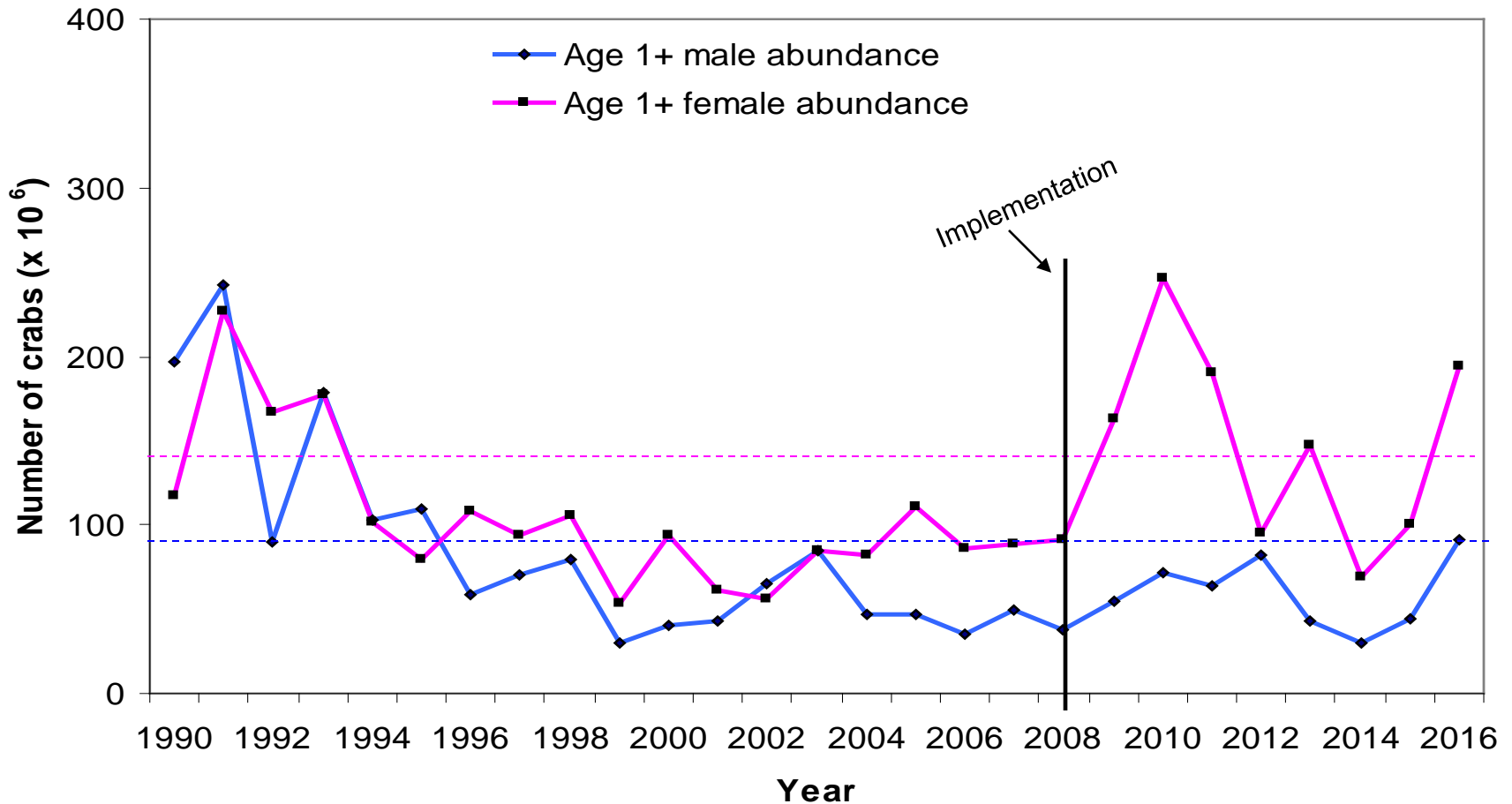
Figure 4. Winter dredge survey estimate of **abundance of age1+ male blue crabs (≥ 60 mm carapace width)**1990-2016. Error bars represent 95% confidence intervals. Abundance of age 1+ male crabs in 2016 is estimated to be 91 million crabs.





Bay wide winter crab dredge survey results – April, 2016

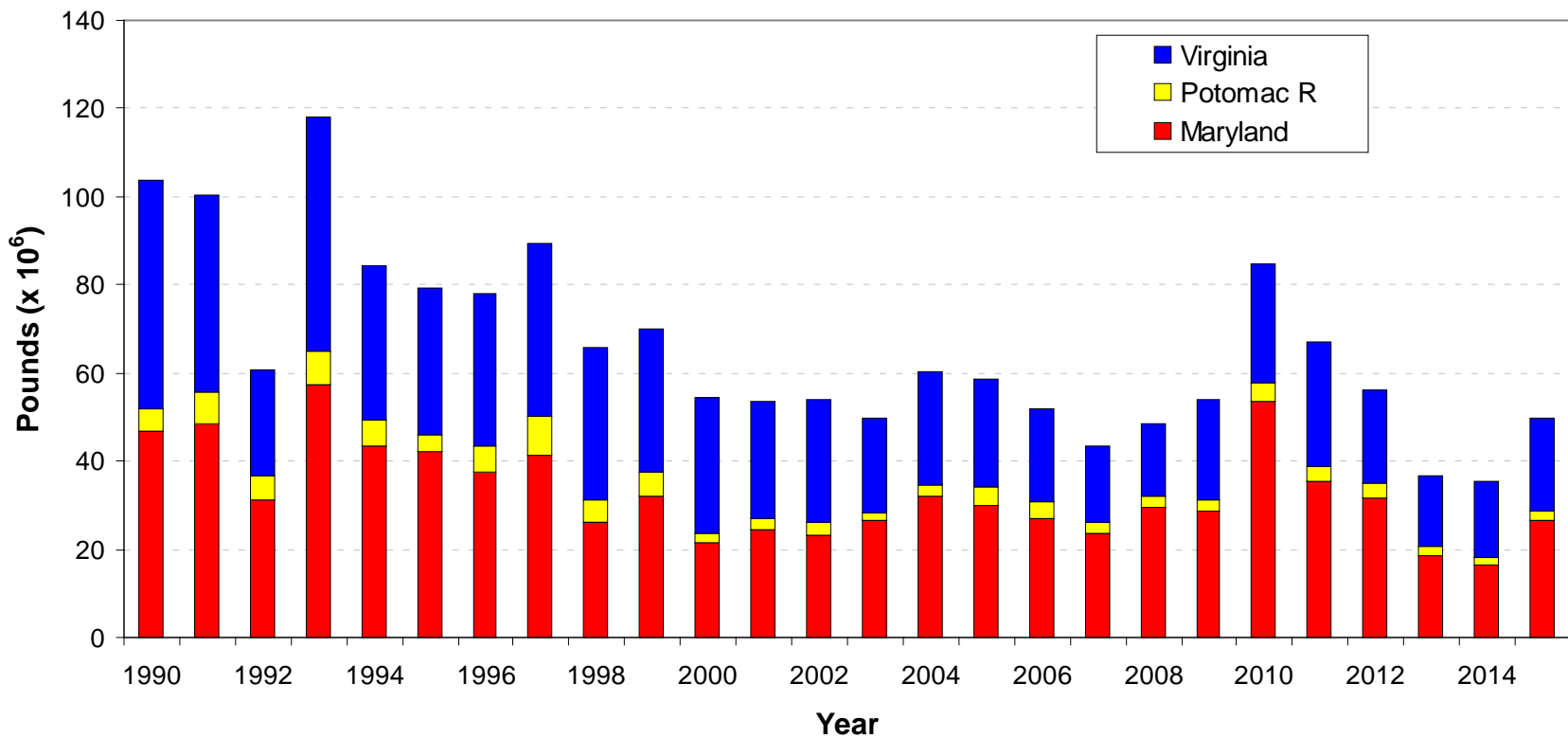
Figure 5. Winter dredge survey estimate of **abundance of age1+ male and female blue crabs (≥ 60 mm carapace width)** with average abundance.





Bay wide winter crab dredge survey results – April, 2016

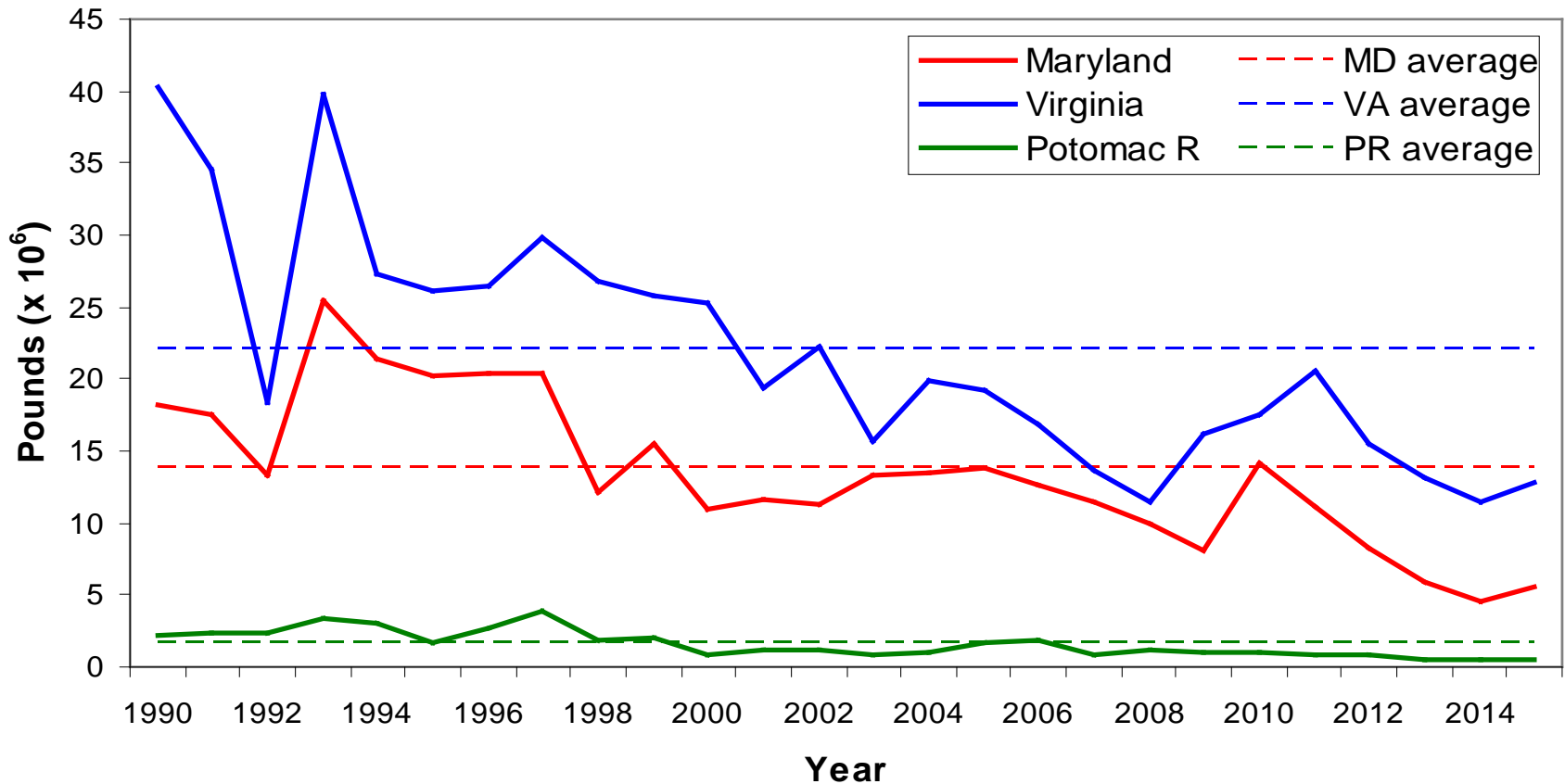
Figure 6. Total commercial blue crab landings (all market categories) in Chesapeake Bay, 1990-2015. Bay-wide harvest in 2015 was approximately 49.7 million pounds.





Bay wide winter crab dredge survey results – April, 2016

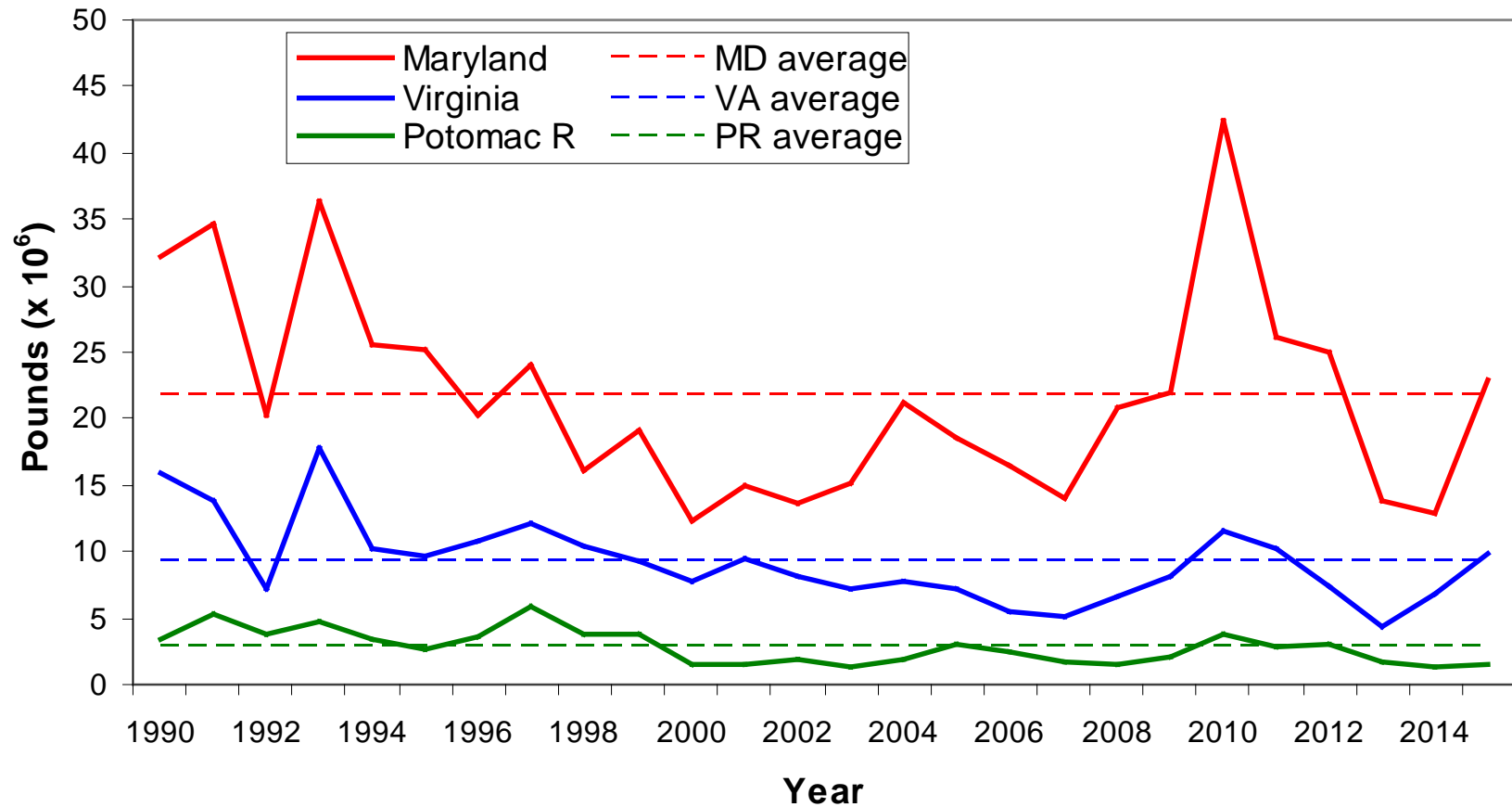
Figure 7. Commercial landings of **female** blue crabs (hard crabs and peeler/soft combined) from each jurisdiction in Chesapeake Bay, 1990-2015. Dotted lines represent the 1990-2014 average.





Bay wide winter crab dredge survey results – April, 2016

Figure 8. Commercial landings of **male** blue crabs (hard crabs and peeler/soft combined) from each jurisdiction in Chesapeake Bay, 1990-2015. Dotted lines represent the 1990-2014 average.

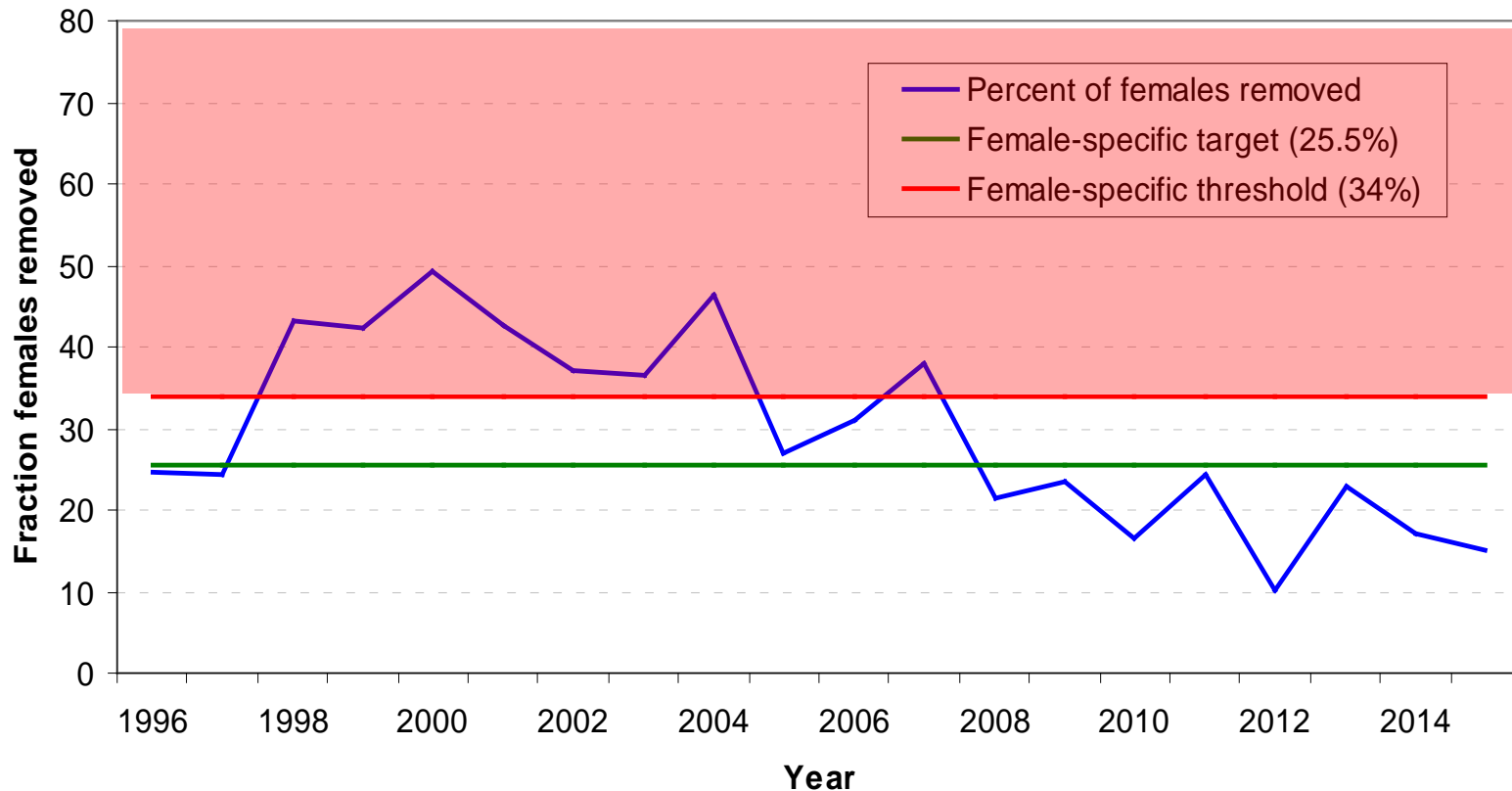




Bay wide winter crab dredge survey results – April, 2016

Figure 9. The percentage of **all female** blue crabs removed from the population each year by fishing relative to the female-specific target (25.5%) and threshold (34%) exploitation rates, 1990 through 2015. Exploitation rate for 2015 was approximately 15%.

Exploitation rate (% removed) is the number of female crabs harvested within a year divided by the female population (age 0 and age 1+) estimated at the beginning of the year.



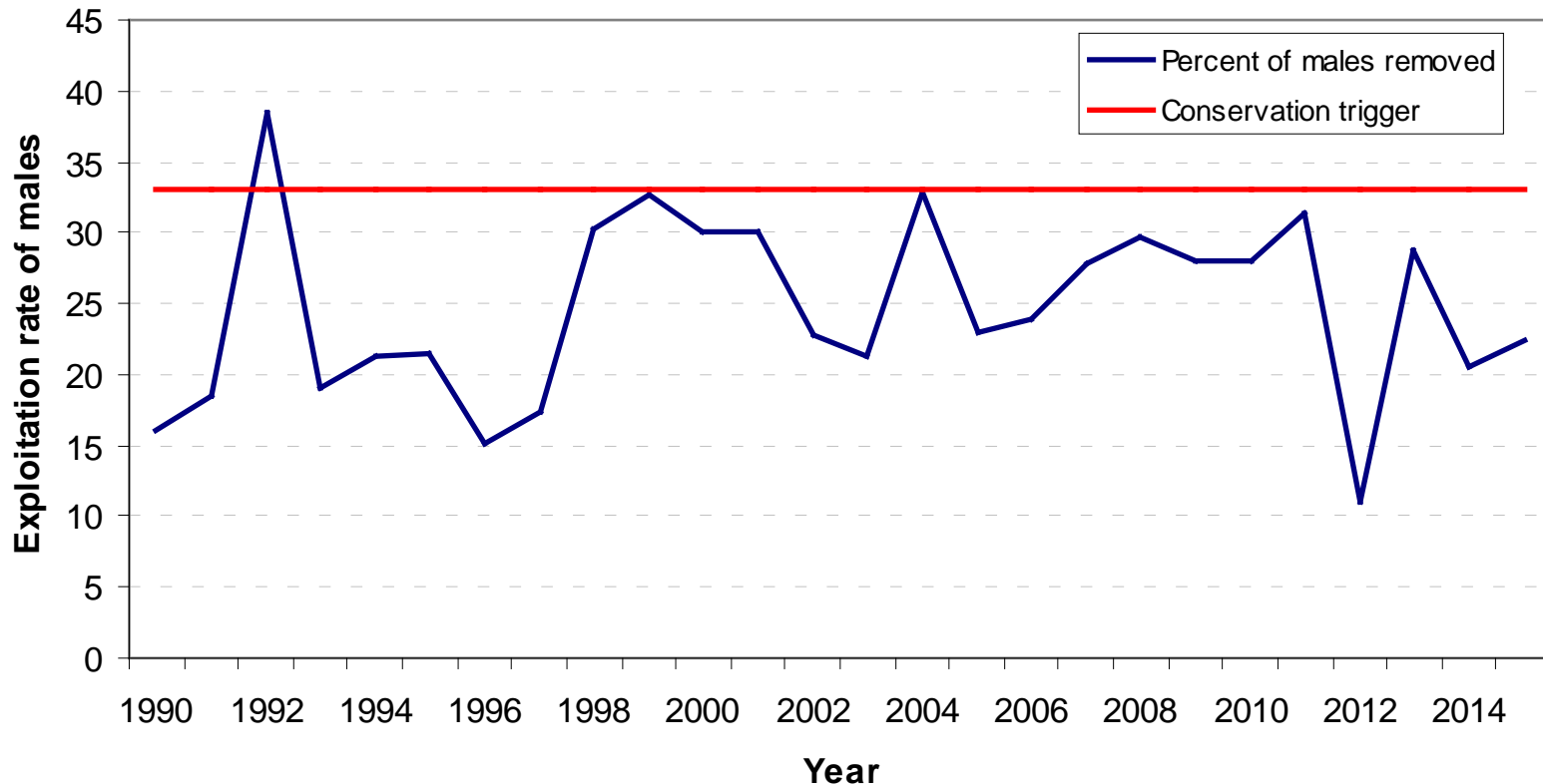
Juvenile abundance used in calculation of exploitation was adjusted for catchability.



Bay wide winter crab dredge survey results – April, 2016

Figure 10. The percentage of all male blue crabs removed from the population each year by fishing, 1990 – 2015, relative to the conservation trigger of 33%.
Exploitation rate for 2015 was approximately 22%.

Exploitation rate (% removed) is the number of male crabs harvested within a year divided by the male population (age 0 and age 1+) estimated at the beginning of the year.



Juvenile abundance used in calculation of exploitation was adjusted for catchability.



Bay wide winter crab dredge survey results – April, 2016

- Total abundance increased 35% (410.6 million in 2015 to 553.2 in 2016)
- Age 1+ female (60 mm and larger) abundance increased 92% (100.9 million to 193.9 million)
- Age 1+ males (60 mm and larger) abundance increased 107% (43.7 million to 90.6 million)
- Total age 0 (less than 60 mm) abundance is about the same as 2015 (268.8 million to 271.4 million)
- Harvest of spawning age females was 15%, below the 25.5% target and well below the 34% threshold for the 8th consecutive year.
- Mild winter temperature resulted in a very low over winter mortality rate.