



# Research on Economic Consequences of Natural Resource Extractive Industries within the Rural Coastal Virginia Community Enhancement Authority



**Virginia Coastal Zone**  
MANAGEMENT PROGRAM



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## Solar Land Use and Revenue Legislation Passed by the 2020 General Assembly

*The 2020 General Assembly session had major implications for Virginia localities permitting solar energy. As the Virginia Clean Economy Act set a target for over 16,000 megawatts of new solar generation in the Commonwealth, counties sought assurance that a greater share of the financial benefits would accrue to the localities.*

*Three pieces of legislation provided that assurance, and are explained in brief below:*

*(1) Stepdown of Local Tax Exemption (Machinery and Tools Tax): Before the 2020 session, 80% of the value of the solar project was exempt from the local personal property taxes for the lifetime of the project. HB 1434 and SB 763 reduced this exemption to 60% after 10 years in service. This legislation provides greater personal property tax revenue to counties in the latter years of a solar project's operation.*

*(2) Revenue Share: HB 1131 and SB 762 create a local option for localities to adopt a "revenue share" ordinance that allows localities to assess \$1,400 per megawatt (MW) to provide a meaningful and reliable revenue stream from the solar project to the localities. The Revenue Share has the added benefit of not impacting state education funding formula or being subject to a depreciation schedule otherwise applicable to a machinery and tools tax regime. If the locality adopts a revenue share ordinance, the legislation requires a 100% M&T Tax Exemption.*

*(3) Siting Agreements: HB 1675 enables the county and solar developer to streamline the solar permitting process and accept voluntary payments. This represents another tool for counties to draw additional revenue from solar developers to support county services and infrastructure investments, such as broadband internet.*

*Together, these three pieces of legislation represent a new set of tools in the hands of Virginia counties as they strive to maximize tax revenue from new solar projects. Thanks to the 2020 General Assembly session, the solar industry will play a much greater role in delivering fiscal benefits to Virginia localities.*

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## EXECUTIVE SUMMARY

The economy within the Middle Peninsula Planning District Commission (MPPDC) has traditionally been based on natural resources such as farming, forestry, and fishing; however, in recent years with the advancement of technology, changes in regulations, and new political interests, the region has seen an increase in more and intensive extractive natural resource industries. Some of these industries are depleting the landscape of economic value and returning little revenue to the local governments and the communities in which they operate.

Through this report, inequalities among different natural resource extractive industries in Coastal Virginia and beyond are illuminated. First, MPPDC staff provided a review of types of severance tax programs across the United States. The most common severance tax programs were aimed at the oil and gas industry. While Montana, Oklahoma, Colorado, Idaho, North Dakota, Alaska, and North Carolina had substantial severance tax programs, Pennsylvania implemented an impact fee that would encourage investment into environmental restoration.

Following this overview of programs across the United States, MPPDC staff researched the Virginia Administrative Code and the Code of Virginia regarding taxes and fees associated with natural resource extractive industries. Industries included nutrient trading banks, wetlands banks (tidal and non-tidal wetlands), carbon trading banks, groundwater withdrawal and trading, forestry, mineral extraction (sand and gravel), dredging (sand and silt), fracking (gas), commercial fisheries, agriculture, and renewable energy (solar, wind). As MPPDC staff researched each industry, they were grouped in one of three categories represented by the following symbology:

	Local Higher Paying Jobs and Revenue Returned
	Local Jobs Created- Moderate Wages and Some Revenue Returned
	Limited to no Local Jobs Created and Reduced to no Revenue Returned

(Wage Estimates Virginia Employment Commission and BLS)

Based on Virginia Employment Commission research and Bureau of Labor Statistics, it was determined that forestry, mineral extraction, and mining create higher paying jobs and revenue returned. Dredging, commercial fisheries, agriculture, oil and gas extraction created jobs with more moderate wages. Nutrient banks, wetland banks, groundwater withdrawal and trading, renewable energy (solar), and carbon trading create virtually no jobs with no annualized wages (full-time workers). This simple classification of extractive industries offers to create a visualization of those industries that create local jobs and return revenue to local governments, and those industries less likely to do so.

The intention of this report is not to discourage extractive resource industries in Coastal Zone localities, rather to illuminate the economic challenges posed by these rapidly growing industries. It is important to understand both the potential direct and indirect impacts associated with these industries so that

local governments and communities within the Coastal Zone can effectively assess the potential trade-offs of allowing such industries to grow within their jurisdiction. Jobs and revenue are also of great importance to local governments. Within the extractive industry cluster today, General Assembly action has the ability to shrink the divide between jobs and revenue at the local level. As part of the development of this report, MPPDC co-authored HB 1675 *Solar energy facilities; definitions, siting agreement with host locality*. This bill passed the 2020 General Assembly session and was signed into law on 4/7/20 and becomes effective on 7/1/20.

## STUDY STATEMENT:












*Across rural coastal areas of Virginia, there is a growing list of industries “extracting” resources from the coastal zone – either to sell the resource(s) as a commodity or to comply with development regulations of the Commonwealth. Many of these extractive industries remove or strip the landscape of economic value, return little to local governments in terms of revenue or jobs, and permanently restrict or cause the devaluation of land going forward.*

*Rural economies are driven by the interconnectivity of natural resources, labor, capital investment, small business growth, transportation, internet availability, commercial and industrial recruitment, exports, local government capacity, and government spending. According to commonly used economic definitions, rural economies are comprised of basic and non-basic industries:*

***Basic** sector is made up of local businesses (firms) that are entirely dependent upon external factors. Local resource-oriented firms like logging or mining and agriculture, manufacturing, and tourism are usually considered to be basic sector firms because their fortunes depend largely upon non-local factors and they usually export their goods.*

***Non-basic** firms are those that depend largely upon local business conditions. A local grocery store sells its goods to local households, businesses, and individuals. Almost all local services are identified as non-basic because they depend almost entirely on local factors. Services, public schools, local government, and retail are some other examples.*

*The following table illustrates the scale of economic importance to local governments, the economic placement of the industry (Basic or Non-basic), employment importance to the economy, and wage rates.*

INDUSTRY	TAXABLE REVENUE TO LOCAL GOVERNMENT	Regional Economy Sector Basic / Non Basic	Job Creation Permanent	Average Weekly Wages Virginia Emp Commission
Forestry		Basic Sector	Known Permanent JOBS	\$811 (VEC)
Mineral Extraction & Mining		Basic Sector	Known Permanent JOBS	\$999 (VEC)
Dredging		Non Basic	Isolated Jobs, but emerging due to new state investment	\$870 (BLS-annualized median)
Commercial Fisheries		Basic Sector	Known Permanent JOBS	\$811 (VEC)
Agriculture		Basic Sector	Known Permanent JOBS	\$811 (VEC)
Oil & Gas Extraction		Basic Sector	Limited to no reported Jobs	NA Middle Peninsula
Nutrient Banks		Basic Sector	Limited to no reported Jobs	Unknown/ not trackable
Wetland Banks		Basic Sector	Limited to no reported Jobs	Unknown/ not trackable
Groundwater Withdrawal & Trading		Basic Sector	Limited to no reported Jobs	Unknown/ not trackable
Renewable Energy: Solar		Basic Sector	Limited to no reported Jobs	Unknown/ not trackable Projected
Carbon Trading		Basic Sector	NA	Unknown/ not trackable Projected

## INTRODUCTION

According to the Tax Policy Center at the Brookings Institution, thirty-four states across the U.S. levy severance taxes. In 2016, state and local governments collected \$8 billion from severance taxes with nearly all this revenue coming from state taxes. Only 12 states allowed local severance taxes in 2016, collecting a combined \$225 million that year. Severance taxes accounted for less than 1 percent of national, state and local revenue in 2016, but provided a substantial amount of local revenue in a few resource-rich states, such as Montana, North Dakota, and Wyoming.

Within the coastal region of Virginia there is a growing list of industries “extracting” resources from the region – either to sell as a commodity or to comply with development regulations. Below is a list of extractive activities within the region. Some of these extractive uses are traditional and employ customarily accepted practices; while some are new and more exploitive, the newer industries are intended to maximize economic gain and may cause direct and indirect fiscal concern at the local level.

### **Traditional Extractive Industries in Rural Coastal Virginia**

- Forestry
- Mining (Sand and Gravel) and Mineral Extraction
- Dredging (sand and silt)
- Commercial Fisheries
- Agriculture

### **Newer, Non-Traditional Extractive Industries in Rural Coastal Virginia**

- Nutrient Credit Banks (i.e. Phosphorus Banks, In-Situ Nutrient Remediation Program<sup>TM</sup> - Oyster Nutrient Trading)
- Wetlands Mitigation Banks (i.e. Tidal and Non-Tidal Wetlands)
- Carbon Trading Banks
- Groundwater Withdrawal and Trading
- Oil and Gas Extraction
- Renewable Energy (Solar and Wind)

Although natural resource extraction industries across much of rural coastal Virginia have existed for decades, technology improvements, marketplace demand, and legislative relief have facilitated an increase in natural resource extraction. Through the extraction process of natural resources some industries generate relevant taxes and fees necessary to fund essential governmental services, whereas many of the new or emerging industries do not provide an equitable return of revenue or create local sustainable jobs.

This project is intended to bring more awareness and improved local understanding to the direct, indirect, and induced impacts associated with extractive industries. This paper is exploratory and poses questions for further research and consideration but does not focus on solutions.

## PRODUCT #1: REVIEW OF SEVERANCE TAX PROGRAMS ACROSS THE US

Across the nation, states levy severance taxes on the extraction of nonrenewable natural resources, such as oil, coal and gas. Many states with severance taxes incorporate both the volume of oil and gas produced and the oil and gas market value or apply separate taxes to the volume and value.

For example, Montana adjusts its tax rate on production value based on the volume of oil or gas a well produces in addition to the age and classification of the well. Other states such as Oklahoma adjust their tax rates on gross production value based on the current value of gas. This approach aims to increase a state's severance tax income when the oil and gas industries are thriving and reduce state pressure when the industry lags. Arkansas places a value tax on gas and oil through its severance tax in addition to a relatively modest fee per volume of oil and gas produced as an oil and gas assessment. Colorado and Idaho tax the gross income from produced oil and gas rather than calculate the monthly market value. Idaho has a flat rate, while Colorado uses a tiered system.

Consequently, as the tax rates vary, revenue generation and revenue distribution will vary. For instance, in 2016, Alaska and North Dakota's severance taxes made up 37.5 percent and 41.8 percent of their total tax collections, respectively. Alaska deposits all funds generated from its Oil and Gas Production Tax into the state's general revenue fund; while North Dakota will distribute a portion of the funds on a monthly basis to county general funds, cities, school districts and townships in oil-producing counties (pursuant to [NDCC 57-51-15](#)). Additionally, Colorado deposits its Severance Tax on oil and gas into three major funds: the first \$1.5 million into its Innovative Energy Fund, then the remaining funds are split, half to the state severance tax trust fund and the other half to the local government severance tax fund. Alternatively, North Carolina uses the revenue from its Oil and Gas Severance Tax to fund the natural gas and oil reclamation regulatory program, to meet its environmental and resource management needs, and to reclaim land affected by exploration for, drilling for, and production of natural gas and oil.

While most states utilize severance taxes for oil and gas extraction, Pennsylvania imposes an impact fee on oil and gas production. In 2012, the Pennsylvania General Assembly enacted Act 13, which included enhancements to Pennsylvania's environmental laws overseeing shale gas development. The Act also provided local uniformity across Pennsylvania and authorized county governments to impose an Impact Fee paid annually by unconventional natural gas producers for each well, or start to drill, each calendar year. In the first year of a well's life, it can range from about \$40,000 to \$60,000, depending on the price of gas. The Impact Fee has generated nearly \$1.7 billion in new revenue, above and beyond the \$2.5 billion in other tax revenues generated by oil and gas-related activities over the past decade (Table 1). The Pennsylvania Public Utility Commission administers the collection and imbursement of the fee to local governments to cover the local impacts of drilling.



**Table 1: Revenue generated from the Pennsylvania Impact fee during a given year.**

YEAR DISTRIBUTED	REVENUE GENERATED FROM IMPACT FEE
2012	\$204.2 Million
2013	\$202.5 Million
2014	\$225.8 Million
2015	\$223.5 Million
2016	\$187.7 Million
2017	\$173.3 Million
2018	\$209.6 Million
2019	\$251.8 Million
<b>TOTAL</b>	<b>\$1,678 Billion</b>

## PRODUCT #2: REVIEW OF EXISTING REVENUE GENERATING TOOLS AND LOCAL GOVERNMENT EXPENSES NEEDED TO MANAGEMENT PROJECT

### TRADITIONAL EXTRACTION:

#### FORESTRY INDUSTRY

The Forest Products Tax is paid primarily by wood using industries (i.e. sawmills and paper mills). According to Virginia Administrative Code [§ 58.1-1600 Forest Products Tax Act](#), *“The first manufacturer using, consuming, or processing forest products is liable for the Forest Products Tax unless the tax has been previously paid by the severer of the forest products. The first manufacturer storing forest products for sale or shipment out of state also is liable for the Forest Products Tax unless the tax has been previously paid by the severer”*. The tax rates imposed depend on the type of wood and how it is processed (Appendix 1). Table 2 shows the amount of Forest Product Tax Collected by the state from Middle Peninsula localities. According to [§58.1-1611](#), *“fifty percent of tax collected within any county or city shall be allocated for expenditure within such county or city. Such sums shall be used within such county or city for the same purposes for which the tax was levied. Any sums not so expended within a two-year period shall revert to the ‘Reforestation of Timberlands State Fund’ for expenditure on a statewide basis at the end of each fiscal year”*.

**Table 2: Middle Peninsula Planning District Commission Forest Products Tax Collected in the District’s Counties (Virginia Department of Forestry, 2019)**

COUNTY	YEAR	REFORESTATION TOTAL TAX	PROTECTION TOTAL TAX	TOTAL TAX
ESSEX	2016	\$28,302.70	\$8,879.86	\$37,182.56
GLOUCESTER	2016	\$5,084.09	\$1,954.19	\$7,038.28
KING AND QUEEN	2016	\$49,906.85	\$13,010.23	\$62,917.08
KING WILLIAM	2016	\$17,276.83	\$4,321.23	\$21,598.06
MATHEWS	2016	\$3,982.27	\$1,044.83	\$5,027.10
MIDDLESEX	2016	\$5,114.44	\$2,896.64	\$8,011.08
<b>Total</b>	<b>2016</b>	<b>\$109,667.18</b>	<b>\$32,106.98</b>	<b>\$141,774.16</b>
ESSEX	2017	\$24,660.02	\$7,409.96	\$32,069.98
GLOUCESTER	2017	\$7,280.33	\$2,875.08	\$10,155.41
KING AND QUEEN	2017	\$44,563.91	\$13,618.44	\$58,182.35
KING WILLIAM	2017	\$14,669.96	\$4,717.80	\$19,387.76
MATHEWS	2017	\$6,303.61	\$2,171.77	\$8,475.38
MIDDLESEX	2017	\$4,476.32	\$1,191.92	\$5,668.24
<b>Total</b>	<b>2017</b>	<b>\$101,954.15</b>	<b>\$31,984.97</b>	<b>\$133,939.12</b>

Most of the tax on pine timber goes toward the [Reforestation of Timberlands \(RT\) State Fund](#), a program that assists private landowners with a portion of the cost of establishing new pines on their property. The State General Fund matches the forest products tax. The RT program began in 1970 and has been instrumental in sustaining a strong pine resource for the Commonwealth. Table 3 shows the amount of planting that has been accomplished in Middle Peninsula localities with RT State funding.

**Table 3: Middle Peninsula Planning District Commission 2019 IFRIS Planting Accomplishments through the Reforestation of Timberlands Program (Virginia Department of Forestry, 2019).**

County	Total # of Tracts	Total Acres
Essex	27	1,469
Gloucester	12	501
King and Queen	26	955
King William	16	642
Middlesex	5	202
Mathews	0	0
Grand Total	86	3,769

Further, if the General Assembly fails to appropriate revenues collected from the forest product tax in a given year, [§58.1-1610](#) authorizes all taxes collected by the Virginia Department of Taxation (VA Tax) to be paid into the state treasury. Next, the comptroller shall credit such taxes as special revenues to the “Protection and Development of Forest Resources of the State Fund” of the Department of Forestry for expenditure for the protection and development of forest resources in accordance with law. In particular, these funds shall be used for the sole purpose of raising, planting, propagating seedling trees, both hardwood and softwood, forest fire protection, forestry education of the public in the use of forest harvesting methods, and rendering forestry service to the timber landowners of the Commonwealth.

Other revenue that returns to localities from the forestry industry includes timber sales on state forestland. According to Code of Virginia [§ 10.1-1107 \(E.\)](#) *“One-fourth of the gross proceeds derived from timber sales on any state forest lands so acquired by the State Forester shall be paid annually by the State Forester to the counties in which such lands are respectively located, and shall become a part of the general funds of such counties, except for Appomattox, Buckingham and Cumberland Counties.”* Table 4 shows the payments in lieu of taxes for timber sales revenue (12.5% on Appomattox, Buckingham and Cumberland Counties and 25% on the remaining State Forests listed) during the Fiscal Year 2018-19. These amounts change according to the amount of timber sold and current market prices.

**Table 4: Payments made to localities from the sale of timber on State Forests during the 2018-19 fiscal year. (VOF, 2019).**

FOREST	COUNTY	AMOUNT
Appomattox-Buckingham	APPOMATTOX	\$28,236.01
Appomattox-Buckingham	BUCKINGHAM	\$28,236.01
Big Woods	SUSSEX	\$50,625.84
Chesterfield	CHESTERFIELD	\$14,485.77
Conway Robinson	PRINCE WILLIAM	\$3.75
Cumberland	CUMBERLAND	\$26,866.35
<b>Devil’s Backbone</b>	SHENANDOAH	\$12,119.23
Dragon Run	KING & QUEEN	\$18,820.25
Matthews	GRAYSON	\$1,000.00
Prince Edward-Gallion	PRINCE EDWARD	\$45,848.58
South Quay	SUFFOLK	\$2,500.00
Total		\$228,741.79

Finally, for owners of forests or timberlands, each County levies a property tax or land use tax. This revenue will go directly to the locality.

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**FORESTRY:**

Local Higher Paying Jobs



Revenue Returned

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**MINING (SAND AND GRAVEL) AND MINERAL EXTRACTION**

Mining activities include both deep and strip mining. According to 23 VAC 10-2010-960 Mining and Mineral Processing, functions of mining and mineral processing may be taxed; however, Virginia exempts tangible personal property used directly in mining and processing. Taxable functions include exploration; site preparation; mineral extraction; product inspection and testing; repair and maintenance; refining; distribution; reclamation; and administration. Additionally, [23 VAC 10-2010-960B](#) provides examples of property used in mining and mineral processing including examples of both taxable and exempt tangible personal property used in each of the above referenced activities. The lists in Table 5 are exemplary and are not intended to be all-inclusive.

**Table 5: Examples of both taxable and exempt tangible personal property used in mining and mineral processing (23 VAC 10-2010-960 B).**

<b>MINING</b>	
<p><b>EXPLORATION.</b></p> <p>Taxable:</p> <ul style="list-style-type: none"> <li>• Blueprints and blueprinting equipment</li> <li>• Explosives, blasting, and dislodging equipment and test drilling equipment and supplies</li> <li>• Engineering equipment</li> <li>• Surveying equipment</li> <li>• Pneumatic rock drills, jackhammers and air compressors</li> <li>• Seismic equipment</li> <li>• Maps</li> <li>• Sight rods</li> <li>• Spades</li> <li>• All other property used in exploration</li> </ul>	<p><b>SITE PREPARATION</b></p> <p>Taxable:</p> <ul style="list-style-type: none"> <li>• Bulldozers, scrapers, and similar equipment, except when used in removing overburden or grading well site</li> <li>• Logging and timbering equipment used for land clearance, except when used in removing overburden</li> </ul> <p>Exempt:</p> <ul style="list-style-type: none"> <li>• Explosives, blasting, and dislodging equipment and supplies</li> <li>• Shaft drilling equipment</li> <li>• Bulldozers and scrapers used in removing overburden or grading well location</li> <li>• Pneumatic rock drills, jackhammers, and air compressors</li> <li>• Fuel and supplies used to operate exempt equipment</li> </ul>
<p><b>EXTRACTION</b></p> <p>Taxable:</p> <ul style="list-style-type: none"> <li>• Light fixtures, bulbs, and other illumination equipment, except when integral part of extraction equipment</li> <li>• Containers for fuel and supplies</li> <li>• Concrete</li> </ul> <p>Exempt:</p> <ul style="list-style-type: none"> <li>• Digging and extracting equipment, machinery and tools including continuous miners, bulldozers, augers, backhoes, drag lines, cranes, power shovels, picks, and other cutting machines and hand tools</li> <li>• Mine support materials, including timber and tools used in mine roof installation</li> <li>• Oil and gas drills and accessories thereto</li> <li>• Drainage pumps, pipes, and valves used within the mine</li> </ul>	<p><b>PRODUCT INSPECTION AND TESTING</b></p> <p>Taxable:</p> <ul style="list-style-type: none"> <li>• Clerical supplies</li> <li>• Reports</li> <li>• Tangible personal property used in marketing or other administrative research</li> </ul> <p>Exempt:</p> <ul style="list-style-type: none"> <li>• Testing scoops or shovels</li> <li>• Coal ash fusion furnace, portable ovens, calorimeter, centrifuge, and similar laboratory equipment</li> <li>• Sample containers such as crucibles and sacks and labels therefor</li> <li>• Laboratory computers</li> <li>• Chemicals used in research and testing</li> <li>• Protective apparel furnished to laboratory personnel</li> </ul>

- Blasting and dislodging equipment and supplies, including explosives
- Roof bolting machines, roof bolts, compressors, timbers, wedges, cribbing, collars, roof supports, and accessories thereto
- Rock dust and other dust allaying materials, rock dusting equipment, and dust collectors
- Ventilation equipment including brattice cloth, lumber, blocks, fans, and air blowers
- Transportation devices and equipment used to haul extracted product from mine face or pit to a stockpile located outside the mine or pit, including shuttle cars, conveyor belts and accessories thereto, front end loaders, mine car handling equipment, and ballast
- Lubricants and similar supplies used in exempt equipment, including oils, starting fluids, antifreeze, and brake fluid
- Personnel cars, trolley locomotives, battery locomotives, mine cars, and supply cars
- Cable and trolley wire, steel rail, track bolts, spikes, and braces used within the mine or pit
- Trolley telephones and mine telephones used within the mine for purposes such as dispatching on mine railways within the mine or work coordination
- Protective apparel, including goggles, miner's lamps, self-rescuers and methanometers furnished to production personnel
- Chemicals used in oil or gas well "completion"
- Fuel and supplies used to operate exempt machinery and equipment including transformers and rectifiers, battery chargers, air compressors, and generators
- Repair or replacement parts and accessories which become a component part of exempt machinery and equipment
- First aid equipment and supplies

**REPAIR AND MAINTENANCE**

Taxable:

- Welding equipment and supplies
- Drills, cranes, and similar equipment used in repair
- Hand tools used in repair
- Soaps and cleaning compounds, rags, and similar cleaning accessories
- Solvents, brooms, mops, brushes, rags and similar cleaning accessories
- Paint, except used on exempt machinery and equipment
- Electrical testing equipment and test panels
- Repair or replacement parts, fuel, and supplies used in repair or maintenance equipment

Exempt:

- Repair or replacement parts for exempt machinery, tools, and equipment including wire rope and chain, welding rods, wire, and electrodes and paint used on exempt machinery and repair or replacement parts

**MINERAL PROCESSING**

**MINERAL PROCESSING**

Taxable:

- Structural construction materials, such as fabricated steel products, angle irons and beams, concrete, and roofing, and machinery and tools used in the construction of tipples, screening plants, preparation plants, and refining plants
- Administrative items used in the refining plant, such as forms, labels, reports, furniture, and office supplies
- Light bulbs and light fixtures
- Fuel or other supplies used for heating or cooling

Exempt:

- Coal cleaning equipment, vibrating screens, dewatering devices, washing tables, separation devices, dust treating devices, weighing devices and controls therefor, used in processing plant

**DISTRIBUTION**

Taxable:

- Repair or replacement parts, fuel, and supplies for vehicles used to transport or convey the product from storage at the mine or processing plant site
- Railroad sidings at preparation plants, rails, ties, spikes, track bolts, bars, and switches therefor
- Road construction and maintenance equipment and supplies, culvert pipe, stone, concrete, and asphalt used in road construction
- Bulldozers, graders, front-end loaders, drag lines, cranes, and parts and supplies therefor used in road construction and maintenance
- Bulldozers, front-end loaders and similar equipment used to load product from storage into vehicles for distribution
- Storage bins and facilities

<ul style="list-style-type: none"> <li>Rock crushers, grinders, and similar equipment and parts therefor</li> </ul>	<ul style="list-style-type: none"> <li>Chemicals used to preserve or protect product in storage</li> <li>Scales and similar weighing devices</li> <li>Oil or gas pipelines and accessories thereto</li> </ul> <p>Exempt: (See subdivision A 2 of this section.)</p> <ul style="list-style-type: none"> <li>Conveyor systems, vehicles and repair parts, fuel, and supplies therefor used to transport product for further processing at a mineral processing plant site or to remove product from production line to storage in storage pile, silo or rail car at plant site.</li> </ul>
<p><b>RECLAMATION</b></p> <p>Exempt:</p> <ul style="list-style-type: none"> <li>Bulldozers, graders, front-end loaders, hydroseeders, and other equipment used in land recontouring</li> <li>Fertilizers, seeds, seedlings and trees</li> <li>Fuel, supplies, repair and replacement parts for machinery and equipment used in reclamation</li> </ul>	<p><b>ADMINISTRATION</b></p> <p>Taxable:</p> <ul style="list-style-type: none"> <li>Office supplies and equipment</li> <li>Light bulbs and lighting fixtures used in offices, shops, bath-houses, storage, and similar facilities</li> <li>Fuel used for heating, cooling, or lighting purposes</li> <li>Billing supplies</li> <li>Tangible personal property used in supply houses, stores, bath-houses, and eating facilities</li> <li>Mine maps and surveys</li> <li>Personnel records and supplies, including safety records and miner identification tags</li> <li>Textbooks, educational, and reference materials</li> <li>Property used in the exhibition of mine products</li> <li>Property used to prevent and control fires</li> <li>Janitorial supplies</li> <li>Eating facilities, such as picnic tables, even when located in mine or processing plant</li> </ul>

Sand and gravel mining operations are expanding across many rural coastal communities as evidenced by increases in borrow pit applications and Bureau of Labor Statistics data showing increases in mining jobs. There currently is no local tax levy applied against the tonnage removed at the local level. Rural coastal local governments have traditionally supported sand and gravel operations as an economic development industry that creates jobs, but with the uptick in sand and gravel operations, some consideration should be given to the taxing framework so that localities can fund essential government services while this industry expands.

Oil and Gas extraction has developed revenue models to help fund government services, which can serve as a model for this industry sector.

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**MINING (SAND AND GRAVEL) AND MINERAL EXTRACTION:**

Local Higher Paying Jobs



Revenue Returned

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## DREDGING (SAND AND SILT)

A Joint Permit Application (JPA) is required to begin a dredging project. There are four agencies involved in the review of a JPA, including the Virginia Marine Resources Commission (VMRC), U.S. Army Corps of Engineers (USACE), the Virginia Department of Environmental Quality (DEQ), and Local Wetland Boards. Depending on the agency and the breadth of the project, an applicant will be charged various fees from the different entities.

Dredging projects will have permit costs and taxes are levied on the equipment and machinery. According to [23VAC10-210-4050](#). Ships or Vessels Used or To Be Used Exclusively or Principally in Interstate or Foreign Commerce, the following are taxable and exempt equipment used in dredging:

### **Taxable**

- Ships or vessels which are not principally used in interstate or foreign commerce are subject to the tax. This includes charter party boats, fishing vessels, and other vessels which leave a point in one state and return to the same point without docking in another state.
- Vessels not physically involved in the dredging of an interstate waterway, such as crew boats, survey boats, and barges used to move equipment, materials, and employees from the dredging site, are subject to the tax.

### **Exempt**

- Ships or vessels used or to be used exclusively or principally in interstate or foreign commerce or the charge for repairs and alterations of them are exempt from the tax.
- Dredges and attendant vessels, such as barges upon which silt from the dredging process is loaded, are entitled to the exemption set forth in this subsection and subsection C provided they are principally used in the dredging of interstate waterways.
- Fuel used for propulsion of ships or vessels, including dredges, is exempt from the tax pursuant

Additionally, there are royalties, which are dependent on the dredging project specifics including location, dredged material placement, and the type of entity applying for the dredging project. In most cases, the applicant is charged \$0.45 per cubic yard for dredged material proposed to be removed from State-owned bottom, which accrues to the Commonwealth. If the dredged material is high quality and has the potential for commercial use, then the applicant may be charged \$0.60 per cubic yard. Dredging royalties will range from \$0.20 to 0.60 per cubic yard. Additionally, a permittee is responsible for placement royalties. If the dredged sediment is placed below mean low tide then the associated royalty is \$0.05 per square foot. However, to place dredged material above the mean low water mark on private property, the private property owner may have to obtain a wetlands or coastal primary sands dunes and beaches permit or an applicant will need to work with fee simple and adjacent property owners to obtain an easement if the proposed disposal site is a private beach or shoreline. Finally, the applicant will need to record an easement and pay the proper recordation fee to the locality.

While most of the revenue generated through dredging projects is returned to the state, localities may receive limited to nominal revenue through recordation fees when an easement is needed for dredge material placement. Additionally as rural coastal localities consider plans to maximize the placement of dredge material as “beneficial use” to protect waterfront land from sea-level rise and storm damage, the dredging industry, by way of dredge spoil placement, may ultimately protect the coastal tax base and preserving a main source of revenue for local governments.

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**DREDGING (SAND AND SILT):**

Local Jobs Created- Moderate Wages



Some Revenue Returned

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**COMMERCIAL FISHING**

Commercial fishing has a very rich history in coastal Virginia. While commercial fishermen must pay license fees depending on the type of fishing that occurs, the gear that is used, and the landing of seafood ([4VAC20-920-10](#)). Appendix 2 provides a list of associated license fees. All fees go directly to the VMRC. Additionally, according to [§58.1-1101](#), intangible personal property is defined as “capital, which is personal property, tangible in fact, used in commercial fishing businesses, and used in the water to catch or harvest seafood, including but not limited to crab pots, nets, tongs, and dredge equipment. Fishing vessels and property permanently attached to such vessels shall not be defined as intangible personal property for purposes of this chapter and shall be taxed locally as tangible personal property according to the applicable provisions of law relative to such property.” This local rate is established each year by the Board of Supervisors of a given locality.

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**COMMERCIAL FISHING:**

Local Jobs Created- Moderate Wages



Some Revenue Returned

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**AGRICULTURE**

Agricultural businesses have a variety of tax exemptions due to the nature of their business. According to [23 VAC10-210-50](#), *“The tax does not apply to commercial feeds, seed, plants, fertilizers, liming materials, breeding and other livestock, semen, breeding fees, baby chicks, turkey poults, agricultural chemicals, fuel for drying or curing crops, baler twine, containers for fruits or vegetables, farm machinery and agricultural supplies sold to farmers for use in agricultural production for market. Also, effective July 1, 1979, the tax does not apply to tangible personal property, except structural construction materials, necessary for use in agricultural production for market when sold to or purchased by a farmer or contractor or furnished to a contractor by a farmer to be affixed to real property owned or leased by a farmer. A purchase for personal or family use or consumption is not exempt. Exempt items must be purchased under a certificate of exemption. A farmer not engaged in the business of producing agricultural products for market cannot claim any agricultural exemptions.”*

Further this section of the Code of Virginia states that, *“A farmer regularly engaged in selling tangible personal property at retail must register as a dealer and collect and pay the tax due on retail sales. The*



*tax applies to regular or recurring sales of farm products by farmers or peddlers or at a public market, roadside stand, farm or any other place.*

The IRS defines excise taxes as taxes paid when purchases are made on a specific good. Excise taxes are often included in the price of the product. In Virginia, the agriculture community, depending on the product that is grown, may pay the following excise taxes to the Commonwealth:

**Apple Excise Tax.** A 2.5 cents (\$0.025) tax per tree run bushel (i.e. 2,140-2,500 cubic inches of apples) on apples grown for market. The apple producer, someone who grows at least 5,000 tree run bushels in a calendar year, is liable for the tax. Revenues support the Apple Board for research, education, publicity, and development of the Virginia apple industry.

**Cattle Assessment.** An assessment of 50 cents (\$0.50) per head applied against the sale of all cattle or calves in Virginia. The assessment does not apply to the sale of dairy cows going back to the farm for milk, animals selling for less than \$100 per head, or cattle weighing 99 pounds or less. The handler (the person or business that conducts the sale of the cattle on behalf of the producer, who raises the cattle for market) deducts the assessment from the amount due to the producer. Revenues support the Cattle Industry Board for market development, education, publicity, research, and promotion of the sale and use of cattle and beef products in Virginia.

**Corn Assessment.** An assessment of 1 cent per bushel of corn grown for market in Virginia. The handler (an entity that buys corn from a farmer), deducts the assessment from the amount due to the producer. Revenue generated supports the Corn Board efforts in research education, publicity, and industry development.

**Cotton Assessment.** An assessment of 95 cents per bale of cotton sold in Virginia. The handler (company that gins the cotton) deducts the assessment from the amount paid when buying the cotton. Revenues support the Cotton Board including research, education and promotion of Virginia cotton.

**Egg Excise Tax.** A tax on eggs or egg products sold or consumed at the wholesale level in Virginia. The registered handler is responsible for collecting and remitting the tax. Tax rates include 5 cents per case (3 dozen eggs) of shell eggs and 11 cents per hundred pounds of liquid eggs, or the liquid equivalent of egg products. The tax supports the Egg Board for research, education, publicity, advertising, and promotion of Virginia eggs and egg products.

**Peanut Excise Tax.** A 30 cents tax on every hundred pounds of peanuts grown in and sold in Virginia to a processor. The processor (a business that cleans, shells or crushes peanuts) is liable for the tax. Revenue supports the Peanut Board for research, education, publicity, advertising and sales promotion of Virginia peanuts.

**Sheep Assessment.** A 50 cents per head assessment on the sale of sheep and lambs in Virginia. The handler deducts the assessment from the amount due to the owner of the sheep or lambs. Fund raised by the assessment supports the Sheep Industry Board. The board supports promotion and economic development of the Virginia sheep industry.

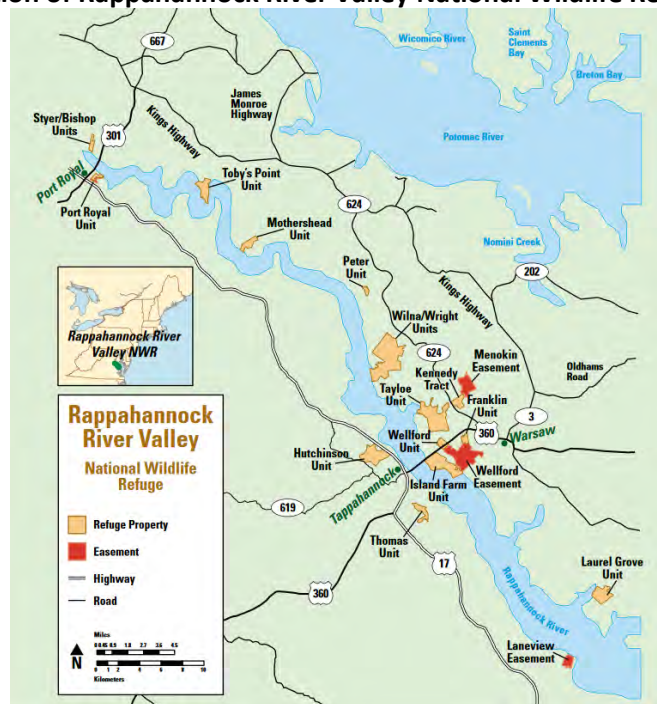
**Small Grains Assessment.** An assessment of one-half of one percent of the price per bushel of small grains produced in Virginia. “Small grains” are barley, oats, rye or wheat. The handler deducts the assessment from the amount due to the farmer. Funds raised by the small grains assessments supports the Small Grains Board. The board supports research, educations, promotion and market development for the small grains industry.

**Soybean Assessment.** An assessment of one-half of one percent of the net market value of soybeans purchased. The first person who buys soybeans from the farmer (“first-buyer”) collects the assessment from the farmer. Funds raised by the soybean assessment supports research, education, publicity and promotion of the sale and use of soybeans.

An agriculture landowner will also pay a local property tax, which goes directly to the locality. However, some localities voluntarily participate in Virginia’s Use Value Assessment Program, which supports the assessment of agriculture, horticulture, forest and/or open space lands based on its use value, which is below the regular assessed value. Currently Gloucester, Middlesex, King William, and Essex Counties in the Middle Peninsula participate in this program.

A subset of agriculture is the conversion of commercial agriculture lands into the U.S. Fish and Wildlife Service (FWS) National Refuge System. The Rappahannock River Valley National Wildlife Refuge is the youngest member of the Eastern Virginia Rivers National Wildlife Refuge Complex. It was established to conserve and protect fish and wildlife resources such as the bald eagle, threatened and endangered species, and wetlands. The FWS purchased the first tract of land for the refuge in 1996. The refuge currently consists of 9,030 acres. The goal of the refuge is to protect 20,000 acres of wetlands and its associated uplands along the Rappahannock River and its major tributaries. Refuge units are in Essex, King George, Caroline, Richmond, and Westmoreland counties and include fresh water tidal marsh, forest swamp, upland deciduous forest, mixed pine forest, and grassland habitats.

**Figure 1: Location of Rappahannock River Valley National Wildlife Refuge properties.**



As the refuge grows, acreage for commercial silviculture and agriculture shrinks, resulting in less direct economic return to the locality. However, ecological value increases and indirect benefits to the locality may accrue.

The FWS annually makes payments to counties and other units of local government for these tax-exempt Federal lands through its Refuge Revenue Sharing program. These payments are one of the ways the Federal Government can fulfill its role of being a good neighbor to local communities. Lands acquired in fee by the FWS are removed from the local tax rolls. The Refuge Revenue Sharing Act, as amended, requires the FWS to make payments annually to counties and other units of local government to help offset lost tax revenues. Due to ecotourism, national wildlife refuges often generate tax revenue for communities far in excess of what was lost from Federal acquisition of the land. For purchased and donated land, the Refuge Revenue Sharing Act, as amended, requires that payments to counties and other units of local government be based on the greater of: (a) 3/4 of 1 percent of the market value; (b) 25 percent of the net receipts; (c) 75 cents per acre. Also, payments to a county or other unit of local government cannot be less than their fiscal year 1977 payment for the land. In contrast, for public domain land that was never on the tax rolls, the Refuge Revenue Sharing Act requires the FWS to pay counties and other units of local government 25 percent of the net receipts collected on those lands (Table 6).

**Table 6: National Wildlife Refuge Fund (Refuge Revenue Sharing) FY2017 Payments for FY2016 by State and Local Government.**

STATE	COUNTY	TOWN, CITY, OR DESIGNATED RECIPIENT AS APPROPRIATE	AMOUNT
Virginia			\$442,703
	ACCOMACK COUNTY		\$107,126
		CHINCOTEAGUE, TOWN OF	\$8,387
		ACCOMACK COUNTY	\$98,739
	CAROLINE COUNTY		\$2,053
	CHARLES CITY COUNTY		\$1,441
	CHESTERFIELD COUNTY		\$6,498
	CITY OF CHESAPEAKE		\$38,119
	CITY OF SUFFOLK		\$23,753
	CITY OF VIRGINIA BEACH		\$102,179
	ESSEX COUNTY		\$4,101
	FAIRFAX COUNTY		\$44,659
	KING GEORGE COUNTY		\$4,088
	NORTHAMPTON COUNTY		\$33,004
	PRINCE GEORGE COUNTY		\$35,597
	PRINCE WILLIAM COUNTY		\$21,507
	RICHMOND COUNTY		\$13,571
	WESTMORELAND COUNTY		\$1,917
	YORK COUNTY		\$3,090

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**AGRICULTURE:**

Local Jobs Created- Moderate Wages



Some Revenue Returned

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**NON-TRADITIONAL EXTRACTION:**

There is a variety of environmental trading programs in Virginia. According to a Virginia Tech publication titled, [Virginia Citizen’s Guide to Environmental Credit Trading Programs: An Overview](#), the following table provides a general description of the program:

Regulatory program	Regulated party	Regulatory requirement	On-site options and requirements	Credits
Wetland and stream permits	Developer	No net loss of wetland/ stream function	Avoid and minimize wetlands/ stream losses	Wetland mitigation from third parties that enhance, restore, create, or preserve wetlands (or streams)
Virginia Stormwater Management Program	Developer	Control runoff volume and quantity of phosphorus runoff from a development	Must limit amount of water running off-site. Implement some phosphorus controls (small developments have exceptions)	May buy permanent phosphorus credits
Chesapeake Bay Point Source Nutrient Trading Program	Municipal and industrial wastewater treatment plants In Chesapeake Bay watershed	Existing sources assigned amount of nitrogen and phosphorus that can be discharged (called wasteload allocation)	New sources must meet stringent concentration limits on-site	Existing sources may buy point source credits to meet wasteload allocation; new sources must offset all loads and may buy credits from point sources or nonpoint sources if no point source credits available
Municipal separate storm sewer systems (MS4)	Municipal government in Chesapeake Bay watershed	Limits on the total amount of nitrogen, phosphorus, and sediment that can be discharged	Implement stormwater control practices, tree plantings, and stream restoration projects within MS4 community	Buy credits from sources outside MS4; credits can be from ag best management practices, land conversion, nutrient assimilation

**NUTRIENT CREDIT TRADING PROGRAMS (NITROGEN AND PHOSPHORUS):**

In order to comply with Virginia’s nutrient focused regulations including the Chesapeake Bay Total Maximum Daily Load (TMDL), Virginia Watershed Implementation Plan (WIP), and Virginia Stormwater Management Program (VSMP), nutrient credit trading serves as a market system to reduce nutrient runoff or discharges below target levels. Source polluters can buy or sell “credits” from or to other sources. This approach allows those that can reduce nutrients at low cost to sell credits to those facing higher cost, nutrient-reduction options. Nutrient trading allows sources of pollution (i.e. wastewater treatment plants or MS4 permittees) to meet their pollution targets in a cost-effective manner and create new revenue opportunities for farmers, entrepreneurs, and others who implement low-cost pollution reduction practices that exceed their TMDL requirements (Jones et al. 2010). The price of credits is based on the market demand. Point source facilities that cannot limit discharge below their waste load allocation can buy credits from other point source facilities that have created surplus reductions. Qualified land is developed and (conceptually) gridded to determine the number of qualified credits available for resale based on market forces.

According to the USDA Natural Resources Conservation Service, the Virginia Department of Transportation ([VDOT](#)) [blazed a trail for state agencies interested in purchasing nutrient credits](#) when it completed transactions for approximately \$1 million in permanent phosphorous credits generated on Virginia farms. The offset credits facilitated the completion of more than 50 projects that improved traffic safety and flow with turn lanes, clover leaves, connectors to existing roads, and repairs of approaches to aging bridges. A VDOT-funded [report released in August 2014](#) shows that the use of farm generated offset credits provided equal or greater water quality benefits for up to half of the installation costs of traditional engineered practices. VDOT followed up its purchase of phosphorous credits in 2014 with additional transactions in 2015, anticipating that up to \$2 million worth of phosphorous credits would be purchased by the end of that year. To maintain local water quality, nutrient credit trading in Virginia can only take place within prescribed river basins. [Nutrient banks—private entities that aggregate credits from multiple farmers—report a steady stream of trades in the James, Rappahannock and York River Basins](#). Because they are permanent nutrient reductions, the credits have significant value ranging from \$10,800 to \$24,000 per pound of phosphorous, depending on the river basin. Maximum credits can be generated on farms through the permanent conversion of sub-prime farmland to forest or agroforestry.

Environmental groups such as the Chesapeake Bay Foundation (CBF) support the development of nutrient banks and tout the benefit as:

“..a way for farmers, foresters, businesses and other facilities to reduce pollution more than is legally required and to sell such additional reductions as credits to other businesses, facilities, and local municipalities so they can meet their reduction requirements. Trading offers a tool to reduce costs associated with reducing pollution, to expedite water quality improvements, and stimulate innovation. Trading can help localities and businesses to reduce pollution and meet their requirements more cost-effectively and often more quickly”.

For more information, please visit: <https://www.cbf.org/issues/nutrient-trading.html>. Environmental credit trading programs provide ways to reach regulatory compliance at a low cost. Yet it is important to know that there are no local permitting requirements to accomplish this. Nutrient banks are established without requirements for local zoning or business permits, land is monetized and credits are sold with no revenue returned to local government for trades of significant monetary value, and land is generally left restricted as the credits are protected in-perpetuity. In other words, the economic value of the natural resources has been taken from the land and converted into cash. According to § 62.1-44.15:35 B. *A VSMP authority is authority to allow compliance with stormwater nonpoint nutrient runoff water quality criteria established pursuant to § 62.1-44.15:28, in whole or in part, through the use of the applicant’s acquisition of nutrient credits in the same tributary.* Additionally, according to § 62.1-44.15:35 E. *Documentation of the applicant's acquisition of nutrient credits shall be provided to the VSMP authority and the Department [Virginia Department of Environmental Quality (DEQ)] in a certification from the credit provider documenting the number of phosphorus nutrient credits acquired and the associated ratio of nitrogen nutrient credits at the credit-generating entity.* Thus, for those localities that have opted out of administering a local VSMP, their VSMP is DEQ. DEQ handles the permitting as the VSMP Authority and based on the above Code of Virginia DEQ is under no requirement to consult with local officials prior to permitting the creation of the bank.

The Commonwealth regulates the quality and quantity of stormwater runoff from urban land development activities under the VSMP and land developers must obtain a VSMP permit that requires

the implementation of a site-specific stormwater pollution prevention plan (SWPPP) which details how to reduce runoff and nutrients discharged from the new construction. To meet water quality requirements, developers have off-site compliance options including the purchase of phosphorus credits. For small developments (defined to be less than 5 acres of disturbed land) phosphorus credits may be purchased to meet their water quality requirements. Developers can also purchase permanent phosphorus credits from multiple credit providers across the Commonwealth (Virginia Tech, 2019).

Revenue generated through this program occurs between credit holders and developers. Virginia citizens may also see revenue benefits if they choose to create a phosphorus bank by permanently converting agricultural land to forest or open space and then selling phosphorus credits. According to DEQ, averages for the price of phosphorus per pound by basin in January 2019 based off 2018 fourth quarter water quality enhancement fees findings were:

River Basin	Average Price per Pound of Phosphorus	Price Range per Pound of Phosphorus
Chowan River	\$15,000	
James River	\$11,000	\$8,500 to \$15,500
New River	\$12,000	
Potomac River	\$19,000	\$13,000 to \$22,500
Rappahannock River	\$12,000	\$11,000 to \$13,500
Roanoke River	\$10,500	\$10,000 to \$12,500
York River	\$12,000	
<i>**basins without ranges did not have very many transactions that quarter and we also excluded sales less than 0.1 pounds because banks usually charge a flat rate for sales that small.</i>		

#### IN-SITU NUTRIENT REMEDIATION PROGRAM (INSRP)- OYSTER NUTRIENT TRADING

Policy objectives set by the General Assembly for the Chesapeake Bay Watershed Nutrient Credit Exchange Program (“Exchange Program”) mandate the incorporation of market-based solutions in development and exchange of nutrient credits. The adoption of a market-based nutrient credit trading program aims to: (a) meet cap load allocations cost-effectively and as soon as possible in keeping with the 2010 timeline and objectives of the Chesapeake 2000 Agreement, (b) accommodate continued growth and economic development in the Bay watershed, and (c) provide a foundation for establishing market-based incentives to help achieve the Chesapeake Bay Program's nonpoint source reduction goals. The “In-Situ Nutrient Remediation Program” or “ISNRP” focuses on the annual seeding, growing, harvesting, production, and certification of oysters in cages placed above the bottom lands of the waters and tributaries of the Chesapeake Bay pursuant to leases granted by the Commonwealth. As oysters reduce nutrient loadings in the Chesapeake Bay and its tributaries, they generate nonpoint source nutrient credits that may be sold and traded within the Commonwealth and to produce oysters for retail and commercial markets.



The ISNRP is a relatively new approach to leveraging oysters to meet clean water commitments and should be encouraged. There is no requirement for revenue return to local governments for this trading program either.

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**NUTRIENT CREDIT TRADING:**

Limited to no Local Jobs Created



Reduced to no Revenue Returned

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## WETLAND MITIGATION BANKS

### TIDAL WETLANDS MITIGATION BANKS

A mitigation bank compensates for unavoidable wetland or stream loss in advance of development actions through the sale or purchase of credits from a mitigation bank. According to DEQ, "The purpose of mitigation banks is to replace both the acreage and the biological, chemical, and physical functions of wetland and stream resources by quantifying the replaced acreage and function as a 'credit', which can be purchased by third parties ('permittees') to compensate ('debit') for unavoidable wetland losses." Wetland compensation ratio guidelines have been established by the USACE and the amount of bank credit required is based on the type of wetland impacted. Credits can be purchased on a per-acre, per-square foot, or per-credit basis with rates set by the market.

**FOR EXAMPLE:**

Assume that one acre is maximized for credit value.

43,560 square feet (sf) = 1 acre

If each sf of credit is valued at \$12

THEN....

$43,560 \text{ sf} \times \$12 = \$522,720$

This is the value of monetized credits, i.e. the amount paid to the bank to purchase wetland mitigation credits.

NEXT....

If the land is assessed at \$500 per acre because it is now classified as a protected wetland

AND....

If the tax levy is \$0.695 per \$100 on that land, then the annual real-estate tax paid to the locality is \$3.47.

THEREFORE....

Conceptually, \$500,000 was extracted from the land with practically no revenue return to the locality.

Prior to purchasing tidal wetland credits, a Tidewater Joint Permit Application (JPA) is required for projects impacting tidal wetlands. Therefore, an applicant will work with the USACE, DEQ, VMRC, and the LWB to obtain the necessary permits and pay the associated mitigation fee to allow the project to

proceed. Besides the LWB permit fee and the possible fee to review the JPA that goes directly to the locality, a fee in-lieu of purchasing a credit may be required depending on the project and locality.

Wetland banks do pay the locality property taxes on the commoditized land, but at a significantly lower value or in many cases a default value of \$500 an acre because the land is assessed at its protected conservation value and not its full development value as any future use has been extinguished by the encumbrance placed on the land. In this case the economic value has been sold and only permanently restricted land with limited tax revenue remains. However please note that there are other circumstances where the tax rate is unchanged since the wetland will remain a wetland when a wetland bank is established.

Additionally, many wetland banks are constructed with no recognition for local zoning, building permits, or business licenses needs, all of which further isolate the business operations which local government operations rely upon for revenue generation. Some local governments classify wetland mitigation banks as meeting the definition of “natural wildlife preserves or conservation areas” due to the final placement of a perpetual conservation easement further ensuring the decrease in taxable assessed value of the land. Please note that there are other circumstances where the tax rate is unchanged since the wetland will remain a wetland when a wetland bank is created.

#### NON-TIDAL WETLAND MITIGATION BANK:

The DEQ implements the Virginia Water Protection Permit (VWP) Program, which is responsible for the Section 401 Certification process for both tidal and nontidal wetland and stream impacts permitted under Section 404 of the Clean Water Act. DEQ can provide Section 401 Certification by either issuing a VWP individual or general permit or by certifying USACE nationwide or regional permits.

Virginia’s Nontidal Wetland Act states that “[p]ermits shall address avoidance and minimization of wetland impacts to the maximum extent practicable.” Further, “permits [issued for impacting nontidal wetlands] shall contain requirements for compensating impacts on wetlands. Such compensation requirements shall be sufficient to achieve no net loss of existing wetland acreage and functions, and may be met through wetland creation or restoration, purchase or use of mitigation bank credits...or contributing to a fund that is approved by the [State Water Control] Board and is dedicated to achieving no net loss of wetland acreage and functions. When utilized in conjunction with creation, restoration or mitigation bank credits, compensation may incorporate (i.) preservation or restoration of upland buffers adjacent to wetlands or other state waters or (ii.) preservation of wetlands.”

In Virginia, compensatory mitigation may include:

- Purchase or use of wetland mitigation bank credits at a DEQ-approved mitigation bank
- Contributing to a DEQ-approved in-lieu fee fund
- Wetland creation or restoration
- Stream restoration (see the Unified Stream Methodology below)
- Preservation of existing wetland and streams, when utilized in conjunction with creation, restoration, or mitigation bank credits
- Preservation or restoration of upland buffers adjacent to surface waters, when utilized in conjunction with creation, restoration, or mitigation bank credits

Virginia uses the following general compensation ratios (alternative ratios may be required by DEQ for activities permitted under a VWP individual permit):

- 2 acres compensation for each 1 acre of impact (2:1) for forested wetland impacts



- 1.5:1 for scrub-shrub wetland impacts
- 1:1 for emergent wetland impacts
- project-specific ratios for other surface water impacts

## CARBON TRADING BANKS

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### **WETLAND MITIGATION BANKS:**

Limited to no Local Jobs Created



Reduced to no Revenue Returned

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Executive Directive 11 (2017), "Reducing Carbon Dioxide Emissions from the Electric Power Sector and Growing Virginia's Clean Energy Economy," directed the Director of the DEQ, in coordination with the Secretary of Natural Resources, to (1.) Develop a proposed regulation for the State Air Pollution Control Board's consideration to abate, control, or limit CO<sub>2</sub> from electric power facilities that: a. Includes provisions to ensure that Virginia's regulation is "trading-ready" to allow for the use of market-based mechanisms and the trading of CO<sub>2</sub> allowances through a multi-state trading program (in accordance with 9 VAC 5-140).

The primary purpose of the regulation is to implement a declining cap on carbon emissions. Originally, this effort would link Virginia to the Regional Greenhouse Gas Initiative<sup>1</sup> (RGGI) and create an emissions trading program. For each ton of carbon emitted by an electricity generating facility an allowance would be issued. The facility would then decide if it wants to reduce carbon emissions and sell its additional allowances, or if it will not reduce carbon emissions and make up the difference with purchased allowances. At the April 2019 meeting of the Virginia Air Pollution Control Board the final CO<sub>2</sub> Cap and Trade Rule (9VAC5-240-6045) was approved; however prior to the Board's action, language was inserted by the Virginia General Assembly (GA) into the 2018-2020 biennial budget bill prohibiting Virginia's membership or participation in the RGGI until the GA decides otherwise. Therefore, since this Rule requires participation in RGGI, the new cap cannot be implemented.

If Virginia joins the RGGI, the cost of allowances will be managed by means of a consignment auction. Such auctions have been known to decrease costs because the costs and prices are known, and a secondary market is not involved. Consignment auctions are revenue neutral, so the only actual cost to a facility would be the administrative cost of managing its consignment auction activities. At the 45<sup>th</sup> RGGI auction in September of 2019, 13,116,447 CO<sub>2</sub> allowances were sold at the auction at a clearing price of \$5.20 per allowance. Bids for the CO<sub>2</sub> allowances ranged from \$2.26 to \$8.00 per allowance. The auction generated \$68.2 million for states to reinvest in strategic programs, including energy efficiency, renewable energy, direct bill assistance, and GHG abatement programs.

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<sup>1</sup> The Regional Greenhouse Gas Initiative (RGGI) is the first mandatory market-based program in the United States to reduce greenhouse gas emissions. RGGI is a cooperative effort among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont to cap and reduce CO<sub>2</sub> emissions from the power sector. For more information please visit: <https://www.rggi.org/>

It is unknown at this time if revenue will accrue at the local government level from carbon trading markets. If previous extractive models are not modified to include a structure to direct a return of revenue to local government, then more coastal resource value will be lost to *local* governments.

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**CARBON TRADING BANKS:**

Limited to no Local Jobs Created



Reduced to no Revenue Returned

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## GROUNDWATER WITHDRAWAL AND TRADING

### GROUNDWATER WITHDRAWAL

Any person or entity within the Eastern Virginia or Eastern Shore of Virginia Groundwater Management Areas require a permit to establish new withdrawals of groundwater in excess of 300,000 gallons per month (from a well, well system, or pond recharged by groundwater with mechanical assistance). Additionally, any person or entity who needs to expand an existing withdrawal is required to apply for a new or expanded groundwater withdrawal permit before exceeding the 300,000 gallons per month use limit or increasing a permitted withdrawal. Groundwater Withdrawal Permits are issued for a maximum term of 15 years. Below are the associated fees (Table 7) which go directly the Virginia DEQ.

**Table 7: List of Groundwater Withdrawal Permit Fees (DEQ, 2015).**

Type of Groundwater Permit	Issuance/Reissuance
Agricultural withdrawals	No Fee
Historic permits – (Initial permit for an existing withdrawal based solely on historic withdrawals)	\$1,200.00
New or expanded groundwater withdrawal Permits	\$9,000

As part of the permit application for new withdrawal permits, an applicant is required to include notification from the local governing body in which the withdrawal is to occur. Notification includes that the location and operation of the withdrawing facility complies with all ordinances adopted ([9VAC25-610-94](#)). This applies to expansion of an existing withdrawal or reapplication for a current permitted withdrawal. The applicant shall document the local governing body's receipt of the request for certification through certified mail or other means that establish proof of delivery.

With limited commercial business within rural coastal localities and with DEQ groundwater modeling to delineate water restricted areas, some concern is expressed that any “rural coastal share” of groundwater resources will be consumed by adjacent suburban and urban commercial needs, further depleting the rural region of access to future groundwater resources necessary to support future development. This is another example of the extraction of natural resources coming at the expense of rural local governments with little or no consideration given to the sustainability of the *local* economy.

## GROUNDWATER TRADING

The Eastern Virginia Groundwater Management Advisory Committee (EVGWMAC) was established in 2015 by the General Assembly. The EVGWMAC was charged with assisting the State Water Commission and the DEQ in developing, revising, and implementing a management strategy for groundwater in the Eastern Virginia Groundwater Management Area. Based on EVGWMAC recommendations, HB 1036 was passed by the General Assembly in 2018. It directs the DEQ to convene a forum to further study how to implement the recommendation made by the EVGWMAC that an aquifer storage and recovery banking system be developed. A Trading Work Group was also established to conduct further study and identify the components of a groundwater trading program. The work group is working to develop and report its recommendations, including recommended program components, to the State Water Commission and the Director of the Department no later than July 1, 2020. The work group is required to include in its discussion input from groundwater users interested in purchasing credits and representatives from local governing bodies currently injecting water into the coastal aquifers or considering a project to do so.

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### **GROUNDWATER WITHDRAWAL & RECHARGE:**

Limited to no Local Jobs Created



Reduced to no Revenue Returned

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The work of the EVGWMAC continues and the extent of rural economic benefit is unknown at this time.

## OIL AND GAS EXTRACTION

While most of the oil and gas extraction in Virginia currently occurs in the western parts of Virginia, the Taylorsville Basin in the coastal zone could draw interest in oil and gas exploration. Oil and gas operators in Virginia must comply with the Virginia Gas and Oil Act of 1990 ([§ 45.1-361](#)), Virginia Gas and Oil Regulation ([4VAC25-150](#)), Virginia Gas and Oil Board Regulations, State Water Control Law, and Virginia Pollution Discharge Elimination System Regulations.

There are multiple sections of the Code of Virginia that address a locality's authority to create severance taxes on "every person engaged in the business of severing gas from the earth":

[§58.1-3712](#) - The governing body of any county or city may levy a license tax on every person engaging in the business of gases from the earth. Such tax shall be at a rate not to exceed one percent of the gross receipts from the sale of gases severed within such county.

[§58.1-3713](#) - Any county or city may adopt a license tax on every person engaging in the business of severing gases from the earth. The rate of such tax shall not exceed one percent.

The moneys collected for each county or city from the taxes imposed under authority of this section and subsection B of [§ 58.1-3741](#) shall be paid into a special fund of such county or city to be called the Coal and Gas Road Improvement Fund of such county or city, and shall be spent for such improvements to

public roads as the coal and gas road improvement advisory committee and the governing body of such county or city may determine as provided in subsection B of this section. The county may also, in its discretion, elect to improve city or town roads with its funds if consent of the city or town council is obtained. Such funds shall be in addition to those allocated to such counties from state highway funds which allocations shall not be reduced as a result of any revenues received from the tax imposed hereunder.

[§58.1-3713.01](#) - The governing body of any county or city imposing a local gas road improvement tax under subsection A of § [58.1-3713](#) or a local coal road improvement severance license tax under subsection B of § [58.1-3741](#) that is using an additional one-fourth of the revenue from such tax to fund the construction of new water or sewer systems or lines or the repair or enhancement of existing water systems or lines shall develop and adopt by resolution an annual plan for such water and/or sewer projects and an annual plan for the funding of such water and/or sewer projects in areas in its county or city where natural water supplies are insufficient from the standpoint of quality or quantity. Plans shall establish a priority for funding water and/or sewer projects in such city or county. Consideration for funding shall be given to (i) replacing water supplies lost due to mining activities and providing emergency water services to areas that have lost water due to mining activities; (ii) preserving water supplies that are jeopardized due to permitted mining which is occurring or is near commencement; (iii) facilitating development of water and/or sewer projects which will promote diversified industrial development; and (iv) increasing the capacity of publicly owned water and/or sewer treatment or supply facilities.

[§58.1-3713.4](#). a county or city may levy an additional license tax on every person engaging in the business of severing gases from the earth. The license tax shall be at a rate not to exceed one percent of the gross receipts from the sale of gases severed within the county or city.

[§58.1-3741](#) - The governing body of any county or city may levy a severance license tax on every coal producer that sells or utilizes coal severed from the earth within its jurisdiction. The rate of tax for the sale or utilization of coal from small mines shall be three-fourths of one percent of the gross receipts from the sale or utilization of such coal by the coal producer. The rate of tax for all other coal shall be one percent of the gross receipts from the sale or utilization of such coal by the coal producer. B. In addition to the tax imposed in subsection A, any county or city may impose a local coal road improvement severance license tax on every coal producer that sells or utilizes coal severed from the earth within its jurisdiction. The rate of tax for the sale or utilization of coal from small mines shall be three-fourths of one percent of the gross receipts from the sale or utilization of such coal by the coal producer. The rate of tax for all other coal shall be one percent of the gross receipts from the sale or utilization of such coal by the coal producer.

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***OIL AND GAS EXTRACTION:***

Local Jobs Created- Moderate Wages (Location dependent)



Some Revenue Returned- Depending on location  
(Oil/Gas/Coal Severance)

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## RENEWABLE ENERGY (SOLAR AND WIND)

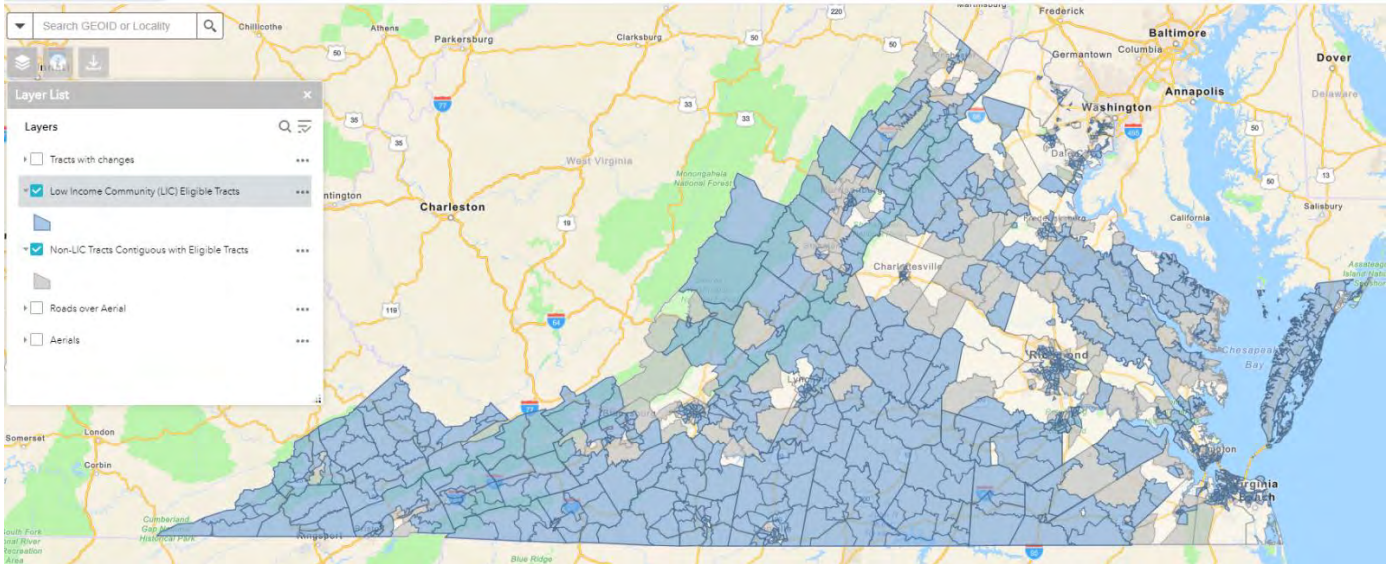
Virginia is now ranked 7<sup>th</sup> in solar job growth and ranked 16<sup>th</sup> for solar jobs nationwide (<sup>2</sup>The Solar Foundation, 2020). According to the [2018 Virginia Energy Plan](#) Revenue for clean energy businesses in Virginia increased from \$300 million in 2014 to \$1.5 billion in 2016. Therefore, as solar energy creates new stakeholders in Virginia communities it is important to understand the industry's revenue streams for localities. The industry has been granted significant relief on the tax policy side as well as the decommissioning side for project development, including the types of surety a locality may require. Any locality contemplating a solar project should consult with legal counsel to ensure understanding of what Virginia law allows and does not allow related to project impacts including direct, indirect, and induced economic impacts for revenue and expenses incurred. Solar is widely recognized as a green industry, but it is also a complicated one. While the industry generates significant positive environmental effects in reducing greenhouse gases and significant wealth for the commercial energy industry and landowner, it does not generate the equivalent long-term revenue necessary to offset the economic impact to lower income communities. Solar projects do not deliver sufficient revenue to fund governmental services necessary to achieve environmental inspections and compliance. The 2020 General Assembly session contains many new solar bills and laws and regulations are anticipated to be amended in order to help level the imbalance caused by solar within rural localities.

The solar industry finds rural communities attractive because land is inexpensive, and the energy grid can handle additional energy generation/distribution. An unrecognized impact is the co-location of solar operations within census tracts meeting the eligibility for Opportunity Zone designations. Opportunity Zones are a federal economic development and community development tax benefit established as part of the 2017 Tax Cuts and Jobs Act available to investors with capital gains designed to encourage long-term private investment **in low-income** urban, suburban, and **rural census tracts**. Figure 2 illustrates the areas that qualified as **low-income census tracts** across the Commonwealth, these rural low-income census tracts are experiencing solar industry growth.

**Figure 2: Map of Virginia showing the location of lower income community (LIC) eligible tracts and non-LIC Contiguous with eligible tracts.**

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<sup>2</sup> The Solar Foundation. (2020). 10<sup>th</sup> Annual National Solar Jobs Census 2019. The Solar Foundation. <https://www.thesolarfoundation.org/national/>



Under the guidelines, an opportunity zone can be:

1. A low-income community census tract has an individual poverty rate of at least 20%; or
2. The median family income does not exceed 80 percent of statewide median family income; or
3. If in a metropolitan area, the greater of 80 percent statewide median family income or 80 percent of metropolitan area median family income.

Based on Census data from 2015 and 2016, Virginia had 901 census tracts eligible to be nominated as Opportunity Zones. Treasury mandated that each state be capped at nominating 25 percent of their eligible census tracts. This meant that Virginia could nominate up to 212 qualified census tracts. Up to 5% (11) contiguous tracts could also be nominated and be a part of 212 qualified census tracts for Virginia.

According to [§58.1-3508.6](#), Machinery and tools, including repair and replacement parts owned by a business and used directly in producing or generating renewable energy shall continue a classification of taxation separate from other classification of machinery and tools; however the rate of tax and rate of assessment under this section shall not apply to machinery and tools owned by a business and used directly in producing or generating renewable energy covered under Chapter 26 (§58.1-2600 et seq.), unless the rate of tax and rate of assessment under this section would result in a lower property tax on such machinery and tools.

Further, Virginia Code [§ 58.1-3360](#) offers the following property tax exemption for commercial solar facilities in Virginia:

- 100% property tax exemption for the assessed value of equipment and facilities used in:
  - o Projects equaling 20 Megawatts (MW) or less that serve a public institution of higher education or private college.
  - o Projects equaling 5 MW or less
- 80% property tax exemption for the assessed value of equipment and facilities used in:



- Other projects over 5 MW and less than 150 MW. The exemption for projects greater than 20 MW shall not apply to projects upon which the construction begins after January 1, 2024.

The law broadly defines eligible solar facility as “any property, including real or personal property, equipment, facilities, or devices designed and used primarily for the purpose of collecting, generating, transferring, or storing thermal or electrical energy.” The exemption does not include the land on which the equipment or facility is located. Furthermore, according to the [Code of VA §58.1-3221.2](#), Energy-efficient buildings, not including the real estate or land on which they are located, are hereby declared to be a separate class of property and shall constitute a classification for local taxation separate from other classifications of real property. The governing body of any county, city, or town may, by ordinance, levy a tax on the value of such buildings at a different rate from that of tax levied on other real property. The rate of tax imposed by any county, city, or town on such buildings shall not exceed that applicable to the general class of real property.” Eligible buildings are those that:

- Exceed the energy efficiency standards prescribed in the Virginia Uniform Statewide Building Code by 30 percent, or
- Meet or exceed performance standards of the Green Globes Green Building Rating System of the Green Building Initiative, or
- Meet or exceed performance standards of the Leadership in Energy and Environmental Design (LEED) Green Building Rating System of the U.S. Green Building Council, or
- Meet or exceed performance standards or guidelines under the EarthCraft House Program, or
- are Energy Star qualified homes.

Currently the Cities of Charlottesville and Roanoke offer exemptions.

According to Virginia Code [§58.1-3661](#), the Commonwealth of Virginia provides the option for any county, city or town to exempt or practically exempt solar energy equipment and recycling equipment from local property taxes. This statute targets non-commercial participants. Solar equipment and installation should be inspected and certified by the local building department or the Department of Environmental quality to provide the value of the system for the purpose of determining tax credit. Cities and counties currently offering a solar energy equipment and facility exemption include Albemarle, Alexandria, Charlottesville, Chesterfield, Hampton, Hanover, Harrisonburg, Henrico, Isle of Wight, King & Queen, Lexington, Loudon, Lynchburg, Prince William, Pulaski, Roanoke, Spotsylvania, Warren, Winchester and Wise.

The Code of Virginia affords a locality an option of adopting local ordinances to address the siting of renewable energy facilities that generate electricity from wind or solar resources (Code of VA [§67-103](#)). This provides some limited protection of the locality in a manner consistent with the goals of the Commonwealth to promote the generation of energy from wind and solar resources and includes provisions establishing reasonable requirements upon the siting of any such renewable energy facility, including provisions limiting noise, requiring buffer areas and setbacks, and addressing generation facility decommissioning. However, more recently passed legislation has shifted some of this protection. For example, a locality can no longer require cash surety for decommissioning. This is significant because in the absence of such a surety, there is no entity liable for the decommissioning cost if the owner of record at the time of decommissioning is not financially solvent.

The solar industry thus presents a conundrum for many rural local governments. While landowners find the land lease rates appealing and Governor Northam’s [Virginia Energy Plan](#) (2018) states that “solar

energy has significant room to grow”, at the local level prime agriculture and silviculture lands are being converted to solar. Many projects have revealed that there are both significant negative economic costs to local government as well as unexplored environmental issues, such as sea-level rise causing the Resource Protection Area (RPA) to migrate into an active solar field. This migration has the potential to cause maintenance and decommissioning access issues given the current regulations restricting activities within the RPA.

**ESSEX SOLAR CENTER RURAL CASE STUDY**

According to the Coronal Energy website, “The Essex Solar Center is sited on 174 acres in Essex County Virginia and is one of the largest solar projects in the Commonwealth. It builds on Coronal Energy’s history of projects in Virginia and was made possible through the Commonwealth’s recently implemented permit by rule (PBR) process through the Virginia Department of Environmental Quality (DEQ). Coronal Energy owns and operates the facility and will sell power to Dominion Energy under a 20-year power purchase agreement (PPA). The facility powers roughly 5,000 homes annually.”

**Figure 3: Aerial of Essex County Solar Center.**



While the website neatly packages this project in one paragraph, this project has a variety of effects and considerations for rural local governments and landowners.

*Landowner Perspective* - Prior to the construction of the Essex Solar Center, this land was primarily used for agriculture. Landowners could farm this land or lease their land to farmers to work their land. The table below provides the [2017 USDA National Agricultural Statistical Service \(NASS\)](#) irrigated cropland and pastureland rental rates for the Eastern Crop Reporting District (i.e. Middle Peninsula localities), and the [SLEAC \(State Land Evaluation and Advisory Council\)](#) land rental rates for non- irrigated cropland.

	<b>Cropland (Non-Irrigated) Rental \$/acre/year</b>	<b>Cropland (Irrigated) Rental \$/acre/year</b>	<b>Pastureland Rental \$/acre/year</b>
<b>Leasing Rate</b>	\$72.00	\$97.00	\$37.50



Hypothetically speaking, if these rates were applied to 174 acres (as a whole) the potential revenue generated from leasing the land in one year as Cropland (non-irrigated), Cropland (irrigated), and Pastureland would be \$12,528; \$16,878; and \$6,525, respectively.

With the construction of the solar center, landowners were afforded a different avenue to generate revenue from their land. According to various county administrators working with solar company applicants, solar land lease rates can be as high as \$1500/acre; however in Essex County rates are closer to \$500/acre/year and therefore when applied to the 174 acres, the landowner has the potential to make approximately \$87,000 per year. Table 8 shows the differences between the agricultural uses and solar center use.

**Table 8: The rental income difference between the agricultural uses and use as the solar center.**

	Lease Revenue from Agriculture	Lease Revenue from Solar	Lease Revenue Difference (\$)	Lease Revenue Difference (%)
Cropland (Non-Irrigated)	\$12,528	\$87,000	\$74,472	594.4% increase
Cropland (Irrigated)	\$16,878	\$87,000	\$70,122	415.5% increase
Pastureland	\$6,525	\$87,000	\$80,475	1233.3% increase

While the increase in revenue may influence the landowner’s decision to lease land to a solar company, the landowner’s personal interest and vision for the property will also play a role. For instance, in 1902, Southside Rappahannock Baptist Association (SRBA) sponsored the establishment of the Rappahannock Industrial Academy (RIA), a private high school for African American youth living in Essex, Middlesex, and King & Queen Counties. The school remained open until 1948, and since then SRBA has sought to preserve the site and its legacy. The RIA is one of the properties being leased for Essex Solar Center and at the ribbon cutting ceremony James Hill, President of the RIA Task Force stated, “We’re celebrating today with one eye on our future and one eye on our past. Maintaining ownership and stewardship over this land and its history, while generating income for our work and serves as home to a source of clean, affordable energy for years to come, only adds to the positive legacy of this site.” With the revenue from leasing the land, the RIA will be able to achieve their mission and continue to offer scholarships to African American students in Middlesex, Essex and King & Queen Counties through their [Rappahannock Industrial Academy Alumni Association Scholarship Fund](#).

*Local Government Perspective* - At first glance the Essex Solar Center provides additional local property tax revenue. In Essex County the commissioner of revenue removed the land used in this project from the land use program and changed the use to commercial. Below is a table of the land used in the Essex Solar Center and the acres used in the project. The table also compares the property tax revenue collected in 2015 (before the solar farm was constructed) and the property tax revenue collected in 2018 (after the solar farm was constructed) based on public information.

LANDOWNER		ACRES	BEFORE SOLAR FARM	AFTER SOLAR FARM
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	<b>TAX MAP PARCEL</b>		Landbook (2015) – Taxes Paid	Landbook (2018) – Taxes Paid
Rappahannock Industrial Academy	46 145	294.170  (70 acres is part of the Essex Solar Center)	\$1,836.98	\$6,680.08
Haile Properties LLC	52 43	106.12  (97 acres is part of the Essex Solar Center)	\$1,762.56	\$9,025.28
Haile Properties LLC	52 2 B	3.540  (3.540 acres is part of the Essex Solar Center)	\$35.04	\$234.08
Haile Properties LLC	52 2 C	3.540  (3.540 acres is part of the Essex Solar Center)	\$35.04	\$234.08
<b>Total Tax Collected</b>			<b>\$4,458.10</b>	<b>\$16,173.52</b>
<b><i>Please note that tax map parcel 52 2 A was excluded from the calculations since this property is adjacent to the Essex Solar Center.</i></b>				

While the solar center provides an additional \$11,715.42 in property tax to the locality, Virginia Code [§58.1-3660](#) offers the following property tax exemption for commercial solar facilities in Virginia:

- 100% property tax exemption for the assessed value of equipment and facilities used in:
  - Projects equaling 20 MW or less that serve a public institution of higher education or private college.
  - Projects equaling 5 MW or less
- 80% property tax exemption for the assessed value of equipment and facilities used in:
  - Other projects over 5 MW and less than 150 MW. The exemption for projects greater than 20 MW shall not apply to projects upon which the construction begins after January 1, 2024

Therefore, this limits the localities’ ability to receive additional revenue from solar operations. As the property value of the land increases as the land use changes to commercial, this value ultimately increases the total land book value for a locality. Consequently, this has the potential to decrease the amount of State funding for education provided to the locality through the composite index. The landbook value documents all fair market values of properties within a given jurisdiction to frame this comparison. Each year a total value of land book (TVLB) will be calculated, which is the total of fair market values of all parcels within a county. Once the TVLB

is calculated a completed land book is sent to the County's Treasurers Department as well as the Virginia Department of Taxation (VaTAX). To fulfill agency missions, VaTAX will extract the TVLB value from each county's land book and send it to the Virginia Department of Education (VDOE) in conjunction with a copy of an annual sales ratio study. With this information VDOE will calculate the True Value of Property (TVP) that is needed to generate a composite index value for each county. The composite index determines a school division's ability to pay education costs based on the true value of property (weighted 50%), adjusted gross income (weighted 40%), and the taxable retail sales (weighted 10%) within the county. These three elements are computed per pupil and per capita for each school. The higher the composite index the less education State aid the county will receive.

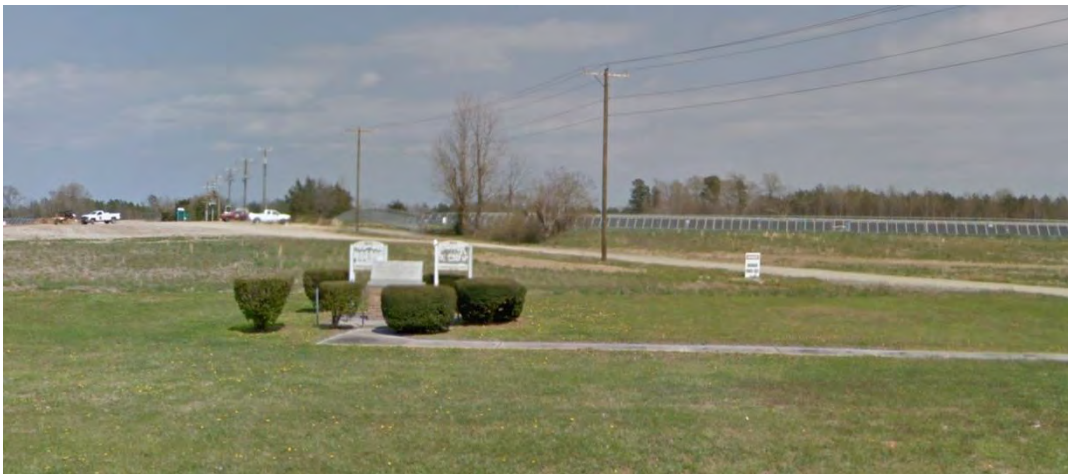
Other local government considerations may include:

**Additional personnel and time required.** According to a local planner and based on his project management experience with commissioning a solar operation, "one local planner is needed for each 100 acres of a solar operation to provide the proper site visits, inspections and monitoring." Such tasks are regularly scheduled; however, there are times when more time and local resources are used when there are site violations or when mishaps occur. For instance, in January 2018, the Essex Solar Center experienced serious stormwater and erosion and sediment control problems. The project's compliance program, through its installation of erosion and sediment controls, was deemed insufficient and this was compounded by extreme rain events which caused a heavy flow of sediment into the adjacent Muddy Gut Creek (Photo 1). Parties involved in resolving this issue included Essex County staff, Friends of the Rappahannock, DEQ, and Coronal Energy. The standard metric for employees needed to monitor solar projects is 1 full-time equivalent staff position (FTE) per 100 acres. Many rural solar projects are over 2,000 acres, which will require at least 20 new FTEs. Most rural localities have one or two code compliance staff. Ramping up to 20 FTEs becomes a significant burden to small rural localities not equipped for projects of this size. Twenty FTEs might require 10 new fleet vehicles. The cost structure quickly compounds within a local budget.



**Figure 4: An image of the silt fence being breached at the Essex Solar Center (Friends of the Rappahannock, 2018).**

**Viewshed.** The Middle Peninsula region is full of beautiful, pristine, rural landscapes including rolling agricultural land, forests, farms, small residential communities, and historical sites. For instance, part of the Essex Solar Center is located on the land where the Rappahannock Industrial Academy (RIA) was located. There is a monument that designates the location and provides photos of two dormitories used for the men and women attending private high schools. Prior to the construction of the solar farm, the view beyond the monument was of agricultural land. Following construction, the view beyond the monument is of the solar farm (Figure 5). This has created a unique juxtaposition between the historical relevance of the land and a new industry.



**Figure 5: A photo of the Rappahannock Industrial Academy monument site and the current view of the Essex Solar Center beyond the monument (Google Maps, 2020).**

**Job creation.** Solar projects may bring job opportunities to a rural area. For instance, at the Essex Solar Center, there were approximately 80 local workers recruited and trained to construct the solar center. As construction of this center took about 8 months, these workers were temporarily employed which temporarily invigorated the workforce. The intellectual capital gained through the training process may create future job opportunities on solar project for these workers, however those workers are likely to secure jobs beyond the Middle Peninsula, thus exacerbating the outflow of trained workers.

There is little doubt that solar projects within the Commonwealth will meet the Governor’s energy goals, and will provide clean, renewable energy to residents, institutions and large companies; however, such successes should not be at the expense of rural local governments and taxpayers.

Only through comprehensive study can rural coastal areas effectively co-exist with solar facilities. They must first understand, and then manage and mitigate, environmental and economic impacts to vulnerable areas. Protection of our Blue Green assets is essential to preserving the unique sense of place in rural coastal Virginia. Rural local governments should not have to risk the environmental quality of their own communities so that green energy can be extracted and consumed by outside communities. Establishing a stronger financial nexus between those that need and consume green energy with the communities that supply that energy is one step toward sustainable resource governance and environmental justice.

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**RENEWABLE ENERGY:**

Limited to no Local Jobs Created



Reduced to no Revenue Returned

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### PRODUCT #3: Recommendation Report – Next Steps

To continue this conversation MPPDC staff created recommendations for possible next steps for research:

1. Distribute the report to General Assembly Members and the Virginia Association of Counties to promote awareness.
2. Distribute the report to the Virginia CZM Program’s Coastal Policy Team for awareness and possible discussion.
3. Coastal PDC’s should discuss the report with their General Assembly representatives and seek collaborative legislative solutions. House Bill 1675 can serve as a model for legislative fairness:

*HB 1675 Siting of solar energy facilities. Requires any applicant seeking to locate a commercial solar photovoltaic (electric energy) generation or storage facility, or any portion thereof, on any census tract meeting the eligibility requirements for an opportunity zone as designated by the federal Internal Revenue Service to execute a siting agreement with the host locality in which the census tract is located, prior to the issuance of a permit by rule or certificate of public need. The bill grants localities various powers in executing such siting agreement and contains certain requirements for the agreement provisions. The bill does not apply to any solar photovoltaic (electric energy) generation or storage facility that has received zoning or site plan approval, preliminary or otherwise, from the host locality on or before January 1, 2020.*

During the 2020 General Assembly Session there are 62 bills introduced associated with solar (Appendix 3). HB 1675, mentioned above, was approved by the Governor on April 7, 2020 and will become effective July 1, 2020 (See Appendix 4). This bill provides new local government authorities to rural localities as the host of a solar project, including the ability to negotiate a financial package that is fair to local governments. Most importantly this bill defines the following:

*"Host locality" means any locality within the jurisdictional boundaries of which construction of a commercial solar facility is proposed.*

*"Opportunity zone" means a census tract in an area of the host locality meeting the eligibility requirements for designation as a qualified opportunity zone by the U.S. Secretary of the Treasury via his delegation of authority to the Internal Revenue Service.*

*"Solar facility" means a commercial solar photovoltaic (electric energy) generation or storage facility, or any portion thereof. "Solar facility" does not include any project that is (i) described in § 56-594, 56-594.01, or 56-594.2 or Chapters 358 and 382 of the Acts of Assembly of 2013, as amended, or (ii) five megawatts or less.*

Additionally, prior to the issuance of a permit by rule or certificate of public need, a solar applicant seeking to locate a facility on any census tract meeting the eligibility requirements for an opportunity zone, as designated by the federal Internal Revenue Service, shall execute a siting agreement with the host locality in which the census tract is located. According to § 15.2-2316.7.B. of the bill, *The siting agreement may include terms and conditions, including (i) mitigation of any impacts of such solar facility; (ii) financial compensation to the host locality to address capital needs set out in the (a) capital improvement plan adopted by the host locality, (b) current fiscal budget of the host locality, or (c) fiscal fund balance policy adopted by the host locality; or (iii) assistance by the applicant in the deployment of broadband, as defined in § 56-585.1:9, in such locality.*

## CONCLUSION:

Blue and green infrastructure has always been the foundation of the economy within rural, coastal Virginia localities. However, with technological advances and business innovation, coastal Virginia's blue and green infrastructure is increasingly commoditized and used to comply with environmental regulations (wetland mitigation, green energy goals), yet there are limited tools for local governments to use to generate revenue aside from property taxes. There are models that both Virginia and other States across the Nation use that can help rural, coastal, local government remain financially solvent and support nature based extractive industries.

Middle Peninsula local governments are supportive of industries that leverage the natural resources of the rural coastal region. The challenge is developing new state tax policy that allows these important industries not only to exist, but to grow and contribute to the cost of delivering essential local government services.

## Appendix 1: FOREST PRODUCT TAX (Department of Forestry – Question & Answers)

### **Severance Tax:** (Forest Products Tax Act)

To provide further for the conservation of the natural resources of the Commonwealth by the protection and development of forest resources and reforestation of forest lands, there is hereby levied, in addition to all other taxes imposed, a forest products tax. The tax shall be paid by every person engaged in this Commonwealth in business as a manufacturer or shipper of forest products for sale, profit, or commercial use.

### **Tax Rates:**

The tax hereby imposed shall be assessed at the following rates (Sec. [§58.1-1604](#)):



1. On pine lumber in its various sizes and forms, including railroad switch ties, bridge timber, and dimension stock, the rate per 1000 board feet measure shall be \$1.15; or at the election of the taxpayer, 20 cents per ton of logs received.
2. On hardwood, cypress and all other species of lumber the rate per 1000 board feet measure shall be 22 1/2 cents; or at the election of the taxpayer, 4 cents per ton of logs received.
3. On timber sold as logs and not converted into lumber or other products in the Commonwealth, the rate per 1000 feet log scale, International 1/4" Kerf Rule, shall be \$1.15 on pine; and 22 1/2 cents on other species; or at the election of the taxpayer, 20 cents per ton of pine logs received; and 4 cents per ton of logs of other species received.
4. On logs to be converted into veneer the rate per 1000 board feet log scale, International 1/4" Kerf Rule, shall be \$1.15 for pine and 22 1/2 cents for other species; or at the election of the taxpayer, 20 cents per ton of pine logs received; and 4 cents per ton of logs of other species received.
5. On pulpwood, excelsior wood, chemical wood, bolts or billets, fuel wood, tanbark, and other products customarily sold by the cord, the rate per standard cord of 128 cubic feet shall be 47 1/2 cents for pine, 11 1/4 cents per cord on all other species; or at the election of the taxpayer, 20 cents per ton of pine logs received; and 4 cents per ton of logs of other species received.
6. On chips manufactured from roundwood and customarily sold by the pound, the rate per 100 pounds shall be 0.986 cents for pine, and 0.234 cents for other species.
7. On railroad crossties the rate per piece shall be 3 8/10 cents on pine, and one cent on all other species; or at the election of the taxpayer, 20 cents per ton of pine logs received; and 4 cents per ton of logs of other species received.
8. On posts, mine ties, mine props, round mine collars, and other types of timber used in connection with mining and ordinarily sold by the piece, the rate per 100 pieces shall be as follows: 38 cents for pine, and 9 cents for other species, where each piece is 4' or less in length; 61 3/4 cents for pine and 14 1/4 cents for other species, where each piece is more than 4' but not over 8' in length; and 76 cents for pine and 18 cents for other species, where each piece is more than 8' in length. If the taxpayer so elects, he may pay the taxes due on the above forest products at the rate of \$1.045 for pine and 24 3/4 cents for other species, per 1000 lineal feet; or at the election of the taxpayer, 20 cents per ton of pine logs received; and 4 cents per ton of logs of other species received.
9. On piling and poles of all types the rate shall equal 2.31 percent of invoice value f.o.b. loading out point; or at the election of the taxpayer, 20 cents per ton of pine logs received; and 4 cents per ton of logs of other species received.
10. On keg staves the rate per standard 400-inch bundle shall be 3 8/10 cents for pine and 1 1/2 cents for other species; the rate per 100 keg heads shall be 11 5/10 cents on pine and 4 1/2 cents for other species; and on tight cooperage, 4 1/2 cents per 100 staves and 9 cents per 100 heads; or at the election of the taxpayer, 20 cents per ton of pine logs received; and 4 cents per ton of logs of other species received.



11. On any other type of forest product not herein enumerated, severed or separated from the soil, the Commissioner shall determine a fair unit tax rate, based on the cubic foot wood volume relationship between the product and the cubic foot volume of 1000 feet board measure of pine when the product is pine, or on the unit rate of cedar or hardwood lumber when the product is a species other than pine.

**Optional rates for certain manufacturers and severers:** (Sec. [§58.1-1606](#))

Notwithstanding the provisions of §§ 58.1-1604 and 58.1-1605, any manufacturer of rough lumber who during any one calendar year, manufactures 500,000 or less board feet may elect to pay a flat tax of \$460 when the amount cut is between 500,000' and 300,000', and a flat tax of \$230 when the amount cut is 300,000 board feet or less. The tax shall be payable to the Department within thirty days after December 31 of each year and the manufacturer shall submit to the Department with said tax, forms prescribed by the Department, certifying that he had actually manufactured a quantity of rough lumber in accordance with the foregoing schedule during the preceding calendar year.

Any person who severs for sale 100 or less cords of fuel wood, or 500 or less posts for fish net poles, during any one calendar year may elect to pay the tax due within the thirty days after December 31 of each year and submit to the Department with said tax, forms prescribed by the Department, certifying the quantity of product severed during the preceding calendar year.

## Appendix 2: Commercial Fishing License Fees

### 4 VAC 20-1090-30. License fees.

The following listing of license fees applies to any person who purchases a license for the purposes of harvesting for commercial purposes, or fishing for recreational purposes, during any calendar year. The fees listed below include a \$1 agent fee.

<b>1. COMMERCIAL LICENSES</b>	
Commercial Fisherman Registration License	\$190.00
Commercial Fisherman Registration License for a person 70 years or older	\$90.00
Delayed Entry Registration.	\$190.00
Delayed Entry Registration License for a person 70 years or older	\$90.00
Seafood Landing License for each boat or vessel	\$175.00
For each Commercial Fishing Pier over or upon subaqueous beds (mandatory)	\$83.00

Seafood Buyer's License -- For each boat or motor vehicle	\$63.00
Seafood Buyer's License -- For each place of business	\$126.00
Clam Aquaculture Product Owner's Permit	\$10.00
Oyster Aquaculture Product Owner's Permit	\$10.00
Clam Aquaculture Harvester's Permit	\$5.00
Oyster Aquaculture Harvester's Permit	\$5.00
Nonresident Harvester's License	\$444.00
<b>2. OYSTER RESOURCE USER FEES</b>	
Any licensed commercial fisherman harvesting oysters by hand	\$50.00
For any harvester using one or more gear types to harvest oysters or for any registered commercial fisherman who solely harvests or possesses any bushel limit described in 4 VAC 20-720-80, only one oyster resource user fee, per year, shall be paid	\$300.00
On any business shucking or packing no more than 1,000 gallons of oysters	\$500.00
On any business shucking or packing more than 1,000 but no more than 10,000 gallons of oysters	\$1,000.00
On any business shucking or packing more than 10,000 but no more than 25,000 gallons of oysters	\$2,000.00
On any business shucking or packing more than 25,000 gallons of oysters	\$4,000.00
On any oyster buyer using a single truck or location	\$100.00
On any oyster buyer using multiple trucks or locations	\$300.00
Commercial aquaculture operation, on riparian assignment or general oyster planting grounds	\$50.00
<b>3. OYSTER HARVESTING, SHUCKING, RELAY AND BUYERS LICENSES</b>	
Any person purchasing oysters caught from the public grounds of the Commonwealth or the Potomac River, for a single place of business with one boat or motor vehicle used for buying oysters	\$50.00
Any person purchasing oysters caught from the public grounds of the Commonwealth or the Potomac River, for a single place of business with multiple boats or motor vehicles used for buying oysters	\$100.00
For each person taking oysters by hand, or with ordinary tongs	\$10.00
For each single-rigged patent tong boat taking oysters	\$35.00
For each double-rigged patent tong boat taking oysters	\$70.00
Oyster Dredge Public Ground	\$50.00
Oyster Hand Scrape	\$50.00

To shuck and pack oysters, for any number of gallons under 1,000	\$12.00
To shuck and pack oysters, for 1,000 gallons, up to 10,000	\$33.00
To shuck and pack oysters, for 10,000 gallons, up to 25,000	\$74.00
To shuck and pack oysters, for 25,000 gallons, up to 50,000	\$124.00
To shuck and pack oysters, for 50,000 gallons, up to 100,000	\$207.00
To shuck and pack oysters, for 100,000 gallons, up to 200,000	\$290.00
To shuck and pack oysters, for 200,000 gallons or over	\$456.00
One day permit to relay condemned shellfish from a general oyster planting ground	\$150.00
<b>4. BLUE CRAB HARVESTING AND SHEDDING LICENSES, EXCLUSIVE OF CRAB POT LICENSES</b>	
For each person taking or catching crabs by dip nets	\$13.00
For ordinary trotlines	\$13.00
For patent trotlines	\$51.00
For each single-rigged crab-scrape boat	\$26.00
For each double-rigged crab-scrape boat	\$53.00
For up to 210 peeler pots	\$36.00
For up to 20 tanks and floats for shedding crabs	\$9.00
For more than 20 tanks or floats for shedding crabs	\$19.00
For each crab trap or crab pound	\$8.00
<b>5. CRAB POT LICENSES</b>	
For up to 85 crab pots	\$48.00
For over 85 but not more than 127 crab pots	\$79.00
For over 127 but not more than 170 crab pots	\$79.00
For over 170 but not more than 255 crab pots	\$79.00
For over 255 but not more than 425 crab pots	\$127.00
<b>6. HORSESHOE CRAB AND LOBSTER LICENSES</b>	
For each person harvesting horseshoe crabs by hand	\$16.00
For each boat engaged in fishing for, or landing of, lobster using less than 200 pots	\$41.00
For each boat engaged in fishing for, or landing of, lobster using 200 pots or more	\$166.00
<b>7. CLAM HARVESTING LICENSES</b>	

For each person taking or harvesting clams by hand, rake or with ordinary tongs	\$24.00
For each single-rigged patent tong boat taking clams	\$58.00
For each double-rigged patent tong boat taking clams	\$84.00
For each boat using clam dredge (hand)	\$19.00
For each boat using clam dredge (power)	\$44.00
For each boat using hydraulic dredge to catch soft shell clams	\$83.00
For each person taking surf clams	\$124.00
Water Rake Permit	\$24.00
<b>8. CONCH (WHELK) HARVESTING LICENSES</b>	
For each boat using a conch dredge	\$58.00
For each person taking channeled whelk by conch pot	\$51.00
<b>9. FINFISH HARVESTING LICENSES</b>	
Each pound net	\$41.00
Each stake gill net of 1,200 feet in length or under, with a fixed location	\$24.00
All other gill nets up to 600 feet	\$16.00
All other gill nets over 600 feet and up to 1,200 feet	\$24.00
Each person using a cast net or throw net or similar device	\$13.00
Each fyke net head, weir, or similar device	\$13.00
For fish trotlines	\$19.00
Each person using or operating a fish dip net	\$9.00
On each haul seine used for catching fish, under 500 yards in length	\$48.00
On each haul seine used for catching fish, from 500 yards in length to 1,000 yards in length	\$146.00
For each person using commercial hook and line	\$31.00
For each person using commercial hook and line for catching striped bass only	\$31.00
For up to 100 fish pots	\$19.00
For over 100 but not more than 300 fish pots	\$24.00
For over 300 fish pots	\$62.00
For up to 100 eel pots	\$19.00
For over 100 but not more than 300 eel pots	\$24.00

For over 300 eel pots	\$62.00
<b>10. MENHADEN HARVESTING LICENSES</b>	
<b>Any person purchasing more than one of the following licenses, as described in this subsection, for the same vessel, shall pay a fee equal to that for a single license for the same vessel.</b>	
On each boat or vessel under 70 gross tons fishing for the purse seine menhaden reduction sector	\$249.00
On each vessel 70 gross tons or over fishing for the purse seine menhaden reduction sector	\$996.00
On each boat or vessel under 70 gross tons fishing for the purse seine menhaden bait sector	\$249.00
On each vessel 70 gross tons or over fishing for the purse seine menhaden bait sector	\$996.00
<b>11. COMMERCIAL GEAR FOR RECREATIONAL USE</b>	
Up to five crab pots with a terrapin excluder device	\$36.00
Up to five crab pots without a terrapin excluder device	\$46.00
Crab trotline (300 feet maximum)	\$10.00
One crab trap or crab pound	\$6.00
One gill net up to 300 feet in length	\$9.00
Fish dip net	\$7.00
Fish cast net	\$10.00
Up to two eel pots	\$10.00
<b>12. SALTWATER RECREATIONAL FISHING LICENSE</b>	
Individual, resident	\$17.50
Individual, nonresident	\$25.00
Temporary 10-Day, resident	\$10.00
Temporary 10-Day, nonresident	\$10.00
Recreational boat, resident	\$48.00
Recreational boat, nonresident, provided a nonresident may not purchase a recreational boat license unless his boat is registered in Virginia	\$76.00
Head Boat/Charter Boat, resident, six or less passengers	\$190.00
Head Boat/Charter Boat, nonresident, six or less passengers	\$380.00
Head Boat/Charter Boat, resident, more than six passengers, plus \$5.00 per person, over six persons	\$190.00
Head Boat/Charter Boat, nonresident, more than six passengers, plus \$5.00 per person,	\$380.00

over six persons	
Rental Boat, resident, per boat, with maximum fee of \$703	\$14.00
Rental Boat, nonresident, per boat, with maximum fee of \$1270	\$18.00
Commercial Fishing Pier (Optional)	\$632.00
Disabled Resident Lifetime Saltwater License	\$10.00
Disabled Nonresident Lifetime Saltwater License	\$10.00
Reissuance of Saltwater Recreational Boat License	\$5.00
<b>13. COMBINED SPORTFISHING LICENSE</b>	
<b>This license is to fish in all inland waters and tidal waters of the Commonwealth during open season.</b>	
Residents	\$39.50
Nonresidents	\$71.00
<b>14. COMBINED SPORTFISHING TRIP LICENSE</b>	
<b>This license is to fish in all inland waters and tidal waters of the Commonwealth during open season, for five consecutive days.</b>	
Residents	\$24.00
Nonresidents	\$31.00
<b>15. TIDAL BOAT SPORTFISHING LICENSE</b>	
Residents	\$126.00
Nonresidents	\$201.00
<b>16. LIFETIME SALTWATER RECREATIONAL FISHING LICENSES</b>	
Individual Resident Lifetime License	\$276.00
Individual Nonresident Lifetime License	\$500.00
Individual Resident Lifetime License age 45 – 50	\$132.00
Individual Nonresident Lifetime License age 45 – 50	\$240.00
Individual Resident Lifetime License age 51 – 55	\$99.00
Individual Nonresident Lifetime License 51 – 55	\$180.00
Individual Resident Lifetime License age 56 – 60	\$66.00
Individual Nonresident Lifetime License age 56 – 60	\$120.00
Individual Resident Lifetime License age 61 – 64	\$35.00
Individual Nonresident Lifetime License age 61 – 64	\$60.00
Individual Resident Lifetime License age 65 and older	\$5.00



## Appendix 3: Bills Associated with Solar Introduced during the 2020 General Assembly Session

Composite view with notes			
Bills	Committee	Last action	Date
HB 77 - Rasoul - Green New Deal Act; fossil fuel projects moratorium, clean energy mandates, civil penalties.	(H) Referral Pending	(H) Committee Referral Pending	12/06/19
HB 174 - Krizek - Va. Residential Property Disclosure Act; required disclosures for buyer to beware, marine clays.	(H) Committee on General Laws	(H) Subcommittee recommends reporting (8-Y 0-N)	01/16/20
HB 206 - Ware - Electric utility regulation; retail customer choice.	(H) Committee on Labor and Commerce	(H) Assigned L & C sub: Subcommittee #3	01/14/20
HB 408 - Delaney - Green Job Creation Tax Credit; extends sunset date.	(H) Committee on Finance	(H) Read first time	01/17/20
HB 413 - Delaney - Subdivision ordinance; energy efficiency and renewable energy provisions.	(H) Committee on Counties, Cities and Towns	(H) Assigned CC & T sub: Land Use	01/17/20
HB 414 - Delaney - Virginia Energy Plan; covenants regarding solar power, reasonable restrictions.	(H) Committee on Labor and Commerce	(H) Assigned L & C sub: Subcommittee #3	01/16/20
HB 461 - Sullivan - Renewable energy property; tax credit established.	(H) Committee on Finance	(H) Referred to Committee on Finance	01/03/20
HB 518 - Bulova - Virginia Residential Property Disclosure Act; disclosures for a buyer to beware, etc.	(H) Committee on General Laws	(H) Subcommittee recommends reporting with substitute (8-Y 0-N)	01/16/20
HB 572 - Keam - Distributed renewable energy; promotes the establishment thereof.	(H) Committee on Labor and Commerce	(H) Assigned L & C sub: Subcommittee #3	01/16/20
HB 573 - Keam - Community solar development pilot program; low-income communities.	(H) Committee on Labor and Commerce	(H) Assigned C & L sub: Subcommittee #3	01/16/20
HB 574 - Keam - Virginia Residential Property Disclosure Act; residential building energy analysis.	(H) Committee on General Laws	(H) Subcommittee recommends incorporating (HB518-Bulova)	01/16/20
HB 633 - Willett - Energy saving products; tax deduction.	(H) Committee on Finance	(H) Referred to Committee on Finance	01/06/20
HB 655 - Heretick - Solar photovoltaic projects; conditional zoning.	(H) Committee on Counties, Cities and Towns	(H) Assigned CC & T sub: Land Use	01/17/20
HB 656 - Heretick - Solar energy projects; national standards.	(H) Committee on Labor and Commerce	(H) Assigned L & C sub: Subcommittee #3	01/16/20
HB 657 - Heretick - Comprehensive plan; solar facilities review.	(H) Committee on Labor and Commerce	(H) Assigned L & C sub: Subcommittee #3	01/16/20
HB 714 - Reid - Virginia Energy Plan; climate change pressing challenge.	(H) Committee on Labor and Commerce	(H) Assigned L & C sub: Subcommittee #3	01/16/20
HB 858 - Convors-Fowler - Virginia Residential Property Disclosure Act, etc.; required disclosures.	(H) Committee on General Laws	(H) Assigned GL sub: Housing/Consumer Protection	01/15/20
HB 859 - Convors-Fowler - Stormwater management facilities; private residential lots, disclosure.	(H) Committee on General Laws	(H) Assigned GL sub: Housing/Consumer Protection	01/15/20
HB 912 - Simon - Distributed renewable energy; promotes establishment of solar	(H) Committee on Labor and Commerce	(H) Assigned L & C sub: Subcommittee #3	01/16/20



HB 947 - Webert - Green development zones; investments in green technologies.	(H) Committee on Finance	(H) Referred to Committee on Finance	01/07/20
HB 959 - Bourne - Resilience hub pilot program; established.	(H) Committee on Labor and Commerce	(H) Assigned L & C sub: Subcommittee #3	01/16/20
HB 1017 - Sickles - Commonwealth of Virginia Innovation Partnership Authority; created.	(H) Committee on Communications, Technology and Innovation	(H) Assigned CT & I sub: Communications	01/16/20
HB 1067 - Kory - Electric utilities; net energy metering.	(H) Committee on Labor and Commerce	(H) Assigned L & C sub: Subcommittee #3	01/16/20
HB 1131 - Jones - Solar energy projects; revenue share assessment.	(H) Committee on Finance	(H) Referred to Committee on Finance	01/07/20
HB 1132 - Jones - Electric utility regulation; initial triennial review, requirements.	(H) Committee on Labor and Commerce	(H) Assigned L & C sub: Subcommittee #3	01/16/20
HB 1133 - Jones - Solar and wind energy; projects on previously developed project sites.	(H) Committee on Labor and Commerce	(H) Assigned L & C sub: Subcommittee #3	01/16/20
HB 1140 - Keam - Clean School Bus Grant Fund and Program; created and established.	(H) Committee on Education	(H) Assigned Education sub: Pre-K-12	01/13/20
HB 1171 - Poindexter - Solar farms; annual report of acreage, report.	(H) Committee on Agriculture, Chesapeake and Natural Resources	(H) Assigned ACNR sub: Natural Resources	01/14/20
HB 1173 - Lopez - Certified pollution control equipment and facilities; tax exemption, timing of certification.	(H) Committee on Finance	(H) Referred to Committee on Finance	01/07/20
HB 1183 - Lopez - Bulk energy storage resources; State Corporation Commission.	(H) Committee on Labor and Commerce	(H) Assigned L & C sub: Subcommittee #3	01/16/20
HB 1184 - Lopez - Distributed energy generation; promotes establishment of distributed solar energy.	(H) Committee on Agriculture, Chesapeake and Natural Resources	(H) Referred to Committee on Agriculture, Chesapeake and Natural Resources	01/07/20
HB 1295 - Helmer - Fossil fuel investments; tax on electric utilities.	(H) Committee on Finance	(H) Referred to Committee on Finance	01/08/20
HB 1434 - Jones - Local tax; exemption for solar energy equipment.	(H) Committee on Finance	(H) Referred to Committee on Finance	01/08/20
HB 1450 - Sullivan - Electric utility regulation; energy efficiency standard.	(H) Committee on Labor and Commerce	(H) Assigned L & C sub: Subcommittee #3	01/16/20
HB 1526 - Sullivan - Electric utility regulation; environmental goals.	(H) Referral Pending	(H) Committee Referral Pending	01/14/20
HB 1634 - Jones - Shared solar programs.	(H) Referral Pending	(H) Committee Referral Pending	01/16/20
HB 1675 - Hodges - Siting of solar energy facilities.	(H) Referral Pending	(H) Committee Referral Pending	01/17/20
SB 94 - Favola - Virginia Energy Plan; relating to the Commonwealth Energy Policy.	(S) Committee on Commerce and Labor	(S) Assigned C&L sub: Energy	01/10/20
SB 269 - Bell - Virginia Freedom of Information Act; exclusions, proprietary records and trade secrets.	(S) Committee on General Laws and Technology	(S) Constitutional reading dispensed (38-Y 0-N)	01/17/20
SB 271 - Bell - Higher educational institutions, public; public-private partnerships, wind and solar power.	(S) Committee on Education and Health	(S) Referred to Committee on Education and Health	01/03/20



SB 342 - Locke - Virginia Residential Property Disclosure Act; disclosure of special flood hazard area to purchaser.	General Laws and Technology	(S) Stricken at request of Patron in General Laws and Technology (14-Y 0-N)	01/15/20
SB 343 - Locke - Virginia Residential Property Disclosure Act; required disclosures for buyer to beware, etc.	(S) Committee on General Laws and Technology	(S) Constitutional reading dispensed (38-Y 0-N)	01/17/20
SB 354 - Bell - Electric utility regulation; energy efficiency standard.	(S) Committee on Commerce and Labor	(S) Referred to Committee on Commerce and Labor	01/06/20
SB 504 - Petersen - Virginia Energy Plan; covenants regarding solar power, reasonable restrictions.	(S) Committee on Commerce and Labor	(S) Assigned C&L sub: Energy	01/10/20
SB 629 - Surovell - Distributed electric generation; community solar gardens.	(S) Committee on Commerce and Labor	(S) Referred to Committee on Commerce and Labor	01/07/20
SB 632 - Surovell - Public utilities; energy storage capacity in the Commonwealth.	(S) Committee on Commerce and Labor	(S) Referred to Committee on Commerce and Labor	01/07/20
SB 634 - Surovell - Alternative and efficient energies; subsidies and rebates.	(S) Committee on Finance and Appropriations	(S) Rereferred to Finance and Appropriations	01/13/20
SB 685 - Mason - Certified pollution control equipment and facilities; tax exemption, timing of certification.	(S) Committee on Finance and Appropriations	(S) Referred to Committee on Finance and Appropriations	01/07/20
SB 710 - McClellan - Distributed renewable energy; establishment of solar renewable energy, etc.	(S) Committee on Commerce and Labor	(S) Referred to Committee on Commerce and Labor	01/07/20
SB 731 - McClellan - Investor-owned electric utilities; rate of return on common equity.	(S) Committee on Commerce and Labor	(S) Referred to Committee on Commerce and Labor	01/07/20
SB 762 - Barker - Solar energy projects; revenue share assessment.	(S) Committee on Finance and Appropriations	(S) Referred to Committee on Finance and Appropriations	01/08/20
SB 763 - Barker - Real estate tax; exemption for certified pollution control equipment and facilities.	(S) Committee on Finance and Appropriations	(S) Referred to Committee on Finance and Appropriations	01/08/20
SB 800 - Lewis - Real property tax exemption for certified pollution control equipment and facilities.	(S) Committee on Finance and Appropriations	(S) Referred to Committee on Finance and Appropriations	01/08/20
SB 820 - Morrissey - Constitutional amendment; personal property tax exemption for motor vehicle of a disable veteran.	(S) Committee on Privileges and Elections	(S) Referred to Committee on Privileges and Elections	01/08/20
SB 851 - McClellan - Electric utility regulation; environmental goals.	(S) Committee on Commerce and Labor	(S) Referred to Committee on Commerce and Labor	01/08/20
SB 870 - Marsden - Solar photovoltaic projects; conditional zoning.	(S) Committee on Local Government	(S) Referred to Committee on Local Government	01/08/20
SB 875 - Marsden - Solar energy projects; national standards.	(S) Committee on Commerce and Labor	(S) Referred to Committee on Commerce and Labor	01/08/20
SB 876 - Marsden - Electric utility regulation; clean energy standard.	(S) Committee on Commerce and Labor	(S) Referred to Committee on Commerce and Labor	01/08/20
SB 893 - Marsden - Comprehensive plan; solar facilities review.	(S) Committee on Local Government	(S) Referred to Committee on Local Government	01/08/20
SB 998 - Lucas - Offshore wind generation facilities; development of facilities.	(S) Committee on Commerce and Labor	(S) Referred to Committee on Commerce and Labor	01/16/20
SJ 33 - Reeves - Constitutional amendment; personal property tax exemption for motor vehicle of a disabled veteran.	(S) Committee on Privileges and Elections	(S) Referred to Committee on Privileges and Elections	01/07/20

## Appendix 4: HB 1675 – Siting for Solar Energy Facilities

### VIRGINIA ACTS OF ASSEMBLY -- CHAPTER

An Act to amend the Code of Virginia by adding in Chapter 22 of Title 15.2 an article numbered 7.3, consisting of sections numbered [15.2-2316.6](#) through [15.2-2316.9](#), relating to siting of solar energy facilities.

[H 1675]  
Approved

Be it enacted by the General Assembly of Virginia:

1. That the Code of Virginia is amended by adding in Chapter 22 of Title 15.2 an article numbered 7.3, consisting of sections numbered [15.2-2316.6](#) through [15.2-2316.9](#), as follows:

*Article 7.3.  
Siting of Solar Energy Facilities.*

§ [15.2-2316.6](#). *Siting of solar facilities in economically disadvantaged localities.*

A. *As used in this article, unless the context requires a different meaning:*

*"Host locality" means any locality within the jurisdictional boundaries of which construction of a commercial solar facility is proposed.*

*"Opportunity zone" means a census tract in an area of the host locality meeting the eligibility requirements for designation as a qualified opportunity zone by the U.S. Secretary of the Treasury via his delegation of authority to the Internal Revenue Service.*

*"Solar facility" means a commercial solar photovoltaic (electric energy) generation or storage facility, or any portion thereof. "Solar facility" does not include any project that is (i) described in § [56-594](#), [56-594.01](#), or [56-594.2](#) or Chapters 358 and 382 of the Acts of Assembly of 2013, as amended, or (ii) five megawatts or less.*

B. *This article applies only to a solar facility located in an opportunity zone.*

§ [15.2-2316.7](#). *Negotiations; siting agreement.*

A. *Any applicant for a solar facility shall give to the host locality written notice of the applicant's intent to locate a solar facility in an opportunity zone in such locality and request a meeting. Such applicant shall meet, discuss, and negotiate a siting agreement with such locality.*

B. *The siting agreement may include terms and conditions, including (i) mitigation of any impacts of such solar facility; (ii) financial compensation to the host locality to address capital needs set out in the (a) capital improvement plan adopted by the host locality, (b) current fiscal budget of the host locality, or (c) fiscal fund balance policy adopted by the host locality; or (iii) assistance by the applicant in the deployment of broadband, as defined in § [56-585.1:9](#), in such locality.*

§ [15.2-2316.8](#). Powers of host localities.

A. The governing body of a host locality shall have the power to:

1. Hire and pay consultants and other experts on behalf of the host locality in matters pertaining to the siting of a solar facility;
2. Meet, discuss, and negotiate a siting agreement with an applicant; and
3. Enter into a siting agreement with an applicant that is binding upon the governing body of the host locality and enforceable against it and future governing bodies of the host locality in any court of competent jurisdiction by signing a siting agreement pursuant to this article. Such contract may be assignable at the parties' option.

B. If the parties to the siting agreement agree upon the terms and conditions of a siting agreement, the host locality shall schedule a public hearing, pursuant to subdivision A of § [15.2-2204](#), for the purpose of consideration of such siting agreement. If a majority of a quorum of the members of the governing body present at such public hearing approve of such siting agreement, the siting agreement shall be executed by the signatures of (i) the chief executive officer of the host locality and (ii) the applicant or the applicant's authorized agent. The siting agreement shall continue in effect until it is amended, revoked, or suspended.

§ [15.2-2316.9](#). Effect of executed siting agreement; land use approval.

A. Nothing in this article shall be construed to exempt an applicant from any other applicable requirements to obtain approvals and permits under federal, state, or local ordinances and regulations. An applicant may file for appropriate land use approvals for the solar facility under the regulations and ordinances of the host locality at or after the time the applicant submits its notice of intent to site a solar facility as set forth in subdivision A of § [15.2-2316.7](#).

B. Nothing in this article shall affect the authority of the host locality to enforce its ordinances and regulations to the extent that they are not inconsistent with the terms and conditions of the siting agreement.

C. Approval of a siting agreement by the local governing body in accordance with subdivision B of § [15.2-2316.8](#) shall deem the solar facility to be substantially in accord with the comprehensive plan of the host locality, thereby satisfying the requirements of § [15.2-2232](#).

D. The failure of an applicant and the governing body to enter into a siting agreement may be a factor in the decision of the governing body in the consideration of any land use approvals for a solar facility, but shall not be the sole reason for a denial of such land use approvals.

2. That the provisions of this act shall not apply to any solar facility that has received zoning and site plan approval, preliminary or otherwise, from the host locality on or before January 1, 2020.