

# 2021 BLUE CRAB ADVISORY REPORT PREVIEW



Pat Geer (VMRC)  
Chair, Chesapeake Bay Stock Assessment Committee  
July 20, 2022  
Sustainable Fisheries GIT Meeting

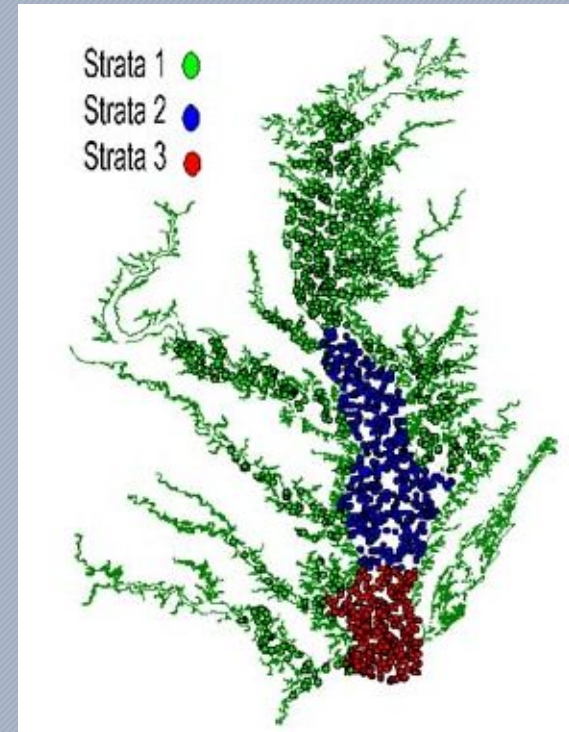
# CBSAC MEMBERS

Pat Geer (Chair)	Virginia Marine Resources Commission
Mandy Bromilow (Coordinator)	ERT/NOAA Chesapeake Bay Office
Bruce Vogt (Staffer)	NOAA Chesapeake Bay Office
Ellen Cosby	Potomac River Fisheries Commission
Glenn Davis	Maryland Department of Natural Resources
Alexa Galvan	Virginia Marine Resources Commission
Daniel Hennen	NMFS, Northeast Fisheries Science Center
Tom Ihde	Morgan State University - PEARL
Eric Johnson	University of North Florida
Rom Lipcius	Virginia Institute of Marine Science
Genine McClair	Maryland Department of Natural Resources
Tom Miller	UMCES, Chesapeake Biological Laboratory
Amy Schueller	NMFS, Southeast Fisheries Science Center
Mike Seebo	Virginia Institute of Marine Science
Alexei Sharov	Maryland Department of Natural Resources
Mike Wilberg	UMCES, Chesapeake Biological Laboratory



# WINTER DREDGE SURVEY RESULTS

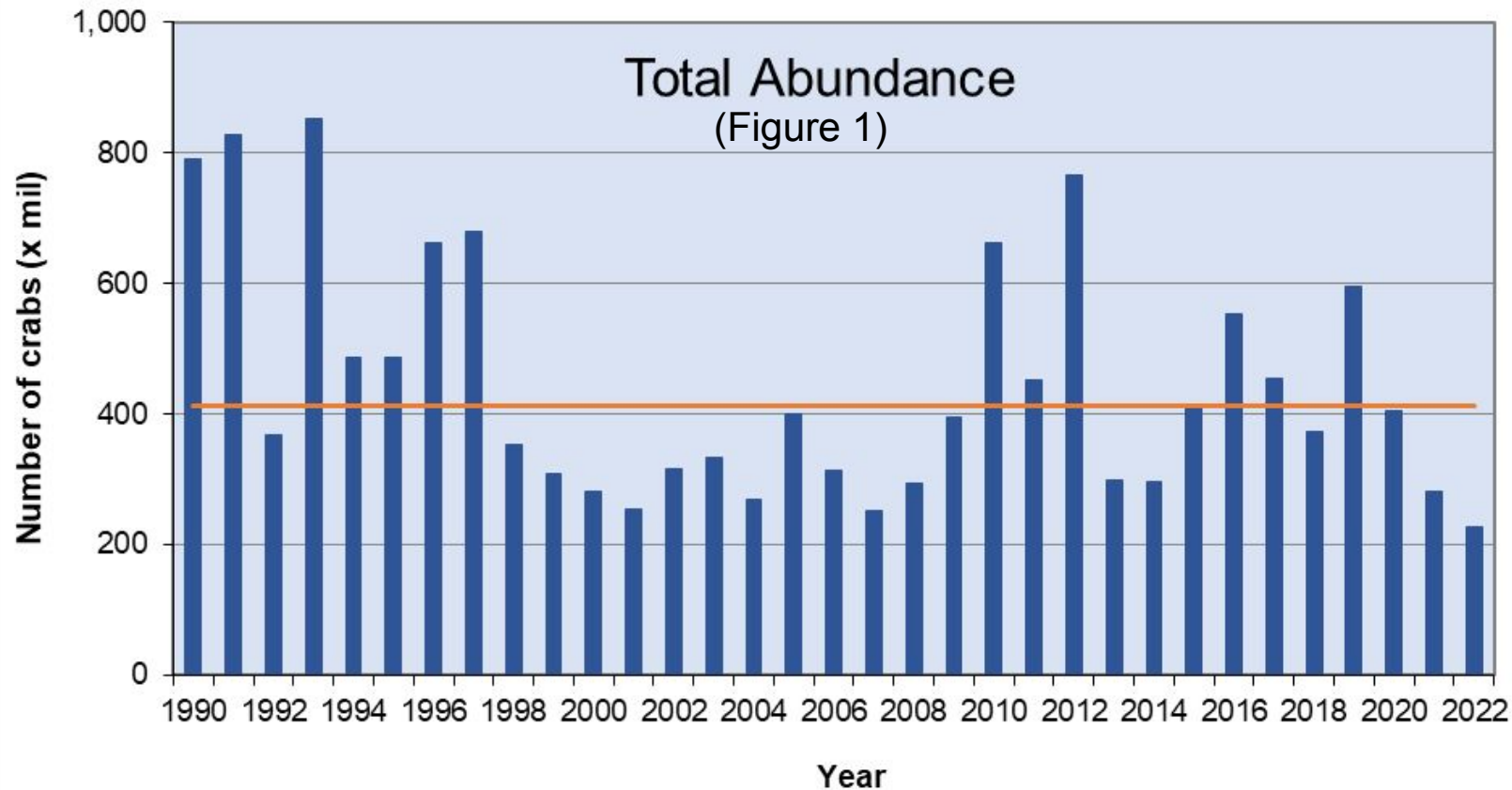
- Conducted jointly by VIMS and MD DNR since 1989-90
- Samples 1500 random sites annually from December to March
- Objectives:
  - Describe the size and sex composition of the bay wide blue crab population
  - Develop accurate estimates of bay wide blue crab abundance
  - Estimate exploitation and fishing mortality and evaluate the status of the stock annually.
- Chesapeake Bay Stock Assessment Committee (CBSAC)
  - Reviewed results at May 25<sup>th</sup> meeting
  - 2022 Blue Crab Advisory Report in mid-June



# RESULTS OF 2021/22 WINTER DREDGE SURVEY

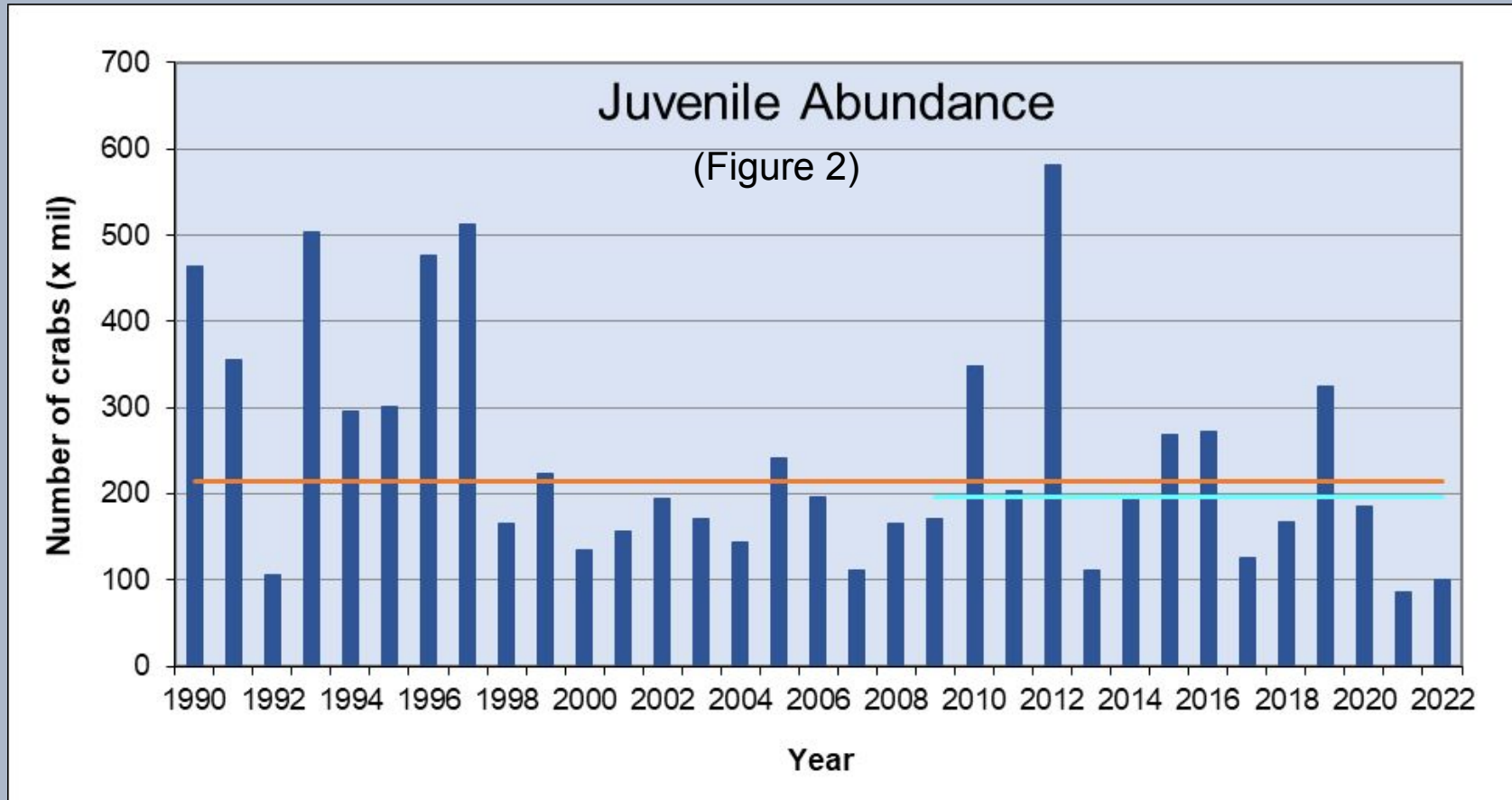
Winter Dredge Survey 2021-22

	Total	Juveniles	Adults	Adult Males	Adult Females
Abundance (millions of crabs)	227	101	126	28	97
Rank (1990-2022) N=33 years	33 <sup>rd</sup>	32 <sup>nd</sup>	27 <sup>th</sup>	33 <sup>rd</sup>	20 <sup>th</sup>
Pct Difference from 2021	-19.54%	17.87%	-36.07%	-26.71%	-38.55%
Pct Difference from Avg <sub>90-22</sub>	-49.13%	-58.64%	-36.28%	-61.85%	-23.05%



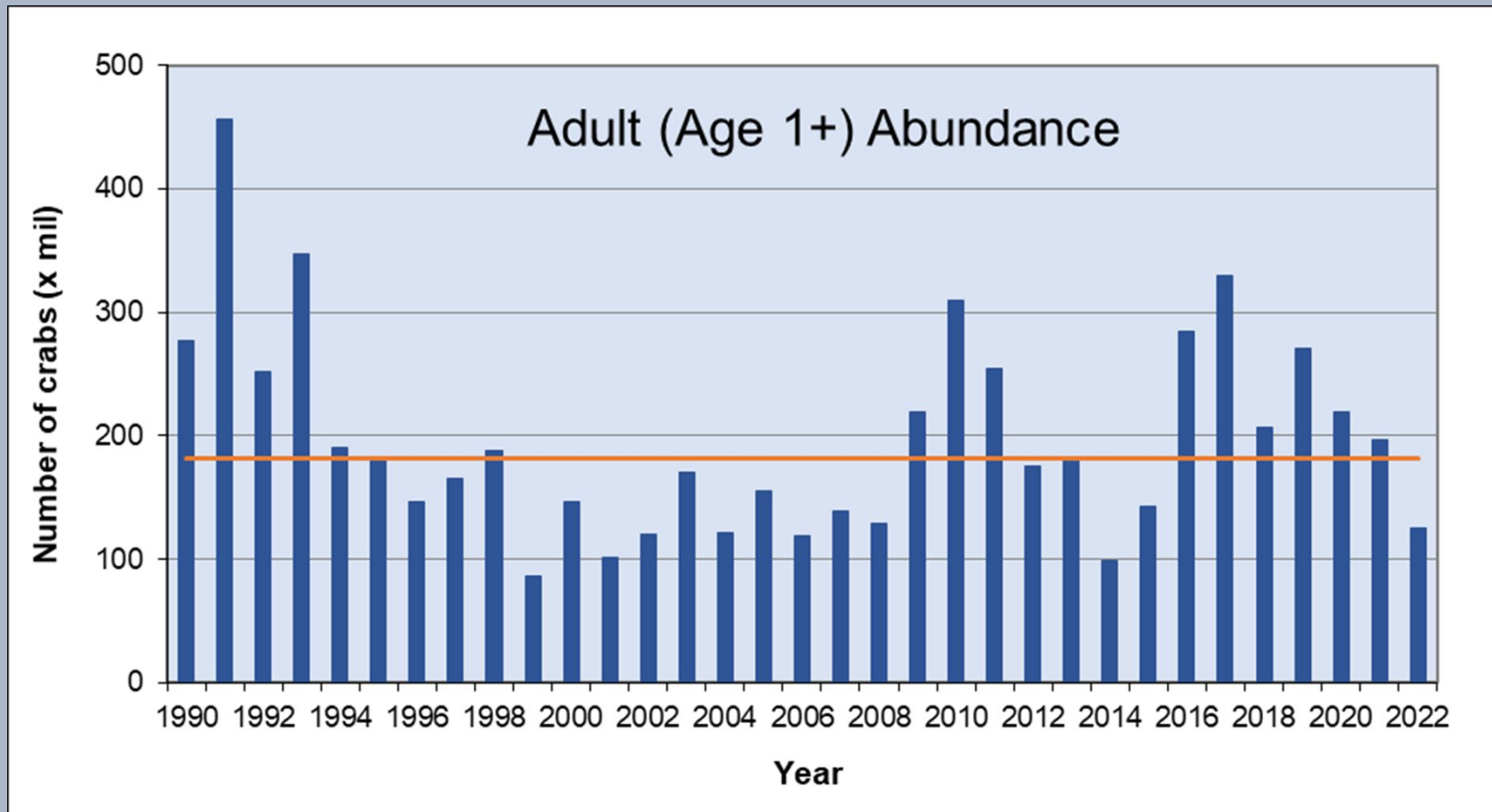
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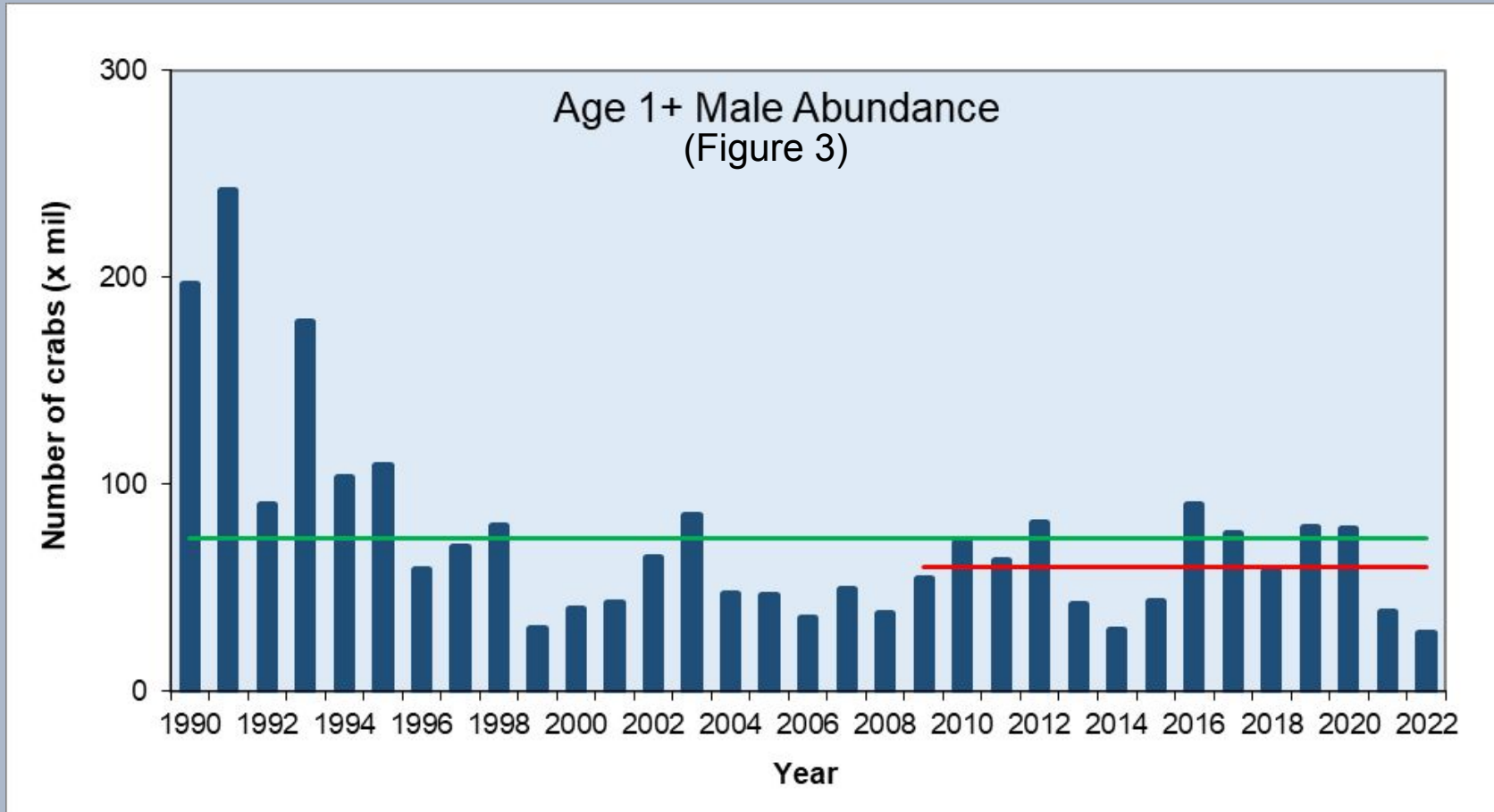
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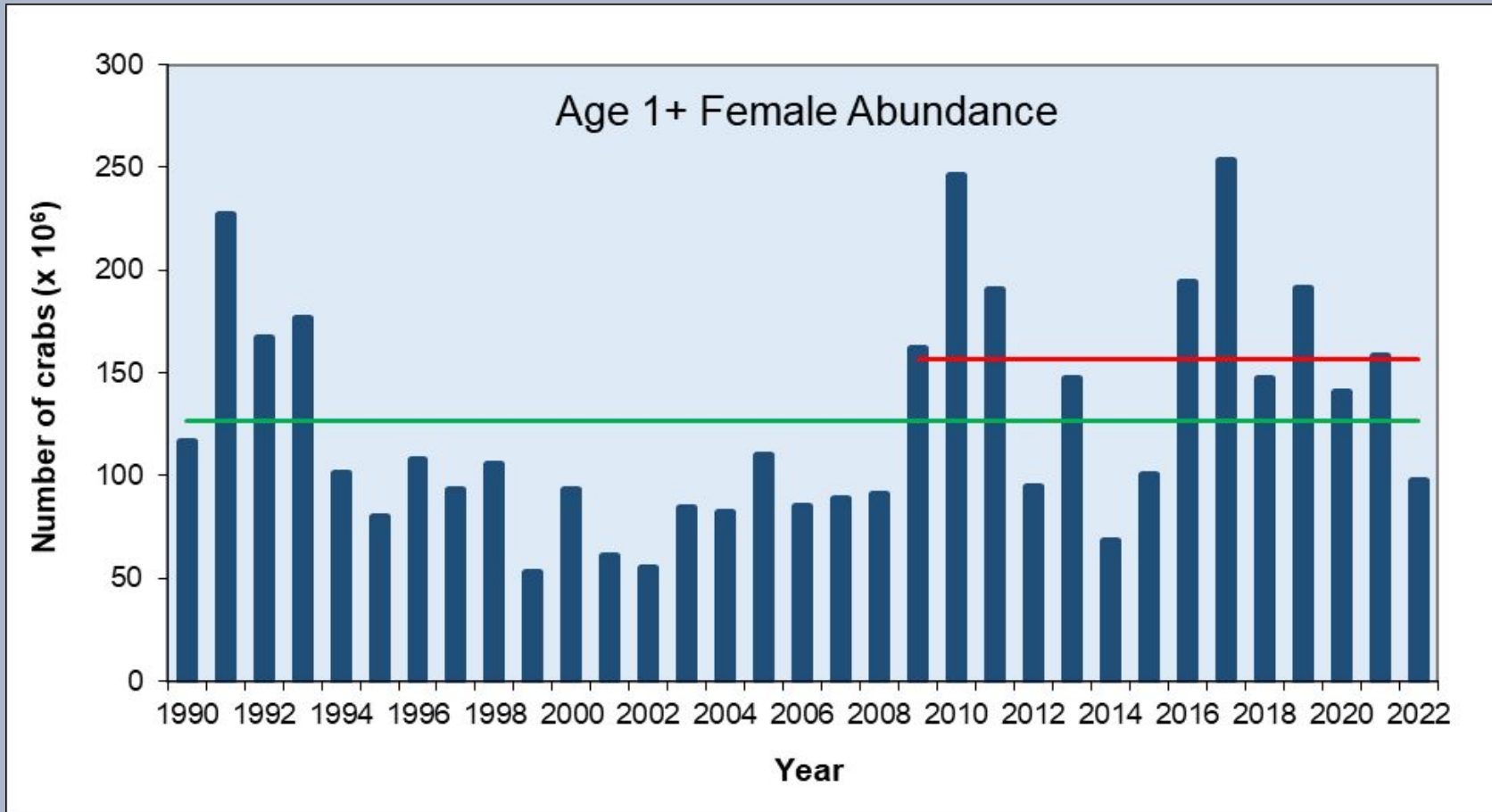
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# OVERWINTERING MORTALITY

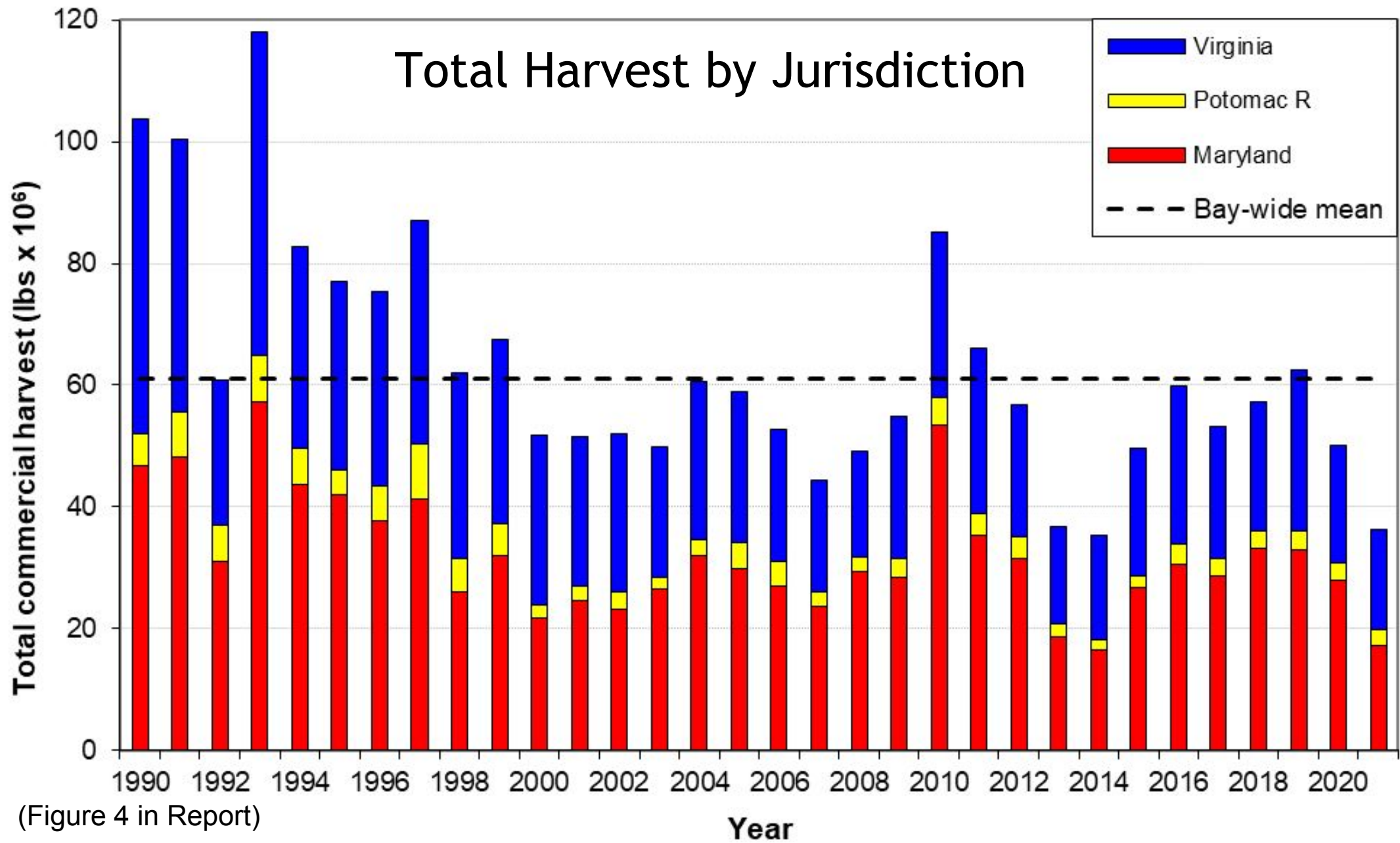
Overwintering mortality in 2022 was lower than average.

Age/Sex Grouping	1996-2022 Average	2018	2019	2020	2021	2022
All Crabs	4.42%	6.37%	1.80%	0.36%	2.80%	3.57%
Juveniles	1.11%	0.87%	0.15%	0.00%	0.11%	0.39%
Adult Females	7.77%	11.06%	1.87%	0.47%	2.12%	6.33%
Adult Males	9.10%	13.66%	7.83%	0.78%	8.39%	5.35%

(Table 2 in Report)

Vessel-specific estimates combined.  
MD data from re-sampled sites in March  
VA data from random sites in March

# 2021 BLUE CRAB HARVEST

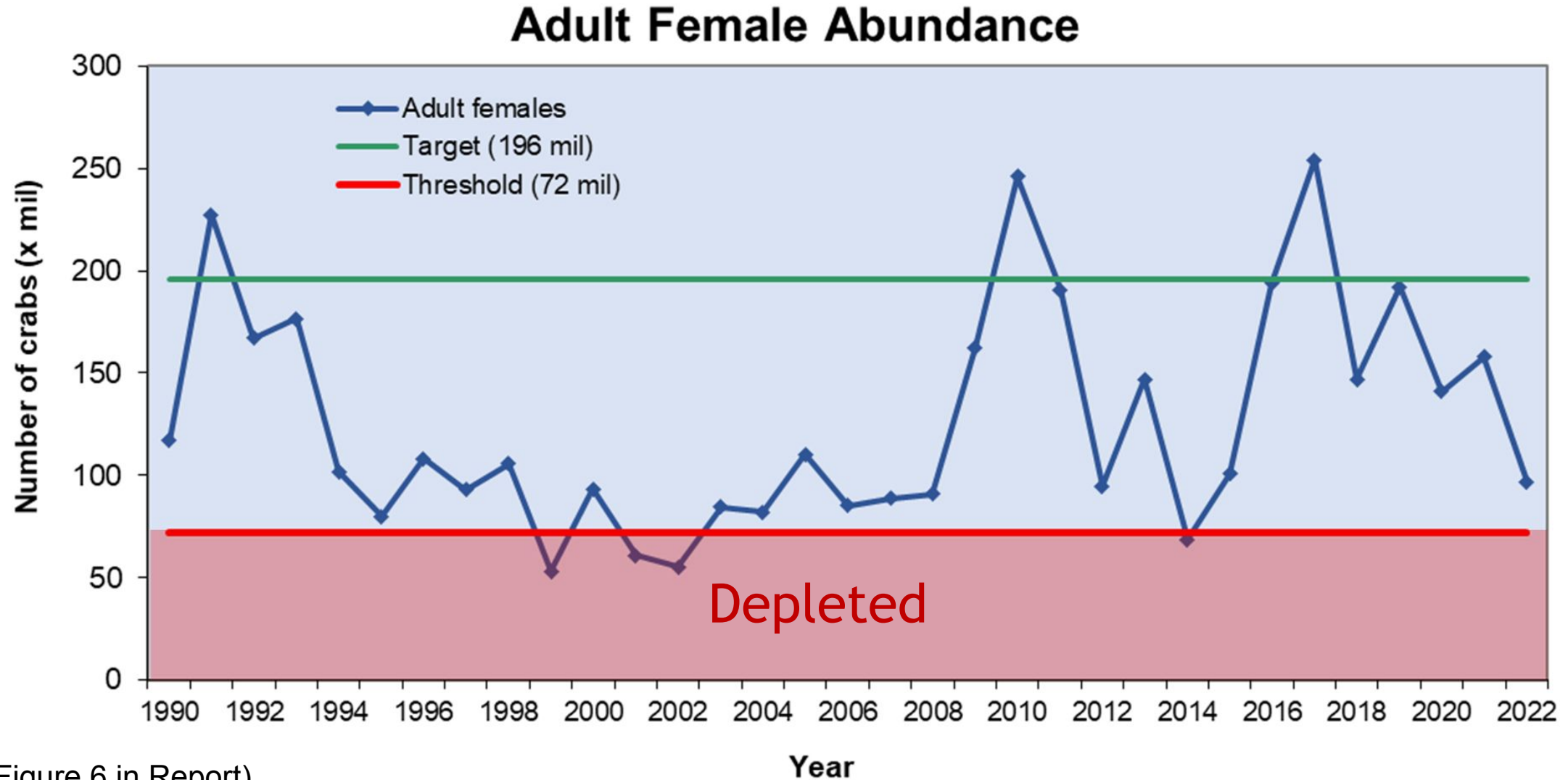


(Figure 4 in Report)

# STATUS OF THE STOCK

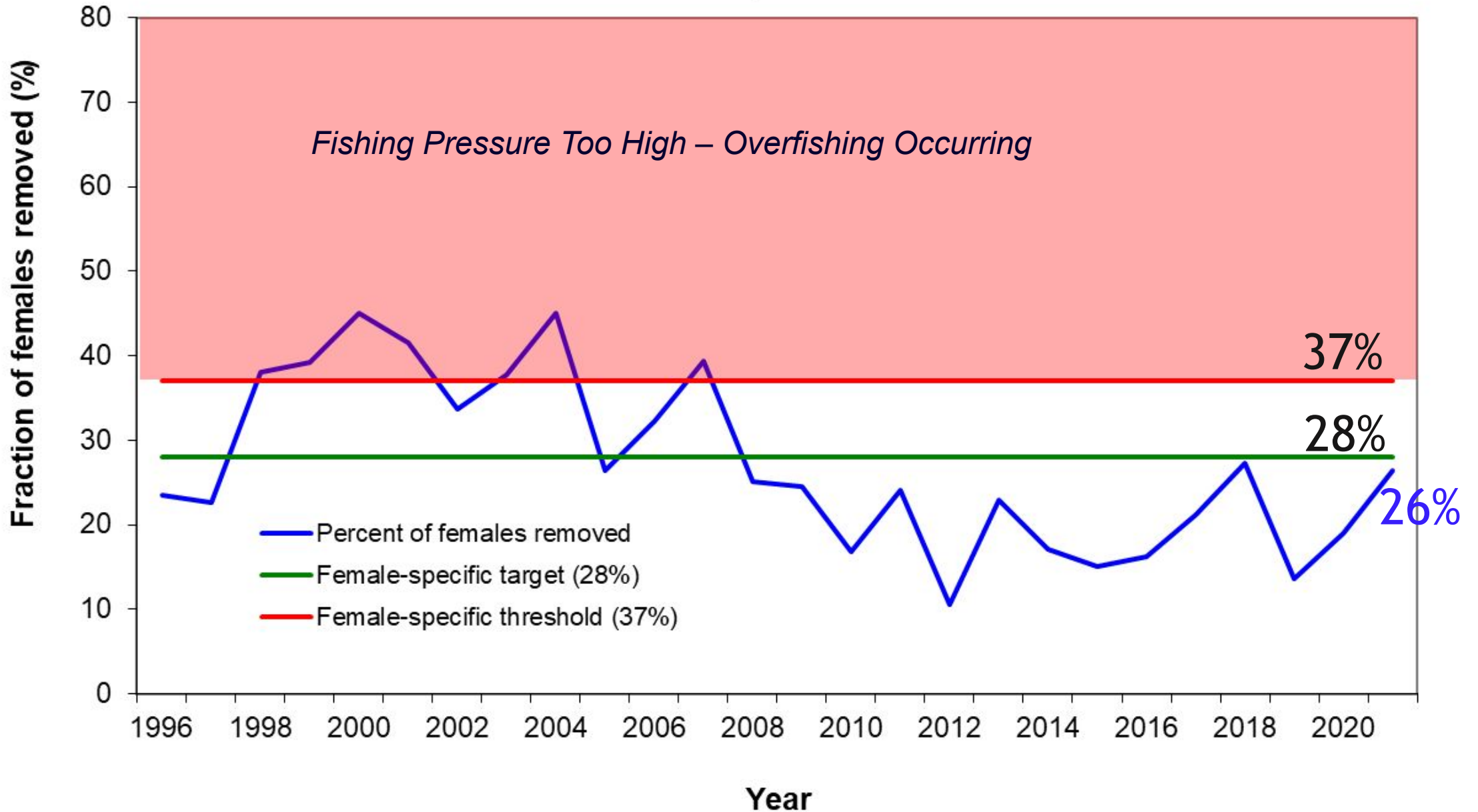


# Control Rule - Adult Female Abundance



(Figure 6 in Report)

# Adult Female Exploitation Rate



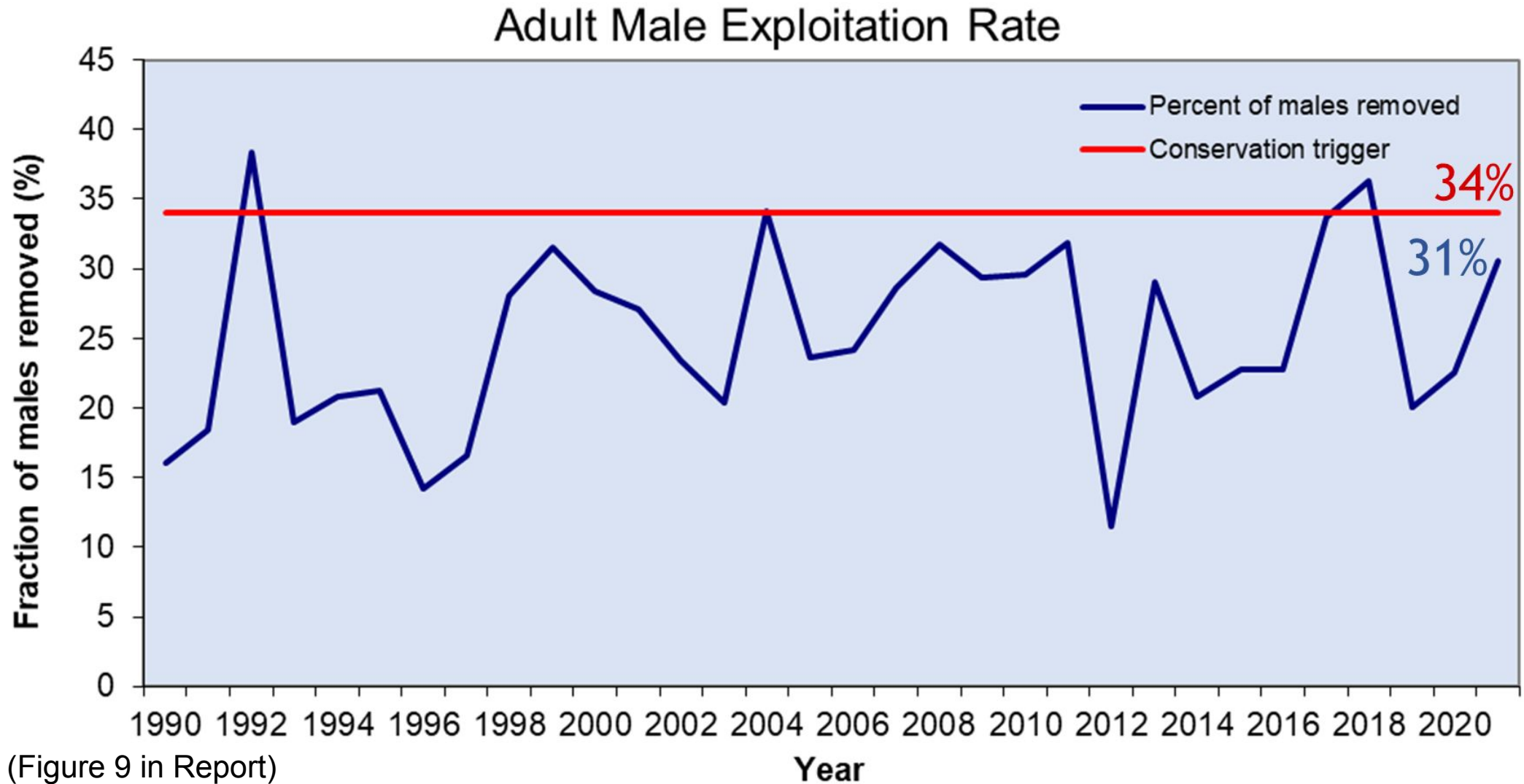
(Figure 5 in Report)

# Control Rules — Table 3 in Report

Control Rule	Reference Points		Stock Status				
	Target	Threshold	2018	2019	2020	2021	2022
<b>Exploitation Rate</b> (percentage of age 0+ females removed)	28%	37% (max)	23%	17%	23%	<b>26%</b>	TBD
<b>Abundance</b> (millions of age 1+ females)	196	72.5 (min)	147	191	141	158	<b>97</b>

Stock Status: The Chesapeake Bay blue crab stock is **not depleted and overfishing is not occurring.**

# MALE CONSERVATION TRIGGER





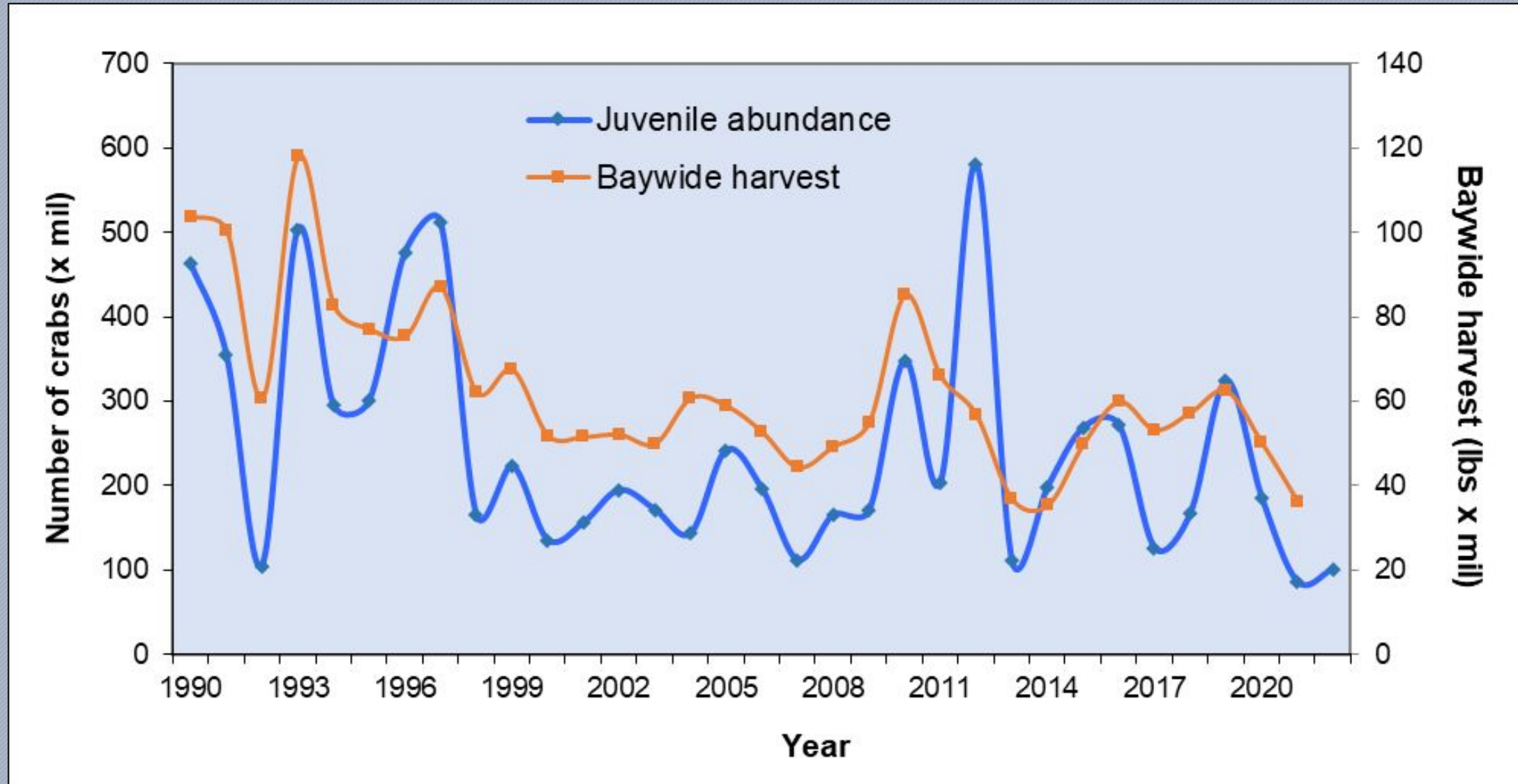
# 2022 ABUNDANCE SUMMARY

- Most abundance estimates declined for the third straight year
  - Total, juvenile, adult, and male abundances near, or at all-time lows
- Total crab abundance decreased almost 20% to 224 million crabs. Lowest in 33 year history of WDS.
- Juvenile abundance increased slightly (+18%) to 101 million crabs, but still the second lowest.
- Adult male declined 28% to 27 million crabs – lowest in WDS history
- Adult female abundance above threshold of 72 at 97 million crabs but declined 38% compared to 2021
  - Females are not overfished but near the target for overfishing.

# Management Advise

- Juvenile abundance is of concern. These crabs will begin to enter the fishery in August. Three years of poor recruitment are now evident in the adults population as well.
- Researchers and managers will continue to watch closely the juvenile results from summer trawl surveys to verify the Dredge Survey results.
- The Control Rules for Management (Age +1 Female Abundance and Female Exploitation Rate) are still within acceptable ranges but management actions seem necessary given male and juvenile abundance.

# RECRUITMENT VS HARVEST



# Management Advise pg2

- CBSAC recommends a new benchmark stock assessment should be planned.
  - The last benchmark was in 2011.
  - The population may be behaving differently now.
  - Additional datasets may be available.
- Workshop scheduled for September 20-21 (VMRC) to discuss recruitment and drivers influencing the population.
- Jurisdictions have agreed to amend regulations to protect juveniles entering the fishery this fall.



# Management Actions for 2022-23 Season

- Maryland
  - Commercial Bushel limits on Males (Aug to Sep)
    - (varies depending on pot license)
  - Recreational Harvest Limit – 1 bushel males per person/boat
- Virginia
  - Reduced Commercial Crab Pot Bushel Limits
    - Oct-1-Nov-30, Mar-17-May-15 (4 months vs 2 weeks)
    - Season for all other gears: Apr 15-Oct 15 (30 days less)
    - Other Potential Measures by March 2023
- PRFC – July 28 Meeting

# Questions



# Additional Slides

# Virginia Pot Regulations July 5

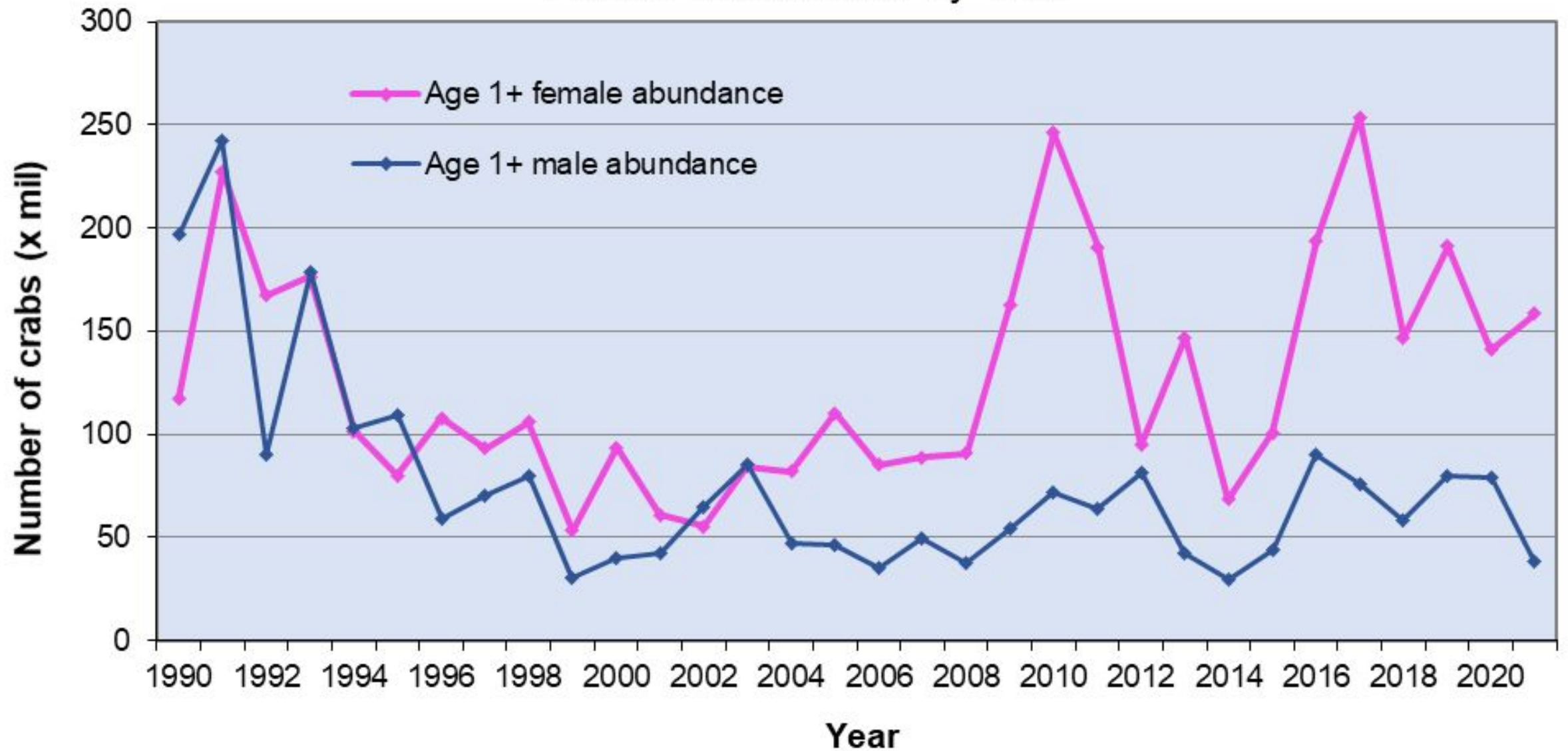
License Type	Old		Effective July 5, 2022		Licenses Sold
	Reduced Limit	Normal Limit	Reduced Limit	Normal Limit	
	Mar-17-Mar-31	Jul-5 to Nov-30, Apr-1-Jul-4	Oct-1-Nov-30, Mar-17-May-15	Jul-5 to Sep-30, May-16 to Jul-4	
85 pot	8	10	8	10	281
127 pot	10	14	10	14	66
170 pot	13	18	13	18	24
255 pot	21	29	21	29	568
425 pot	27	47	27	47	113
Peeler pots	210				454



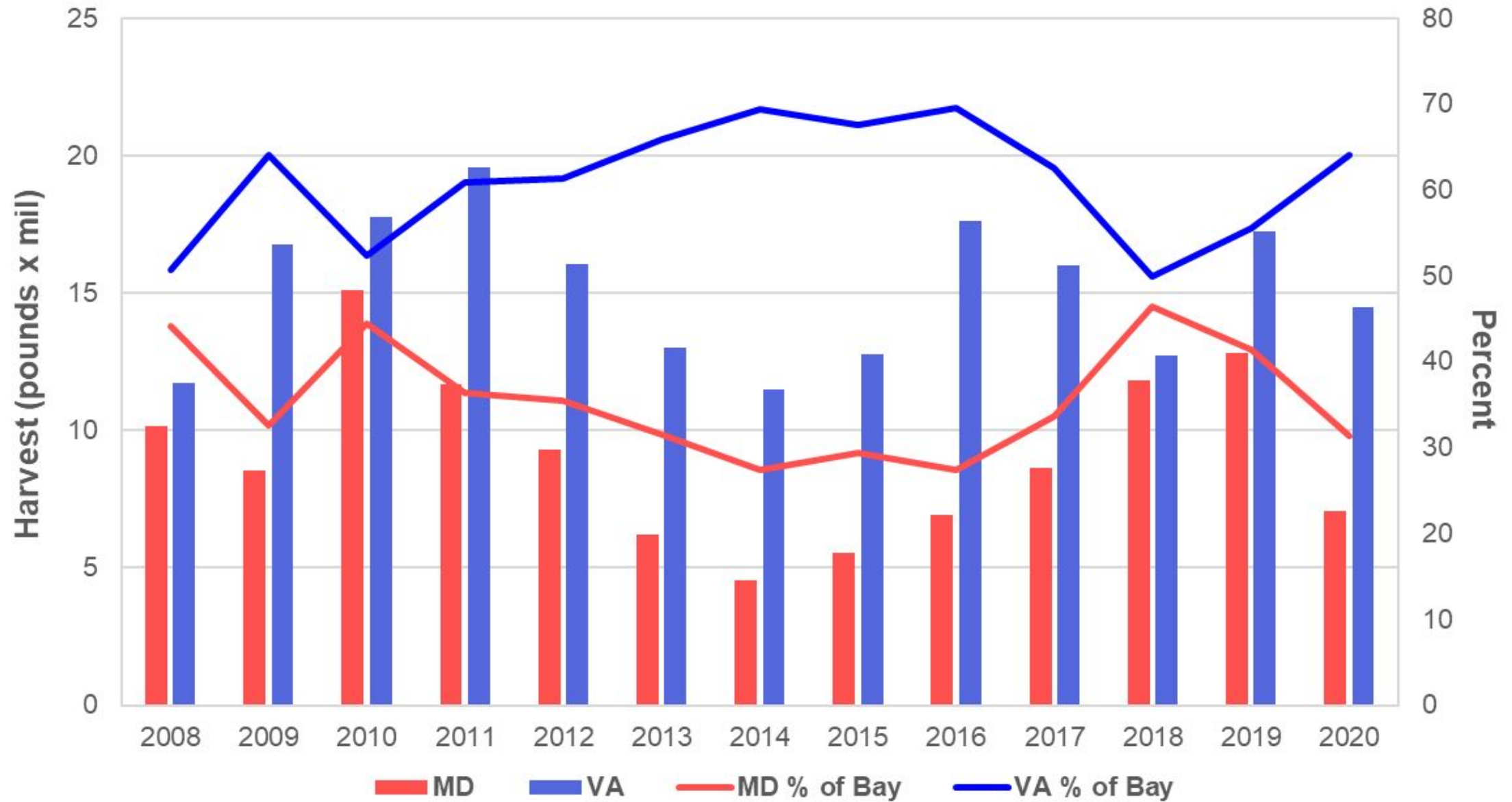
# Maryland Pot Regulations July 1

Maryland	License Type			
Dates	LCC	CB3 or TFL	TFL w/ CB6 or CB3 w/ CB6	TFL w/ CB9 or CB3 w/ CB9
Pots	50	300	900	Unlimited
Male Harvest				
Aug 1 - Sep 30	4	8	12	15
Female Harvest				
Jul 1 – Aug 31	2	9	13	17
Sep 1 – Oct 31	5	17	27	32
Nov 1 – Nov 30	2	5	10	15
Dec 1 – Dec 15	No Female Hard Crab Harvest Allowed			
LCC – Limited Crab Harvester License 50 pots;				
CB3 – CrabHarvester License 300 pots				
CB6 – 600 pot authorization;				
CB9 – 900 pot authorization;				
TFL – Unlimited Tidal Fish License				

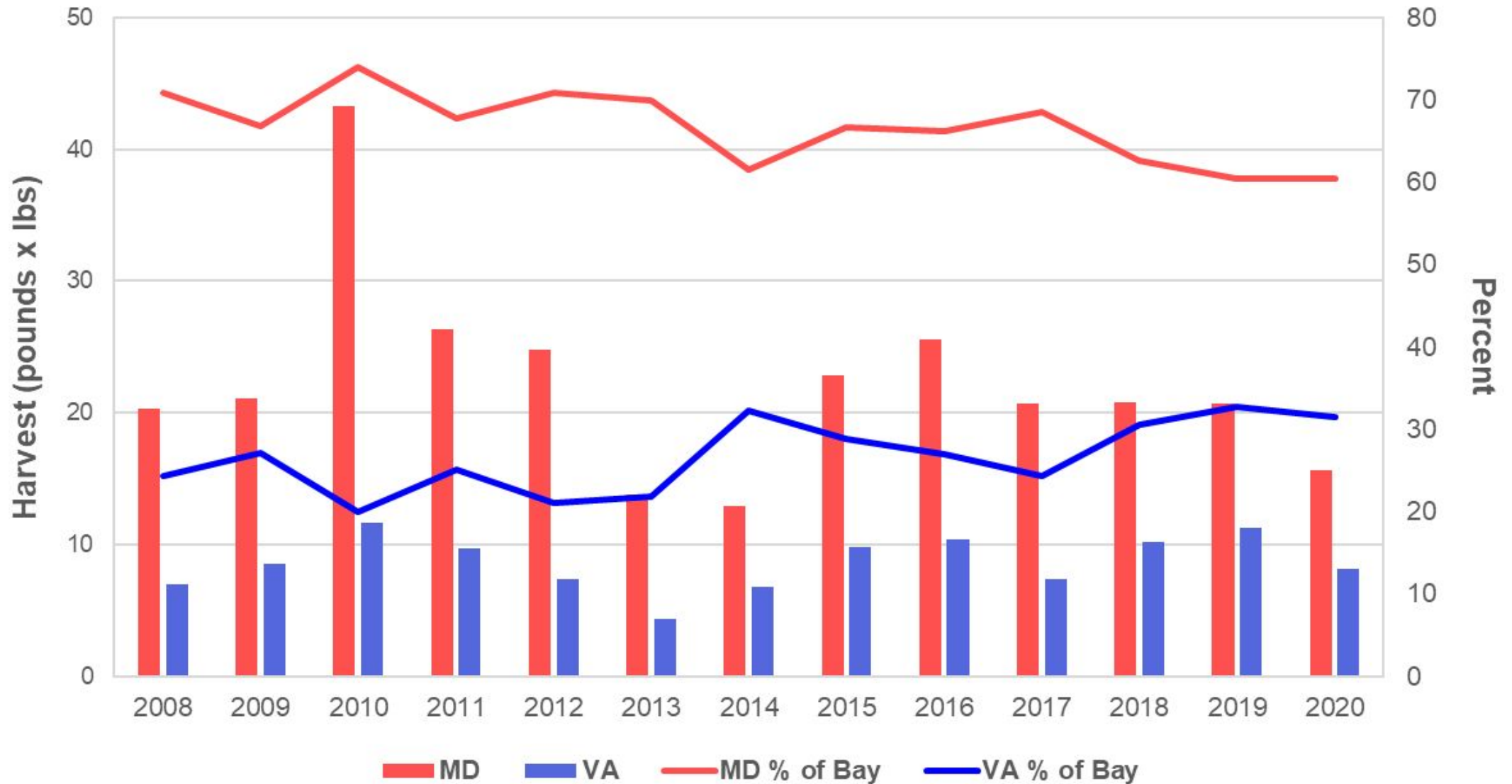
## Adult Abundance by Sex



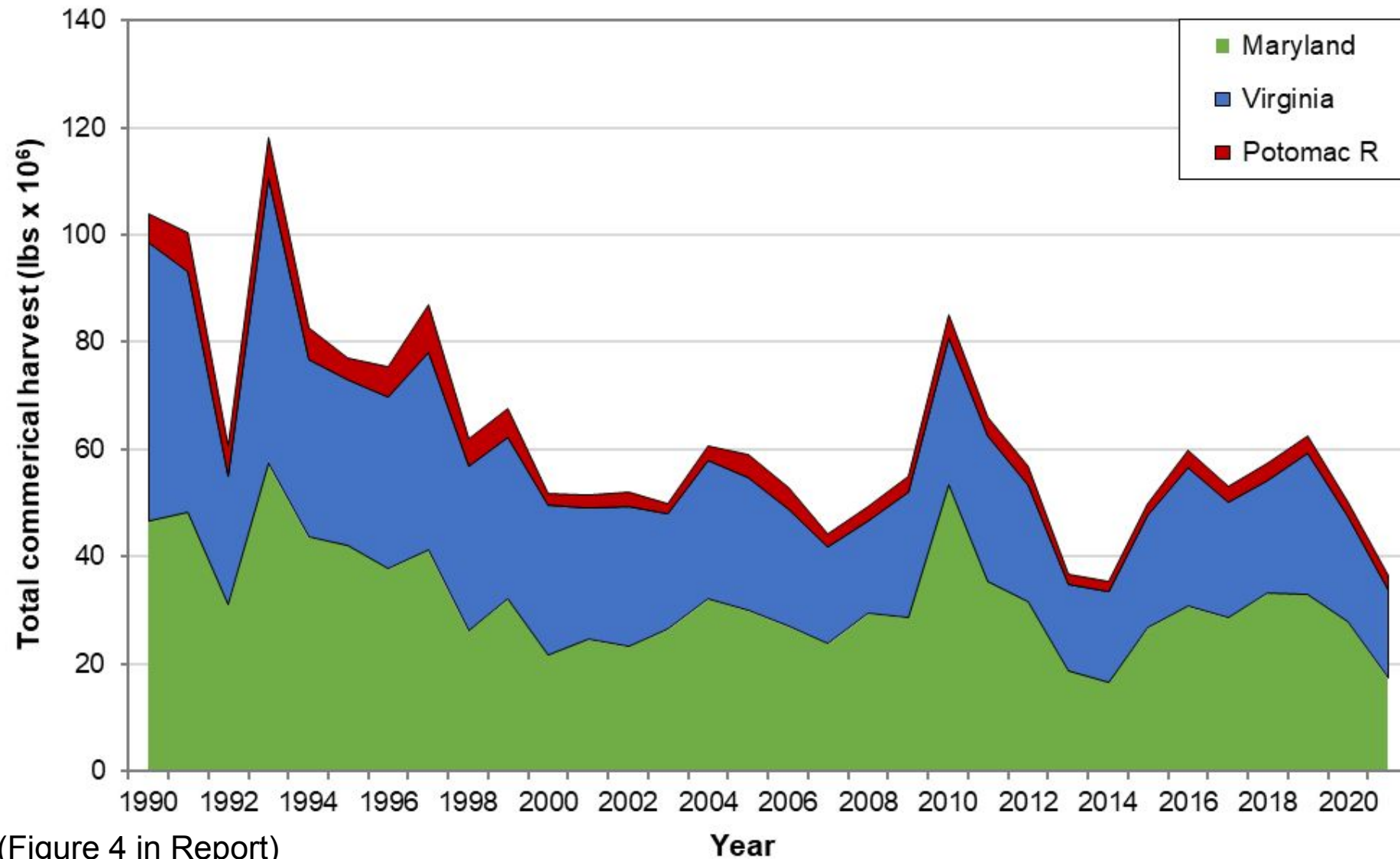
## Female Harvest



## Male Harvest



# Total Harvest by Jurisdiction



(Figure 4 in Report)