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## Scientific Survey Shows Blue Crab Stock Drops

~ The number of spawning age females fell significantly, although juvenile levels improved. Additional management protections for females are planned~

NEWPORT NEWS, VA. -- The Virginia Marine Resources Commission today released the 2014 blue crab winter dredge survey, which showed the abundance of spawning-age female crabs dropped to just below the minimum safe level of 70 million and are in a depleted state.

While juvenile crab numbers increased and last year's harvest remained at a safe level (under the target fishing removal rate) for the sixth consecutive year, the total abundance of crabs remains comparatively low, at approximately 297 million.

"This is disappointing news," said Virginia Marine Resources Commissioner John M.R. Bull. "Crabs live in a constantly changing ecosystem, and their abundance levels are influenced by coastal currents, weather patterns, predators, water temperatures and a host of other factors."

The long cold winter appears to be one cause of the low abundance level. Low water temperatures resulted in one of the worst cold-kill events since the start of the survey in 1990, causing the death of an estimated 28 percent of all adult crabs in Maryland.

"We are now faced with two challenges: Conserving adult females through targeted harvest reductions so they survive to spawn this summer, and conserving this new generation of crabs in order to increase their chances of reproducing in even larger numbers next year," Bull said.

The decline in spawning age females will be the biggest factor in determining new management actions by VMRC, Maryland, and the Potomac River Fisheries Commission to increase reproductive potential in 2014 and 2015.

Although the number of juvenile crabs in the Bay was up 78 percent from 2013's record low, this segment of the population remains at pre-2008 levels, when a coordinated Bay-wide stock rebuilding program kicked off.

This year's low abundance would seem to preclude the possibility of reopening the winter crab dredge fishery, which has been closed annually since 2008.

The three jurisdictions remain committed to collaborating on a two-pronged management approach this year. The first action will be to protect the adult females that will be spawning this summer. The second will be designed to protect the current population of juvenile females through next spring, to build up the female population that will spawn in 2015. The three jurisdictions will consult further with scientists and stakeholders to identify the specific actions to be implemented.

Management efforts will be aimed at producing a more productive and vibrant recreational and commercial blue crab fishery in 2015.

"Even though our 2008 conservation measures were designed to allow for naturally occurring fluctuations in crabs, these results are not what we had hoped to see," said DNR Fisheries Director Tom O'Connell. "What is most important here is that the structure we put into place to cooperatively manage this fishery is strong, and that we will continue to work with our partners and stakeholders to adjust our management strategies as needed."

The annual Winter Dredge Survey is the primary assessment of the Bay's blue crab population, and has been done annually by the Virginia Institute of Marine Science and Maryland DNR 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 Chesapeake Bay Stock Assessment Committee is reviewing the survey results. VMRC will begin discussions with its crab management advisory committee today.

Here is the history of the Bay-Wide Winter Dredge Survey results (1990 through 2014). 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	TBD	TBD

 $<sup>^{</sup>st}$  2013 Bay-wide commercial harvest and percentage of the female crab removal rate are preliminary.

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