COMMONWEALTH of VIRGINIA

Marine Resources Commission
2600 Washington Avenue
Third Floor
Newport News, Virginia 23607

Molly Joseph Ward
Secretary of Natural Resources

John M.R. Bull
Commissioner

April 12, 2016

Contact: Laurie Naismith
Virginia Marine Resources Commission
(757) 247-2269 (office)
(757) 508-1804 (cell)

Scientific Survey Shows Solid Blue Crab Stock Improvement

~ Overall crab abundance increases 35 percent. Spawning-age females almost double but remain below target levels. ~

HAMPTON, VA. – The Virginia Marine Resources Commission today released the results of the 2016 blue crab winter dredge survey, which shows another year of growth in the stock and forecasts an improved harvest in 2016.

“We now have back-to-back years of solid growth in this important fishery,’’ Commissioner John M.R. Bull said. “The crab stock has been on a rollercoaster for most of the last decade. We’ve seen a few great years of reproduction followed by awful years of abundance. Two years does not make a trend, and this news inspires both wary optimism and cautious management.”

The results of the 2016 Blue Crab Winter Dredge Survey show the total population of blue crabs in the Chesapeake Bay climbed 35 percent to a total of 553 million. This is the fourth highest level in two decades, since 1996, and builds on last year’s 38 percent boost in abundance.

Stock improvements were found in both female and male crabs, as well as juveniles and adults.

The spawning female stock almost doubled, from 101 million to 194 million, while the adult male stock more than doubled, from 44 million to 91 million. These are the second highest levels recorded since 1995 and bode well for a good crab harvest this year. Still, this level of spawning age female crabs remains below the scientifically recommended target of 215 million but well above the minimum safe threshold of 70 million crabs.

The juvenile abundance increased only slightly, from 269 million to 271 million, which is just above the average level of juveniles recorded over the past almost 30 years.

The bay-wide crab harvest last year increased by 42 percent, to 50 million pounds.

Increased overall abundance means commercial crabbers can expect to see more crabs in their crab pots this year than last year and to more often catch their daily bushel limits. Some slight loosening of harvest limits may be warranted.

Crab spawning naturally fluctuates and can be affected by wind, currents, weather, cannibalism and increased predation on crabs by other species. In recent years, unexpected predation events and stressful combinations of environmental factors have caused dramatic downturns in crab stock abundance. This highlights the need for fishery managers to continue to enhance resilience of the stock through adaptive management to compensate for unusual or extreme environmental conditions.

A bay-wide 10 percent crab harvest reduction enacted in 2014 by VMRC, Maryland, and the Potomac River Fisheries Commission to combat low overall crab abundance and to boost a dangerously depleted female spawning stock appears to have been effective.

“Two years ago, the number of adult female crabs were so low that a harvest cut was necessary to help rebuild them,’’ said Bull. “Now that the stock has improved, we need to be cautious and make prudent management decisions that further improve the stock and increase the stock’s resilience to factors outside of anyone’s control.”

In 2014, Bay fishery managers refined their management regimen to focus on conserving juvenile crabs as well as spawning age female crabs. Each year’s juveniles become the next year’s spawning stock. Conserving more juveniles when they reach market size in the fall and emerge from hibernation in the spring increases the likelihood they will survive to spawn another generation of abundant crabs in the summer.

“This recent success in management seems to have built some resilience in the stock,’’ said Rom Lipcius of the Virginia Institute of Marine Science. “We’re seeing a rebound in abundance and a buffer on unpredictable environmental disturbances that can cause severe declines in the stock.”

The annual Bay-wide Winter Dredge Survey is the primary assessment of the Bay’s blue crab population, and has been conducted annually by the Virginia Institute of Marine Science and Maryland’s Department of Natural Resources since 1990. The survey employs crab dredges to sample blue crabs at 1,500 sites throughout the Chesapeake Bay from December through March. Sampling during winter when blue crabs are usually buried in the mud and stationary, allows scientists to develop, with good precision, estimates of the number of crabs present in the Bay.

“The increase in blue crab numbers is a positive sign toward the commitment of the 2014 Chesapeake Bay Watershed Agreement to rebuild long term sustainability of blue crab populations,” said Peyton Robertson, chair of the Chesapeake Bay Program's Sustainable Fisheries Goal Implementation Team.

The Chesapeake Bay Stock Assessment Committee (CBSAC), a subcommittee of the Sustainable Fisheries Goal Implementation Team, is reviewing the new survey results and will release their full analysis of the results in the 2016 Blue Crab Advisory Report this summer. The annual advisory report is used by managers as they review and update fishery regulations.

“While the spawning stock of adult females has increased to a healthy level, it is still below the established target of 215 million. The highly variable nature of blue crab reproductive success means that caution must be maintained when considering management adjustments so harvests do not adversely affect future spawning potential,” said Glenn Davis, chair of the CBSAC.

VMRC will begin discussions with its crab management advisory committee on options to adjust harvest restrictions while maintaining higher abundance. The Commission board will be briefed on the survey results at its April 25 meeting.

Here is the history of the Bay-Wide Winter Dredge Survey results (1990 through 2016). All surveys begin in December and ended in March of the next year.

Survey Year (Year Survey Ended)	**Total Number of Crabs in Millions (All Ages and Both Sexes)**	**Number of Juvenile Crabs in Millions (both sexes)**	**Number of spawning age Female crabs in Millions**	**Bay-wide Commercial Harvest (Millions of Pounds)**	**Percentage of Female Crabs Harvested (female exploitation fraction)**
1990	791	463	117	96	44
1991	828	356	227	90	34
1992	367	105	167	53	60
1993	852	503	177	107	35
1994	487	295	102	77	28
1995	487	300	80	72	32
1996	661	476	108	69	20
1997	680	512	93	77	22
1998	353	166	106	56	40
1999	308	223	53	62	37
2000	281	135	93	49	43
2001	254	156	61	47	42
2002	315	194	55	50	34

2003	334	172	84	47	33
2004	270	143	82	48	42
2005	400	243	110	54	24
2006	313	197	85	49	29
2007	251	112	89	43	35
2008	293	166	91	49	24
2009	396	171	162	54	23
2010	663	340	246	85	18
2011	452	204	191	67	24
2012	765	581	95	56	10
2013	300	111	147	37	23
2014	297	199	69	35	17
2015	411	269	101	50*	15*
2016	553	271	194	TBD	TBD

* 2015 Bay-wide commercial harvest and percentage of the female crab removal rate are preliminary.

##########