

SHELLFISH MANAGEMENT DIVISION EVALUATION, 08/23/2022

PUBLIC HEARING: Proposal to amend Chapter 4 VAC 20-720-10 et seq., "Pertaining to Restrictions on Oyster Harvest" to establish the 2022-2023 areas of public harvest, public oyster harvest seasons, and oyster resource conservation measures.

ISSUES: Prior to October 1st of each year, The Commission meets to establish, by regulation, Chapter 4 VAC 20-720-10 et seq., "Pertaining to Restrictions on Oyster Harvest", the areas of public oyster harvest, public oyster harvest seasons and oyster resource conservation measures if they wish these to be different from those which are established by 28.2-506 of The Code of Virginia. The Commission has no requirement to change the oyster season established by code, but may do so, per section 28.2-507 of the Code of Virginia, "in order to protect or promote the growth of oysters". Any changes to the season established in code should take into account this requirement. The Commission may establish methods and seasons of harvest in those areas described in 28.2-524 of the Code of Virginia that "promote the oyster or clam fishery". This is what allows The Commission to establish a season and area for dredging oysters in the Pocomoke and Tangier Sounds, as dredging is a benefit to the oyster fishery and not necessarily the oyster resource. There are two other areas described in Code Section 28.2-524 in the main stem of the Bay, one from Smith Point to Windmill Point and the second in the mouth of the Piankatank River, where an oyster season can be established that promotes and protects the fishery rather than the oyster resource as is required by Code Section 28.2-507.

BACKGROUND: The reported oyster harvest from Virginia waters, on both public and private oyster ground, over the last 20 years has generally tracked upward and continues to remain relatively stable with a harvest of market oysters in the 500,000 to 600,000 bushels range in recent years (Attachment 1). The 2021-2022 season showed an increase in harvest numbers when compared to the 2020-2021 season. This increase is likely related to favorable market conditions returning after adverse impacts associated with the COVID-19 pandemic. Information gathered during the annual stock assessment surveys of the public oyster grounds is used in conjunction with the advice and recommendations of the Shellfish Management Advisory

Committee (SMAC) and the Virginia Institute of Marine Science (VIMS) to develop the proposed public oyster harvest season and recommended management measures each year.

The SMAC has met several times to provide recommendations regarding the 2022-2023 public oyster harvest season. Staff has worked with SMAC to develop, when taken in its entirety, a proposed public oyster harvest season that “protects and promotes the growth of oysters” for the 2022-2023 time period. The proposed changes to Chapter 4 VAC 20-720-10 et seq. are intended to conserve the oyster resource while minimizing negative impacts to the oyster fishery.

The productivity of the public oyster grounds open to harvest are maintained by a combination of factors: 1) Consistent and regular replenishment efforts in the form of shell, seed, or other substrate plantings directly on the areas that are opened to harvest; 2) A relatively consistent spat set; 3) Restricting the harvest gear used in certain areas; and 4) Maintaining sanctuary areas (non-harvest) to ensure adequate brood stock exists to promote additional spat sets on nearby open harvest areas. The public ground can remain productive as long as these factors are considered.

Based on long term monitoring data collected by VIMS and MRC, areas that do not consistently receive good spat sets or replenishment and are opened to scraping or dredging will begin to see a decline in productivity. Depending on the existing oyster density and the amount of harvest activity, this decline can be rapid.

The amount of effort in this fishery has been stabilized through a limited entry system and other management measures. Although effort is not increasing, there is evidence that over time the productivity of public ground open to harvest, as indicated by the quantity of live oysters and available substrate for future recruitment, by the two most popular gear types, the dredge and hand scrape, becomes significantly degraded during the harvesting process (Attachment 3). As an area is worked with a dredge or scrape the shell base is often degraded or moved into deeper water and the area’s ability to continue to produce oyster’s declines. When the shell base drops below a certain level, ideally 10 liters of shell per meter square or at a minimum 5 liters, the ability of the area to naturally recruit oyster larvae declines (Attachment 3 red and green line). The majority of the annual replenishment effort (~\$2.5 million a year in General Funds), undertaken by the Commission, is focused on maintaining the productivity of these areas. The effort needed to maintain these areas is more extensive if they are regularly open to harvest by dredge or scrape.

There are some benefits to the oyster fishery associated with the efficiency of the scrape and dredge. There may also be some benefits during the warm weather months as the condition of the resource and efficacy of the dredge allow vessel limits to be harvested in a very short time period (reports of as little as an hour in the 2021-2022 season). This harvest takes place earlier in the day during cooler temperatures and may reduce the possibility of shellfish reaching temperatures that promote the growth of *Vibrio* bacteria. Harvest amounts can increase relatively quickly when there is a modest increase in the densities of oyster populations in areas open to harvest. Conversely, a modest decrease in oyster density can create an equally sharp drop in harvest numbers. This was the case in portions of the Rappahannock in the 2018-2019 season. When an area reaches an oyster density high enough to support fishing effort with less efficient gear types, transitioning the area to the less efficient gear type may allow for a more stable long-term harvest that is less dependent on annual fluctuations in population density. A transition to less efficient gear types would allow the resource to recover with less replenishment effort. If implemented gradually, this could allow both the oyster resource and harvest amounts to increase together as replenishment effort is shifted to or focused in other areas.

As noted earlier, areas that have high densities of market oysters can remain productive for a longer period, with minimal replenishment effort when harvested with less efficient gear types. Oyster densities above 5 market oysters per square meter can support patent tonging, and those areas closer to 10 markets or above can support a hand tong fishery. This has been seen in areas such as Deep Rock and the Lower Rappahannock, which are open to patent tongs, and areas that are open to hand tongs only, such as the upper James and York Rivers.

Recently collected harvest and survey data confirms that under current conditions and gear type usage, areas that are not opened to harvest by scrapes or dredges can produce a similar or higher number of oysters when transitioned to less efficient gear types with minimum or no replenishment effort (Attachment 3).

Based on the most recent standing stock assessment data (fall 2021) the majority of all oyster harvesting areas regularly open to harvest have reached a market oyster density that could support fishing effort with either patent or hand tongs (Attachment 2). However, a sudden transition in all areas would likely create some level of economic hardship for much of the oyster fishery that has become accustomed to using hand scrapes or dredges in most harvesting

areas. Staff recommends a gradual transition to less efficient harvesting methods, with an emphasis on transitioning areas that could support a hand tong fishery in shallow water being a priority. Deeper areas, such as the majority of the Rappahannock River, should be considered for a gradual transition back to a patent tong and hand tong only fishery provided the resource continues to improve and the public fishery can be supported at or above current levels of harvest with the less efficient gear type.

Staff proposed to SMAC that an additional area in the Lower Rappahannock be opened to patent tongs only for the 2022-2023 season. SMAC was not supportive of this.

Water depth is also a limiting factor on the type of gear that can be used in some areas. It is difficult to use hand tongs in water that is deeper than 12-15 feet. Although in the past some have used hand tongs with shafts greater than 20 feet in length, most do not use tongs longer than 18 feet. Patent tongs can be problematic to deploy in some shallow locations, but can be used in water of any depth. The hand scrape or dredge can be used in almost any depth of water, shallow or deep, where oysters occur.

There are a limited number of options to minimize any negative impact of the current level of harvest effort while maintaining the fishery at its current size. These options include: adjusting the start and duration of the harvest season; decreasing vessel or individual harvest bushel limits; changing to less efficient gear types such as patent and hand tongs; and subdividing the current harvest areas into additional rotation areas.

After consultation with SMAC the following are staff recommended changes for the 2022-2023 public oyster harvest season that also have the support of the Committee:

- A shortened harvest day ending at 11am for all gear types for the month of October.
- A harvest day that ends at 12 noon for all gear types except hand and hand tong for all months other than October.
- Extending the patent tong harvest season in some areas to be concurrent with other gear types and other harvest areas.
- The opening of additional areas to harvest by hand tong.

SMAC further advised that they were supportive of an additional month of harvest in areas open to hand scraping in the Lower James River. Staff has some concerns about extending seasons, but agrees with SMAC that an extension in the James River would spread fishing effort over additional areas for the proposed harvest season.

The alternative is to shorten the harvest season in multiple areas and this is not likely to be supported by the Advisory Committee or many oyster harvesters and buyers.

Staff and SMAC agree that the changes made in recent years should continue this season as these measures have had the primary intended effect of preventing high levels of fishing effort from being focused on single harvest areas. These measures helped to mitigate both a safety concern about “overcrowding” expressed by many watermen, as well as negative impacts to the oyster resource. Staff and SMAC support the continuation of these changes for the 2022-2023 public harvest season as follows;

- A vessel limit of 28 bushels for vessels harvesting by hand or hand tong.
- Increase in the individual harvest limit for harvest by hand or hand tong from 12 to 14 bushels.
- Changing the gear type permitted for harvest in one area in the lower Rappahannock (Rappahannock River Rotation Area 1) from hand scrape to patent tong for the entirety of the season and removal from the current rotation cycle.
- Changing the gear type permitted in the York River from hand scrape to hand tong in the upper portion of the river.
- A shortened harvest day ending at 12 noon in hand scrape areas for the entire season, previously 2pm.
- A delay in the start of the hand scrape and patent tong season until the middle of October from October 1st.

The intent of these changes, along with the coordinated opening of harvest areas (See attachment 4, Proposed Oyster Harvest Season Chart), is to allow for the continued long-term expansion of the oyster resource (See Attachment 2, Average Bay wide oyster density graph) and oyster fishery while providing short-term resource and fishery stability.

STAFF

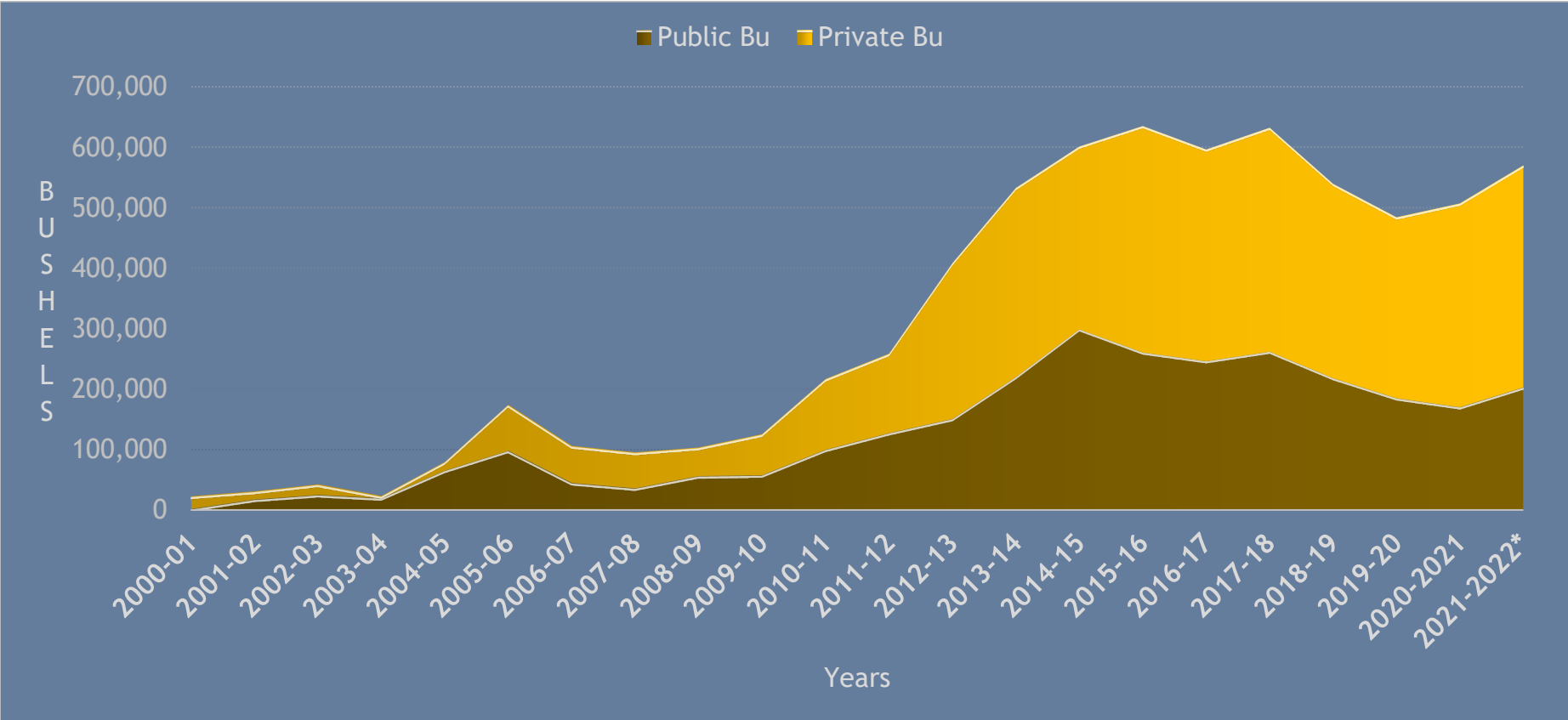
RECOMMENDATION:

Staff recommends adopting Amendments to Chapter 4 VAC 20-720-10 et seq., “Pertaining to Restrictions on Oyster Harvest to establish the 2022-2023 areas of public harvest, public oyster harvest seasons and oyster resource conservation measures.

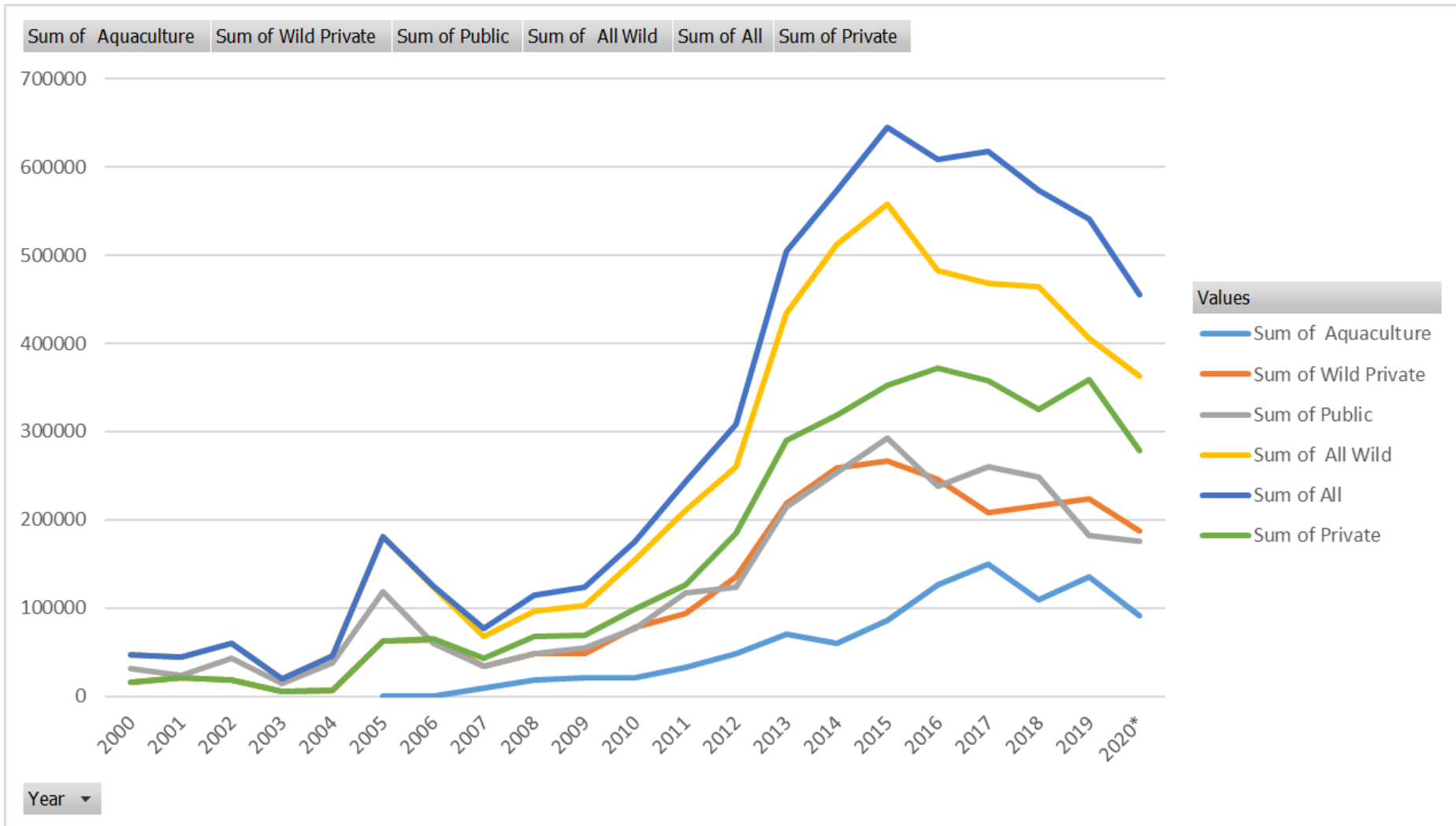
Attachments:

1. Harvest Graphs
2. Average Bay wide oyster density graph
3. Gear Comparison Graphs
4. Proposed Oyster Harvest Season Chart
5. Public Notice
6. Draft Regulations

Attachment 1, Harvest Graph



Attachment 1, Harvest Graph (continued)



Attachment 2, Bay Wide Oyster Density



ALL AREAS ALL SIZES WITH SHELL



Attachment 3, Gear Comparison

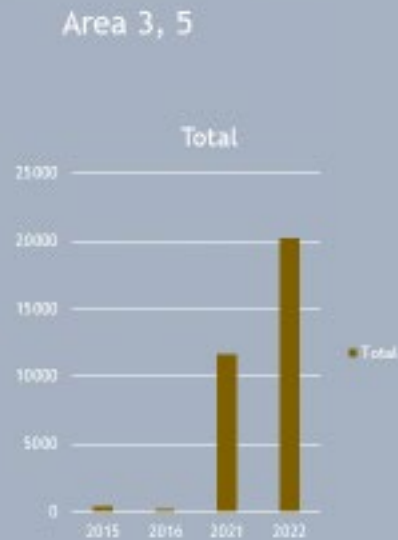
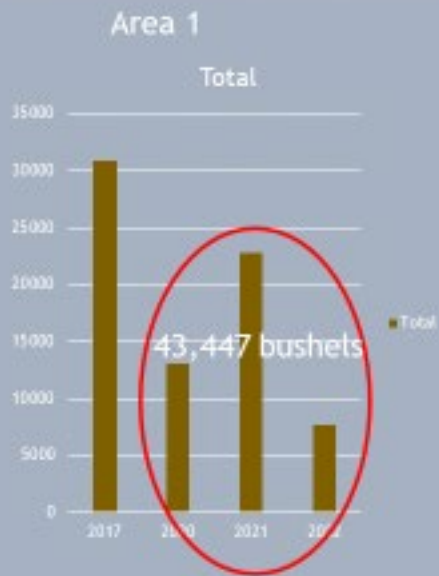


RAPP POST HARVEST GEAR AND AREA COMPARISON



Attachment 3, Gear Comparison (continued)

RAPP POST HARVEST GEAR AND AREA COMPARISON



Attachment 4, Proposed Oyster Harvest Season

Draft 2022 - 2023 Public Oyster Harvest Season (SMAC Recommendation)								
Area	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
James								
Clean Cull	HT*	HT	HT	HT	HT	HT	HT	
Area 2,3	**HS*	HS*	HS*	HS*	*HS**			
Area 1	**HS*	HS*	HS*	HS*	*HS**			
Seed Oysters	HT*	HT	HT	HT	HT	HT	HT	HT
York HTA	HT*	HT	HT	HT	HT	HT		
York 2				HS*	HS*			
York 1		HT	HT	HT	HT	HT		
Milford Haven		HT	HT	HT	HT	HT		
Deep Rk		PT*	PT*	PT*	PT*	*PT**		
Rappahannock								
Area 1	**PT	PT*	PT*	PT*	PT*			
Area 4	**HS*	HS*			HS*			
Area 2			HS*	HS*				
Area 7			HS*					
Area 8				HS*				
Area 9	HT*	HT	HT	HT	HT	HT		
Corrotoman HTA	HT*	HT	HT	HT	HT	HT		
Great Wicomico			HS*	HS*				
Blackberry Hangs								
Little Wicomico	HT*	HT	HT					
Potomac Tribs	HT*	HT	HT					
Indian Creek						HT		
Tangier-Pocomoke								
Poco Area 2			DR*	DR*	DR*			
Tangier Area 2			DR*	DR*	DR*			
Poco. Sound 10		HT/HS*			HS*			
Poco. Sound 9		HT	HT	HT	HS*			
Seaside ES		By Hand	By Hand	By Hand	By Hand	By Hand		
		HT	HT	HT	HT	HT		
HT	HS		DR		PT		By Hand	
Hand Tong	Hand Scrape		Dredge		Patent Tong			
* harvest ends at noon/ 11am in October					Online Mandatory Reporting Codes HT = OT HS = OSCR DR = OYDRD PT = PTOYS BY HAND = OYHND			
** half of month								
Bushel Limits								
8 bushel limit HS/DR/PT - 16 BU. Vessel limit								
14 bushel limit HT/By Hand - 28 BU. Vessel limit								
https://webapps.mrc.virginia.gov/harvest/								