

Community & Economic Development Committee Meeting

AGENDA

May 7, 2019 - 1:00 PM

Conference Room A/B/C, Second Floor

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**Committee Members: Chairman Cindy Shelton, Wendy Maurer and Gary Snellings**

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**Community Economic Development Committee Meeting Agenda**

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1. DISCUSS THE USE OF APIARIES IN RESIDENTIAL AND PLANNED DEVELOPMENT ZONING DISTRICTS
2. DISCUSS CHANGES TO USES PERMITTED IN THE A-1, AGRICULTURAL ZONING DISTRICT.
3. AUTHORIZE THE PURCHASE OF DEVELOPMENT RIGHTS ON TAX MAP PARCELS 17-49G, 49I AND 49J (CATON PROPERTY); AND AUTHORIZE AN APPLICATION FOR MATCHING FUNDS THROUGH THE US DEPARTMENT OF DEFENSE

Next CEDC meeting is scheduled for June 4, 2019

This agenda may be amended on the day of the meeting. Participation of all citizens is encouraged. For all individuals with special needs, please notify County Administration of any accommodations required at least 24 hours in advance of the meeting. The agenda and related materials may be found on the County's website at [www.staffordcountyva.gov](http://www.staffordcountyva.gov)

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**Committee Members: Chairman Cindy Shelton, Wendy Maurer and Gary Snellings**  
**Community Economic Development Committee Meeting Agenda**

<b>Subject:</b>	
Discuss the Use of Apiaries in Residential and Planned Development Zoning Districts	
<b>Recommended Action:</b>	
Determine if an ordinance amendment should be pursued to allow Apiaries in residential and planned development districts.	
<b>Committee/Commission Recommendation:</b>	
CEDC	
<b>Fiscal Impact:</b>	<b>District:</b>
N/A	
<b>Overview:</b>	
Several Board of Supervisors members have received inquiries to allow Apiaries (Bee Hives) in residential and planned development zoned neighborhoods. The zoning ordinance includes apiaries in the definition of agricultural operation. Agricultural operations are only allowed in A-1, Agricultural and A-2, Rural residential zoning districts.	
<b>Discussion/Analysis:</b>	
<p>An apiary usually consists of a box type structure(s) with removable frames where the bees build honeycombs. Bee keeping can be conducted as a hobby or for pecuniary gain by selling honey and bees wax based products. Interest in bee keeping has grown in recent years for at-home food production and as a means to help stem the tide of declining bee populations in the United States.</p> <p>Several other County governments have dealt with this issue. Common themes revolve around viability of the hives and safety of nearby residents. Some ordinances require a convenient water source for the bees so that the bees will not congregate at nearby swimming pools, pet water bowls, bird baths or other water sources that would create conflicts between bees, humans, pets and wildlife. Bees often swarm and can be a nuisance and even highly dangerous to people who have allergic reactions to bee</p>	

stings. Ordinances typically establish setbacks from property lines and tall physical barriers between the hives and nearby property lines. Hanover County even requires the property to be posted with signs warning that bee hives are present on the property.

The intent of the ordinances is to help channel the direction of bee swarms and provide suitable distance to neighbors as a means to avoid nuisances. Bees are not fully domesticated insects. The location of hives and colonies are not limited to man made hive structures. It is not uncommon for bees to swarm and colonize in nearby trees, eaves and attics of nearby structures.

**Attachments:**

1. Chart of Counties

**Summary/Conclusion:**

Currently, there is limited regulation of apiaries in Agricultural zoning districts in the County. There are no specific zoning regulations governing the number or location of hives. If the Board would like to consider extending the use of keeping apiaries to the residential and planned development zoning districts, additional performance standards in the smaller lot subdivisions should be considered. Attachment 1 is a chart describing how our peer localities handle this issue.

**Strategic Priorities:**

This initiative could be considered to be in support of Priority 5.2 of the "Vibrant and Exciting Business Community" priority by allowing additional opportunities for establishing home based businesses.

**Reviewed By:**

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County	Agriculture District	Other district
Chesterfield	Permitted use	Accessory use, no more than 2 bee boxes, accessory setbacks not commercial operations no sale of product produced
James City	Accessory use	Not permitted
Prince William	Accessory use 4 bee hives on lots less than 10,000sf 1 additional beehive For every 2,500 sf larger than 10,000 sf lot, Adequate water source within 50 feet of beehives Flight barrier of 6 feet if landing platform of hive faces and is within 10 ft of lot line	Accessory use 4 bee hives on lots less than 10,000sf 1 additional beehive For every 2,500 sf larger than 10,000 sf lot, Adequate water source within 50 feet of beehives Flight barrier of 6 feet if landing platform of hive faces and is within 10 ft of lot line
Henrico	Permitted use with 400 ft distance from adjacent dwelling	Not permitted
Spotsylvania	Home Occupation with accessory setbacks	Home Occupation with accessory setbacks

### Community & Economic Development Committee Meeting

#### AGENDA

May 7, 2019 - 1:00 PM

Conference Room A/B/C, Second Floor

**Committee Members: Chairman Cindy Shelton, Wendy Maurer and Gary Snellings**  
**Community Economic Development Committee Meeting Agenda**

<b>Subject:</b>	
Discuss Changes to Uses Permitted in the A-1, Agricultural Zoning District.	
<b>Recommended Action:</b>	
Recommend forwarding to the Board of Supervisors for their review and approval to refer the ordinance amendment to the Planning Commission to start the public hearing process.	
<b>Committee/Commission Recommendation:</b>	
CEDC deferred action on this item on February 5, 2019 and March 5, 2019 for further discussion.	
<b>Fiscal Impact:</b>	<b>District:</b>
N/A	
<b>Overview:</b>	
Proposed Ordinance O19-21 would reduce conflicts between agricultural and residential activities and uses while protecting agricultural related operations and businesses.	
<b>Discussion/Analysis:</b>	
<p>The Board approved Resolution R17-255 on September 19, 2017. This resolution requested the Planning Commission provide recommended changes to the uses permitted in the A-1, Agricultural Zoning District. This request was the result of the Board of Zoning Appeals questioning the compatibility of the permitted uses in this zoning district.</p> <p>The Planning Commission formed a committee consisting of Commissioners Darrell English, Steven Apicella, and Albert Bain; and two additional members from the agricultural community. Mr. John Howe is Chairman of the Agricultural/PDR Committee, and a retired Extension Agent. Mr. John Harris owns a farm and is a former Planning Commissioner. These members brought valuable insight to the committee.</p> <p>The committee met in December 2017, January, April, and May in 2018. The committee reviewed and</p>	

discussed every use that is currently listed in the district and reviewed the regulations for uses in the agricultural zoning districts of the following counties: Albemarle, Fauquier, Hanover, Loudoun, Prince William, and Spotsylvania. These counties were designated as Stafford's peer counties at the time of the committee discussions.

The recommendations of the Committee removed several uses, changed the approval process for some, and added a minimum acreage requirement for others. Uses that should be added due to recent state legislation are agri-tourism and farm wineries. Staff has prepared a chart showing the proposed changes including these uses. In addition to the recommendations, several uses and definitions need further discussion and it was thought the full Commission should be included in these discussions. These include wedding/event venues, acreage requirements for kennels, and keeping of livestock such as horses and chickens.

Currently, wedding venues are not a listed use but are approved as a rural home business by special exception approved by the Board of Zoning Appeals. It is suggested the use be listed as a use approved by special exception with an acreage requirement. Concerns over the noise generated by such venues have been voiced by the neighbors during previous public hearings. If the venue is on a larger acreage parcel, noise levels can be reduced by providing a greater distance from the venue to the neighbors. Staff canvassed the peer counties and found that they permit this type of use by temporary use permit.

When dog kennels were discussed, noise and acreage were concerns. Kennels are divided into two categories – commercial and non-commercial. A commercial kennel is defined as a location used for boarding, breeding, grooming, and/or training of 6 or more dogs for pecuniary gain. The definition of non-commercial kennel removes the statement “for pecuniary gain.” Both are permitted in the A-1, Agricultural District; the commercial kennel requires approval of a conditional use permit and the non-commercial kennel is permitted as a by-right use. The committee solicited Animal Control Officer Michael Null for his input on this issue. Officer Null spoke to the issue of noise from the barking dogs and believed that any measures taken, such as setbacks from property lines and increasing the required acreage, would help reduce the levels. He suggested that a kennel be allowed on lots of 6 acres for 6 dogs, and require an additional acre of land for each additional dog. This would help prevent kennels from being located in subdivisions with the minimum acreage requirement of 3 acres, increase the distance to adjacent dwellings, and locate the sound farther away from adjacent properties.

Officer Null also believed increasing the acreage required for the keeping of livestock was an item that needed discussing. This concern arises from property owners on 3-acre lots wanting horses, cows, chickens, etc. Currently, there are no acreage requirements for the keeping of such animals and the concern is that animals are not given enough room to flourish and are too close to the adjacent properties. One suggestion was to require a conservation plan approved by the Soil and Water Conservation District before livestock can be located on property. Such a plan would go a long way towards addressing the need for small agricultural operations to use best management practices for the operation on their land. The committee understands this is not within the parameters of Resolution R17-255, but wanted to make all aware of this as a comprehensive review of the uses and their

definitions.

After reviewing the list of changes, staff suggests the Planning Commission also consider recommending changing the approval process for commercial kennels from a conditional use permit to a special exception. This would allow for the use to end when the operation of the kennel ceased.

At the September 12, 2018 meeting, the Commission discussed the changes to the uses in this district and requested additional information concerning wedding/event venues and wanted language drafted to address issues of keeping livestock on small acreage lots.

Staff provided the following information to the Commission at the September 26, 2018 meeting for their review and comments.

Staff reached out to the peer counties for information on how they regulated wedding/event venues in the non-commercial zoning districts and received the following:

- Prince William County - temporary activity permit (max 6 per year), if conducted at a licensed farm winery it is considered an ancillary use with a max attendance of 150 guests.
- Loudoun County - approved as a minor special exception and defined as a banquet/event facility and provides for the regulations as to size of parcel, number of attendees, landscaping and noise levels permitted.
- Fauquier County - regulated as a special exception permit approved by the Board of Supervisors with standards for acreage, setbacks, duration of event, and number of attendees.
- Albemarle County - weddings permitted only as ancillary to farm wineries, breweries if 200 attendees or less, otherwise requires a special events permits approved by the Board of Supervisors.

Staff has attached the regulations from the county codes and included a draft definition of an event venue for your review.

Concerning the subject of keeping livestock on small acreage lots, staff learned that Loudoun County zoning ordinance provides language that requires a conservation farm plan for agricultural operations on parcels less than 5 acres. The language is attached for your review. Staff has also provided a draft revision of the kennel definitions, both commercial and non-commercial to reflect the definitions used in Chapter 5, Animals of the County Code. In addition, the acreage requirement for a non-commercial kennel has been adjusted to account for the number of dogs changed from 6 to 5.

The Planning Commission reviewed the draft O18-35 which has been amended to include the definition of agri-tourism, event venue, class A winery, home-based rescue facilities, and amended definitions for

commercial and non-commercial kennels, and farm wineries. In addition, language was added to the agricultural operation to require farm plan for property less than 5 acres. The recommendations of the Planning Commission were presented to the Community and Economic Development Committee (CEDC) on March 5, 2019, The CEDC requested farm breweries be added to the list of uses permitted in the district

The CEDC discussed this at the March 5, 2019 meeting and requested the following items be addressed and researched:

The following items have been added to the proposed ordinance and are highlighted in yellow for your convenience:

- The term commercial has been added to the feed lot use item
- United State Department of Agriculture (USDA) Consulting Forester has been added to the forestry item
- Animal feeding operation (AFO) definition from Department of Environmental Quality (DEQ) has been added to the feedlot definition. This definition is used in regulating pollution run off from a site.

Requests were made to research the following items:

- The origins of the 900 foot setback from a stream for a feed lot which was different from other required setbacks. The 900 foot setback came from the cemetery regulations.

- DEQ required buffers for an AFO are generally from streams, rivers, sinkholes, or other natural or mandmade features and relate to animal waste disposal. A permit to discharge is required for an AFO is according to the number or type of livestock or poultry. These setbacks are taken from Virginia Cooperative Extension publication 446-049 waste applications.  
200 feet from a dwelling  
100 feet from a water supply well  
50 feet from surface water if waste is applied  
25 feet from surface water for subsurface injection  
25 feet for rock outcroppings except for limestone  
50 feet for limestone outcroppings

As stated in the publication, local zoning ordinances may included greater distance or additional buffer requirements.

- The five (5) acre minimum for an agriculture operation is consistent with the acreage requirement for land use tax consideration.

- Staff did not find that Hydroponic farming is a specific use listed in the VA State code, but guidelines for successful production is published by Virginia Cooperative Extension.



<b>Attachments:</b>
<ol style="list-style-type: none"><li>1. Attachment 1 - Chart with Changes to A-1</li><li>2. Attachment 2 - Proposed Draft Ordinance O19-21</li><li>3. Attachment 3 - Hydroponic Guidelines From VCE</li><li>4. Attachment 4 - VA Code 4.1-208</li><li>5. Attachment 5 - 9VAC25-192-10</li><li>6. Attachment 6 - VCE General Permit Requirements for Confined Animal Feeding</li></ol>
<b>Summary/Conclusion:</b>
<p>The changes to the uses in the A-1, Agricultural zoning district are the result of the Special Planning Commission Committee, the Planning Commission and the suggestion of the CEDC members. The intent of the changes and recommendations for standards of development were made to clarify the uses in the district, reduce conflicts between agriculture and residential uses and protect the existing and future agriculture operations and businesses in the county.</p> <p>Staff requests the CEDC vote to forward proposed Ordinance O19-21 to the Board for their consideration of sending to the Planning Commission for their recommendations.</p>
<b>Strategic Priorities:</b>
Healthy Growth
<b>Reviewed By:</b>



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## A1 Zoning Uses Proposed Changes

Uses	Current Regulations	Proposed Changes
<ul style="list-style-type: none"> <li>Agricultural service</li> <li>Establishment (selling farm machinery)</li> </ul>	Lots greater than 5 acres permitted by right	Special Exception, no acreage requirement
<ul style="list-style-type: none"> <li>Agriculture</li> </ul>	Definition agriculture operation	List use in table as agriculture operation
<ul style="list-style-type: none"> <li>Agri-tourism</li> </ul>	No mentioned	Added use in table and definitions
<ul style="list-style-type: none"> <li>Bed and Breakfast</li> </ul>	Permitted by right	Special Exception
<ul style="list-style-type: none"> <li>Boat sales</li> </ul>	Permitted by right	Accessory to Marina
<ul style="list-style-type: none"> <li>Campground</li> </ul>	Permitted by right	Require 10 acres
<ul style="list-style-type: none"> <li>Club/lodge/fraternal organization</li> </ul>	Permitted by right	Special Exception
<ul style="list-style-type: none"> <li>Community Use</li> </ul>	Permitted by right	Special Exception
<ul style="list-style-type: none"> <li>Farm Breweries –</li> </ul>	Breweries permitted in B-2 with SE, M-1 and M-2 by right	Add to use table and definitions Brewery limited license per state code
<ul style="list-style-type: none"> <li>Farm Wineries</li> </ul>	Not mentioned	Add use to table and definitions Per state code provisions
<ul style="list-style-type: none"> <li></li> </ul>		
<ul style="list-style-type: none"> <li>Feed lot</li> </ul>	Permitted by right with number of animal restrictions	Special Exception with no animal restrictions , setback from streams and per federal and state code provisions
<ul style="list-style-type: none"> <li>Fleet Parking</li> </ul>	Permitted by right	Remove as permitted use
<ul style="list-style-type: none"> <li></li> </ul>		
<ul style="list-style-type: none"> <li>Forestry</li> </ul>	Permitted by right	Require 20 acres and approved plan with Dept. of Forestry and/or certified consulting forester
<ul style="list-style-type: none"> <li>Golf Course</li> </ul>	Permitted by right	Conditional Use Permit
<ul style="list-style-type: none"> <li></li> </ul>		
<ul style="list-style-type: none"> <li>Kennel- non-commercial</li> </ul>	Permitted by right	Add minimum acreage requirement and additional acres per number of dogs Amend definition
<ul style="list-style-type: none"> <li>Kennel – commercial</li> </ul>	Permitted by Cond. Use Permit	Allow by special exception Add minimum acreage requirement and additional acres per number of dogs Amend definition
<ul style="list-style-type: none"> <li>Parking and storage of commercial vehicles</li> </ul>	Permitted by right	Remove

<ul style="list-style-type: none"> <li>Plant and tree</li> <li>nursery/greenhouse</li> </ul>	Permitted by right	Require 5 acre min lot size
<ul style="list-style-type: none"> <li>Recreational enterprise</li> </ul>	Permitted by right	Remove
<ul style="list-style-type: none"> <li></li> </ul>		
<ul style="list-style-type: none"> <li>Recreation facility</li> </ul>	Permitted by right	Remove
<ul style="list-style-type: none"> <li></li> </ul>		
<ul style="list-style-type: none"> <li>Sawmill and ancillary</li> </ul>	Permitted by right	Require 5 acres min. lot size
Products not part of		
Timbering operation		
<ul style="list-style-type: none"> <li>Slaughter and animal processing incidental to agricultural intensive use</li> </ul>	Permitted by right	Require 10 acres min lot, inspected by VA Dept of Agriculture
Slaughter and animal processing incidental to Agricultural intensive use		Requires 10 acres min, inspected by USDA approved by Special Exception
<ul style="list-style-type: none"> <li>Turkey Shoot</li> </ul>	Conditional Use	Special Exception
<ul style="list-style-type: none"> <li></li> </ul>		
<ul style="list-style-type: none"> <li>Veterinary Clinic</li> </ul>	Permitted by right	Special Exception if boarding animals
<ul style="list-style-type: none"> <li></li> </ul>		
<ul style="list-style-type: none"> <li>Event venue on 5 acre minimum parcel</li> </ul>		Create definition and permit as a special exception

O19-21

PROPOSED

BOARD OF SUPERVISORS  
COUNTY OF STAFFORD  
STAFFORD, VIRGINIA  
ORDINANCE

At a regular meeting of the Stafford County Board of Supervisors (the Board) held in the Board Chambers, George L. Gordon, Jr., Government Center, Stafford, Virginia, on the day of , 2019:

MEMBERS:

Gary F. Snellings, Chairman  
L. Mark Dudenhefer, Vice Chairman  
Meg Bohmke  
Jack R. Cavalier  
Thomas C. Coen  
Wendy E. Maurer  
Cindy C. Shelton

VOTE:

On motion of , seconded by , which carried by a vote of , the following was adopted:

AN ORDINANCE TO AMEND AND REORDAIN STAFFORD COUNTY CODE SEC. 28-25,"DEFINITIONS OF SPECIFIC TERMS," AND SEC. 28-35, TABLE 3.1, "TABLE OF USES AND STANDARDS," TO CREATE DEFINITIONS OF USES WITHIN THE A-1, AGRICULTURAL ZONING DISTRICT AND AMEND THE USES AND HOW THEY ARE PERMITTED

WHEREAS, the A-1, Agricultural Zoning District allows for a variety of uses;  
and

WHEREAS, questions concerning the compatibility of the permitted uses in the A-1, Agricultural Zoning District with traditional agricultural activities have been made by the Board of Zoning Appeals and supported by the Comprehensive Plan which encourages compatibility of uses and discourages growth in the rural area; and

WHEREAS, the Board requested the Planning Commission draft a proposed ordinance amendment to address uses and their compatibility in the A-1, Agricultural Zoning District; and

O19-21

WHEREAS, the Planning Commission formed a committee to review the uses permitted in the A-1, Agricultural Zoning District and drafted the proposed ordinance creating new definitions and amending the uses and how the uses are permitted; and

WHEREAS, the Board carefully considered the recommendations of the Planning Commission and staff, and the testimony, if any, received at the public hearing; and

WHEREAS, the Board finds that public necessity, convenience, general welfare, and good zoning practices require adoption of such an ordinance;

NOW, THEREFORE, BE IT ORDAINED by the Stafford County Board of Supervisors on this the     day of     , 2019, that Stafford County Code Sec. 28-25, "Definitions of specific terms," and Sec. 28-35, Table 3.1 "District Uses and Standards" be and they are amended and reordained as follows, all other portions remaining unchanged

Sec. 28-25. Definitions of specific terms.

*Agri-tourism activity.* Any activity carried out on a farm or ranch that allows members of the general public, for recreational, entertainment, or educational purposes, to view or enjoy rural activities, including farming, wineries, ranching, historical, cultural, harvest-your-own activities, or natural activities and attractions. An activity is an agri-tourism activity whether or not the participant paid to participate in the activity.

*Event venue:* a facility located on a minimum of 5 acres of land that is operated by the owner of the property who resides on the property. The events may include but not limited to weddings, birthdays, anniversaries, etc. In addition, the facility may contain a kitchen to conduct catering for onsite events only.

Farm Brewery – an establishment located on a farm in the Commonwealth on land zoned Agriculture and agriculture products grown on the farm are used in the production of the beer in accordance with VA State Code Sec. 4.1 208 (2).

*Farm winery.* An establishment engaged in the growing of grapes, honey, or other fruits for the production and resale of wine or other fermented beverages in accordance with Code of Virginia, § 4.1-100, 4.1-207(5).and 4.1-219. **Do we want to limit farm wineries to class A or B?**~~Farm wineries may also include limited retail sale of related products, and on-site special events, as an accessory use. An establishment located on a farm on land zoned agricultural with a producing vineyard, orchard, or similar growing area and with facilities for fermenting and bottling wine on the premises in accordance with the regulations as set forth by the VA State Code for a Class A farm winery.~~

*Feedlot.* A lot, yard, structure, corral or other area in which livestock are confined, primarily for the sole purpose of feeding, growing, raising, holding, and birthing prior to slaughter or sale at market. ~~Any enclosure, pen or building wherein more than three hundred (300) veal animals, slaughter or feeder cattle, two hundred (200) mature dairy cattle, seven hundred fifty (750) swine, one hundred fifty (150) horses, five hundred (500) sheep, lambs, goats or similar animals, five thousand (5,000) fowl constitute a feedlot.~~ This does not apply to areas upon which livestock are allowed to graze.

An Animal Feeding Operation (AFO) is defined as a lot or facility where animals are stabled or confined for a total of 45 days or more in any 12-month period, and where crops or vegetative growth is not maintained in the normal growing season over the lot or facility.

Class A farm winery license. At least 51 percent of the fruits or agricultural products used by the owner or lessee to manufacture the wine shall be grown or produced on such farm and no more than 25 percent of the fruits, fruit juices or other agricultural products shall be grown or produced outside the Commonwealth.

Home-based rescue means an animal welfare organization that takes custody of companion animals for the purpose of facilitating adoption and houses such companion animals in a foster home or a system of foster homes

~~Kennel, commercial, Any place where six (6) or more animals more than six (6) months of age are kept, boarded, groomed, bred or trained for pecuniary gain on a regular basis in which five (5) or more canines, felines, or hybrids of either are kept for the purpose of breeding, hunting, training, renting, buying, boarding, selling, or showing. This includes home-based rescue organizations.~~

~~Kennel, noncommercial A place where six (6) or more animals means any establishment in which five (5) or more canines, felines, or hybrids more than six (6) months of age are kept and maintained by the resident of the property as an accessory use. All kennels shall comply with the accessory structure/use regulations for the district.~~

### **Table 3.1. District Uses and Standards**

#### *A-1 Agricultural.*

The purpose of the A-1 district is to reserve areas for traditional agricultural activities and to provide for their continuation as well as preservation of areas of rural character.

(a) *Uses permitted by right:*

Accessory dwelling.

~~Agricultural service establishment on lots greater than or equal to five (5) acres.~~

~~Agriculture.~~ Agricultural operation, if on property less than 5 acres must provide a conservation farm plan approved by the Tri-County City Soil and Water Conservation District (SWCD)

Agri-tourism

Aquaculture.

Aqua tourism

Automobile avocation.

~~Bed and breakfast inn.~~

~~Boat sales.~~

Campground on ten (10) acre minimum parcel.

Cemetery. (See Section 28-39(o)).

~~Club/ lodge/ fraternal organization.~~

~~Community use.~~

Equestrian use and bridle path.

Farm Winery

Farmers market (in accordance with subsection 28-39(v)).

~~Feed lot.~~

Forestry - 20 acre minimum with plan approved by Department of Forestry and /or a certified consulting forester

~~Golf course.~~

Group family day care home (in accordance with subsection 28-39(g)).

Home business I

Home occupation.

Manufactured home qualifying as a single-family home under Virginia Code.

Noncommercial kennel – minimum 5 acres for 5 dogs, 1 acre for each additional dog (see revised kennel definition that reflects that in chapter 5)

Park and playground.

~~Parking and storage of commercial vehicles.~~

Place of worship.

Plant and tree nursery/greenhouse – a 5 acre minimum

Public facilities/utilities but not including generating facilities, substations, switching stations, and wastewater treatment facilities which are permitted as a conditional use permit, and not including propane and heating fuel distribution facilities.

Public works excluding wastewater treatment facilities.

~~Recreational enterprise.~~

~~Recreational facility.~~

Sawmill and ancillary products – a 5 acre minimum

Secondary dwelling fifty (50) or more years in age upon referral of the Stafford County Historic Commission.

Single-family dwelling.

Slaughter and animal processing incidental to agricultural intensive use – 10 acre minimum inspected by Virginia Department of Agriculture and Consumer Services (VDACS).

Small family day care.

Veterinary clinic without boarding facilities.

Wayside stand.

Wetland mitigation bank.

(b) *Conditional use permit:*

Airport, private.

Child care center.

~~Commercial kennel.~~

Commercial tree stump grinding and mulch sale.

Communication facility.

Golf course.

Horseracing.

Hotel/motel.



Indoor flea market.

Marina with or without accessory boat sales

Nursing home.

Outdoor flea market.

Public facilities/utilities for generating facilities, substations, switching stations and wastewater treatment facilities (except for the expansion or modification to a wastewater treatment facilities existing prior to October 17, 2006).

School.

Test lane facility.

Travel trailer/RV park.

~~Turkey shoot.~~

(c) *Special exception:*

Agricultural service establishment on lots ~~less~~ greater than five (5) acres.

Bed and Breakfast Inn

Club/lodge/fraternal organization

Commercial kennel – minimum 5 acres for 5 dogs, 1 acre for each additional dog (see revised kennel definition that reflects chapter 5).

Community Use

Event venue on lots greater than 5 acres

Commercial Feed lot - 900-foot setback from a perennial stream

Home-based rescue

Home business II

~~Parking and storage of commercial vehicles on lot(s) less than three (3) acres in size.~~

Rural home business

Slaughter and animal processing incidental to agricultural intensive use if inspected by United States Department of Agriculture (USDA) and 10 acres minimum

Turkey shoot

Veterinary clinic with boarding of facilities

TCF:JAH:swb

DRAFT

## Guide to Identifying Food Safety Hazards in Greenhouse Systems

Amber Vallotton<sup>1</sup>, Laura K. Strawn<sup>2</sup>, Joyce Latimer<sup>3</sup>

<sup>1</sup>Extension Specialist, Horticulture, <sup>2</sup>Assistant Professor and Extension Specialist, Food Science & Technology, <sup>3</sup>Professor and Extension Specialist, Horticulture

### Overview

According to the United States Department of Agriculture 2012 Census of Agriculture, sales from greenhouse-grown food crops equaled around \$800 million in the U.S. Crops grown included tomatoes, lettuce, cucumbers, peppers, and berries, with hydroponic production operations making up about 64% of the total production (cwt) (USDA Census of Agriculture, 2012). Demand for greenhouse-grown produce continues to increase, providing growers with unique opportunities to tap into this expanding market. Although greenhouse systems provide a more protected environment than field-grown systems, it is important to understand the unique food safety risks and possible sources of contamination when growing produce in these systems. Identifying food safety hazards are necessary to implementing practices that reduce the risk of contamination during the pre-plant, production, harvest, and post-harvest handling stages. Use the checklist below to guide you in asking important questions targeting possible risks at each of the greenhouse system stages.

### General

- Have all workers been trained in proper health, hygiene, and produce handling practices and policies for each of the stages; and are all procedures/SOPs performed being regularly documented (recordkeeping)?
- If any contamination concern occurs, what are the corrective actions to mitigate these concerns (remember to document them: describing the situation, date of occurrence, and action(s) taken)? For more information on understanding and identifying further food safety risks, visit Virginia's Fresh Produce Food Safety website: <http://www.hort.vt.edu/producesafety/>.

### Pre-Plant Stage

- What is the crop being grown? Are there any risks known to be associated with this crop?
- What is the seed source if you are propagating transplants from seeds?
- What substrate will be used for seed starting? Is it a soil-less substrate? If not, do you know the source, composition, and process used to make the media? For example, if rockwool is used, have the tools used to cut the rockwool been cleaned and sanitized?
- Are the growing containers new, or have the used containers been cleaned and sanitized?



- Is the water used for irrigating the seedlings from a potable source?
- Are there growing conditions that may pose a food safety risk (for example, high humidity, darkness, physical proximity to other hazards like chemicals used for nutrient solutions)?

### **Production Stage**

- What type of greenhouse production system is being used (for example, in-ground beds, benches, or hydroponic)?
- If plants are being grown in the ground, will they be grown on plastic or directly in the soil?
  - If growing in the soil, are any amendments being added?
  - If so, do these amendments contain raw manure or composted manure?
  - If so, do you have a record of the source/manufacturer of the amendment and process used to make it?
  - If so, was the amendment applied with the recommended interval between planting and harvest dates?
- If plants are being grown in containers on benches, what substrate is used?
- If a hydroponic system is used, what is the specific type (for example, nutrient film technique (NFT), floating raft, vertical stack, aeroponic)?
  - Are channels, rafts, and pots cleaned and sanitized between crop rotations; and stored to minimize contamination?
- What is the source of irrigation water? Is the irrigation source tested for *Escherichia coli* annually?
- For hydroponic nutrient solutions, are concentrated nutrients and acids stored in such a way as to prevent cross contamination and spillage?
- Does the greenhouse facility have overhead lights? If so, are lights covered to prevent shattering/breaking over crop growing areas?
- Are tools and materials stored in the greenhouse production area; are they located away from growing areas to prevent contamination?
- Are rodent/fly traps placed around the entrances and inside perimeter of the greenhouse? If so, do traps contain any poison bait that could be a risk? Is there a schedule to monitor traps)?
- Are domestic animals prevented from entry into the greenhouse, head-house, and packing areas?



### **Harvest Stage**

- Are harvesting tools, carts, and bins cleaned and sanitized prior to use? If so, are they properly stored to prevent re-contamination?



- If harvested crop is packed directly into containers and boxes in the production area, are packing materials new? Are all packing containers and boxes stored to protect them from contamination?
- If harvested crop is re-packed in a separate area from greenhouse production, is there a way to provide traceability of the crop and growing location from the greenhouse to the packing area (i.e. packing slip or labeling system)?

### **Post-Harvest Handling Stage**

- Have packing surfaces been cleaned and sanitized prior to packing the produce?
- If produce is washed prior to packing, has wash water been tested to ensure potability?
  - If so, is testing conducted at least annually (or more regularly as needed)?
  - Is washing equipment cleaned and sanitized prior to the wash step?
  - If sanitizer is used, is it labeled for use with produce and food contact surfaces, and are labeled rates being used?
- What types of packing materials are used (for example, clamshells, cardboard boxes, bags, foam, corrugated fiberboard, among others)? Are these properly stored to prevent contamination from pests and or other hazards?
- Are live rodent/fly traps placed in the packing area? Are these regularly monitored to track pest pressures?
- Once packed, how is the product stored?
  - For crops requiring refrigeration, are they stored in coolers, walk-in cold room, among others? Are cold storage facilities cleaned, organized, regularly maintained, and identified with proper signage?
  - Is the cooler used for storing non-produce, such as meats or other foods and items that could cross contaminate the produce?
  - Is storage temperature monitored to ensure that it is maintained consistently to preserve produce quality? Are thermometers regularly calibrated? How are thermometers calibrated?
- How is the product transported to the marketplace?
  - Is the cold chain maintained?
  - Is the transport vehicle regularly cleaned to prevent cross contamination?



### **References**

USDA Census of Agriculture. 2012. Available from:

<https://www.agcensus.usda.gov/Publications/2012/>. Accessed May 24, 2017.

Virginia Fresh Produce Food Safety Team. 2016. Greenhouse GAPs. Available from:

[https://www.youtube.com/watch?v=ia\\_vbyloyaw](https://www.youtube.com/watch?v=ia_vbyloyaw). Accessed May 24, 2017.

Code of Virginia  
Title 4.1. Alcoholic Beverage Control Act  
Chapter 2. Administration of Licenses

## § 4.1-208. Beer licenses

A. The Board may grant the following licenses relating to beer:

1. (Effective until January 1, 2019) Brewery licenses, which shall authorize the licensee to manufacture beer and to sell and deliver or ship the beer so manufactured, in accordance with Board regulations, in closed containers to (i) persons licensed to sell the beer at wholesale; (ii) persons licensed to sell beer at retail for the purpose of resale within a theme or amusement park owned and operated by the brewery or a parent, subsidiary or a company under common control of such brewery, or upon property of such brewery or a parent, subsidiary or a company under common control of such brewery contiguous to such premises, or in a development contiguous to such premises owned and operated by such brewery or a parent, subsidiary or a company under common control of such brewery; and (iii) persons outside the Commonwealth for resale outside the Commonwealth. Such license shall also authorize the licensee to sell at retail the brands of beer that the brewery owns at premises described in the brewery license for on-premises consumption and in closed containers for off-premises consumption.

Such license may also authorize individuals holding a brewery license to (a) operate a facility designed for and utilized exclusively for the education of persons in the manufacture of beer, including sampling by such individuals of beer products, within a theme or amusement park located upon the premises occupied by such brewery, or upon property of such person contiguous to such premises, or in a development contiguous to such premises owned and operated by such person or a wholly owned subsidiary or (b) offer samples of the brewery's products to individuals visiting the licensed premises, provided that such samples shall be provided only to individuals for consumption on the premises of such facility or licensed premises and only to individuals to whom such products may be lawfully sold.

1. (Effective January 1, 2019) Brewery licenses, which shall authorize the licensee to manufacture beer and to sell and deliver or ship the beer so manufactured, in accordance with Board regulations, in closed containers to (i) persons licensed to sell the beer at wholesale; (ii) persons licensed to sell beer at retail for the purpose of resale within a theme or amusement park owned and operated by the brewery or a parent, subsidiary or a company under common control of such brewery, or upon property of such brewery or a parent, subsidiary or a company under common control of such brewery contiguous to such premises, or in a development contiguous to such premises owned and operated by such brewery or a parent, subsidiary or a company under common control of such brewery; and (iii) persons outside the Commonwealth for resale outside the Commonwealth. Such license shall also authorize the licensee to sell at retail the brands of beer that the brewery owns at premises described in the brewery license for on-premises consumption and in closed containers for off-premises consumption, provided that not less than 20 percent of the volume of beer sold for on-premises consumption in any calendar year is manufactured on the licensed premises.

Such license may also authorize individuals holding a brewery license to (a) operate a facility designed for and utilized exclusively for the education of persons in the manufacture of beer, including sampling by such individuals of beer products, within a theme or amusement park



located upon the premises occupied by such brewery, or upon property of such person contiguous to such premises, or in a development contiguous to such premises owned and operated by such person or a wholly owned subsidiary or (b) offer samples of the brewery's products to individuals visiting the licensed premises, provided that such samples shall be provided only to individuals for consumption on the premises of such facility or licensed premises and only to individuals to whom such products may be lawfully sold.

2. Limited brewery licenses, to breweries that manufacture no more than 15,000 barrels of beer per calendar year, provided that (i) the brewery is located on a farm in the Commonwealth on land zoned agricultural and owned or leased by such brewery or its owner and (ii) agricultural products, including barley, other grains, hops, or fruit, used by such brewery in the manufacture of its beer are grown on the farm. The licensed premises shall be limited to the portion of the farm on which agricultural products, including barley, other grains, hops, or fruit, used by such brewery in the manufacture of its beer are grown and that is contiguous to the premises of such brewery where the beer is manufactured, exclusive of any residence and the curtilage thereof. However, the Board may, with notice to the local governing body in accordance with the provisions of § 4.1-230, also approve other portions of the farm to be included as part of the licensed premises. For purposes of this subdivision, "land zoned agricultural" means (a) land zoned as an agricultural district or classification or (b) land otherwise permitted by a locality for limited brewery use. For purposes of this subdivision, "land zoned agricultural" does not include land zoned "residential conservation." Except for the limitation on land zoned "residential conservation," nothing in this definition shall otherwise limit or affect local zoning authority.

Limited brewery licensees shall be treated as breweries for all purposes of this title except as otherwise provided in this subdivision.

3. Bottlers' licenses, which shall authorize the licensee to acquire and receive deliveries and shipments of beer in closed containers and to bottle, sell and deliver or ship it, in accordance with Board regulations to (i) wholesale beer licensees for the purpose of resale, (ii) owners of boats registered under the laws of the United States sailing for ports of call of a foreign country or another state, and (iii) persons outside the Commonwealth for resale outside the Commonwealth.

4. Wholesale beer licenses, which shall authorize the licensee to acquire and receive deliveries and shipments of beer and to sell and deliver or ship the beer from one or more premises identified in the license, in accordance with Board regulations, in closed containers to (i) persons licensed under this chapter to sell such beer at wholesale or retail for the purpose of resale, (ii) owners of boats registered under the laws of the United States sailing for ports of call of a foreign country or another state, and (iii) persons outside the Commonwealth for resale outside the Commonwealth.

No wholesale beer licensee shall purchase beer for resale from a person outside the Commonwealth who does not hold a beer importer's license unless such wholesale beer licensee holds a beer importer's license and purchases beer for resale pursuant to the privileges of such beer importer's license.

5. Beer importers' licenses, which shall authorize persons licensed within or outside the Commonwealth to sell and deliver or ship beer into the Commonwealth, in accordance with Board regulations, in closed containers, to persons in the Commonwealth licensed to sell beer at wholesale for the purpose of resale.

6. Retail on-premises beer licenses to:

- a. Hotels, restaurants, and clubs, which shall authorize the licensee to sell beer, either with or without meals, only in dining areas and other designated areas of such restaurants, or in dining areas, private guest rooms, and other designated areas of such hotels or clubs, for consumption only in such rooms and areas. For purposes of this subdivision, "other designated areas" includes outdoor dining areas, whether or not contiguous to the licensed premises, which may have more than one means of ingress and egress to an adjacent public thoroughfare, provided that such outdoor dining areas are under the control of the licensee and approved by the Board. Such noncontiguous designated areas shall not be approved for any retail license issued pursuant to subdivision A 5 of § 4.1-201.
- b. Persons operating dining cars, buffet cars, and club cars of trains, which shall authorize the licensee to sell beer, either with or without meals, in the dining cars, buffet cars, and club cars so operated by them for on-premises consumption when carrying passengers.
- c. Persons operating sight-seeing boats, or special or charter boats, which shall authorize the licensee to sell beer, either with or without meals, on such boats operated by them for on-premises consumption when carrying passengers.
- d. Grocery stores located in any town or in a rural area outside the corporate limits of any city or town, which shall authorize the licensee to sell beer for on-premises consumption in such establishments. No license shall be granted unless it appears affirmatively that a substantial public demand for such licensed establishment exists and that public convenience and the purposes of this title will be promoted by granting the license.
- e. Persons operating food concessions at coliseums, stadia, or similar facilities, which shall authorize the licensee to sell beer, in paper, plastic, or similar disposable containers or in single original metal cans, during the performance of professional sporting exhibitions, events or performances immediately subsequent thereto, to patrons within all seating areas, concourses, walkways, concession areas, and additional locations designated by the Board in such coliseums, stadia, or similar facilities, for on-premises consumption. Upon authorization of the licensee, any person may keep and consume his own lawfully acquired alcoholic beverages on the premises in all areas and locations covered by the license.
- f. Persons operating food concessions at any outdoor performing arts amphitheater, arena or similar facility which has seating for more than 3,500 persons and is located in Albemarle, Augusta, Pittsylvania, Nelson, or Rockingham Counties. Such license shall authorize the licensee to sell beer during the performance of any event, in paper, plastic or similar disposable containers or in single original metal cans, to patrons within all seating areas, concourses, walkways, concession areas, or similar facilities, for on-premises consumption. Upon authorization of the licensee, any person may keep and consume his own lawfully acquired alcoholic beverages on the premises in all areas and locations covered by the license.
- g. Persons operating food concessions at exhibition or exposition halls, convention centers or similar facilities located in any county operating under the urban county executive form of government or any city which is completely surrounded by such county, which shall authorize the licensee to sell beer during the event, in paper, plastic or similar disposable containers or in single original metal cans, to patrons or attendees within all seating areas, exhibition areas, concourses, walkways, concession areas, and such additional locations designated by the Board



in such facilities, for on-premises consumption. Upon authorization of the licensee, any person may keep and consume his own lawfully acquired alcoholic beverages on the premises in all areas and locations covered by the license. For purposes of this subsection, "exhibition or exposition halls" and "convention centers" mean facilities conducting private or public trade shows or exhibitions in an indoor facility having in excess of 100,000 square feet of floor space.

h. A nonprofit museum exempt from taxation under § 501(c)(3) of the Internal Revenue Code, located in the Town of Front Royal, and dedicated to educating the consuming public about historic beer products, which shall authorize the licensee to sell beer for on-premises consumption in areas approved by the Board. The privileges of this license shall be limited to the premises of the museum, regularly occupied and utilized as such.

7. Retail off-premises beer licenses, which shall authorize the licensee to sell beer in closed containers for off-premises consumption.

8. Retail off-premises brewery licenses to persons holding a brewery license which shall authorize the licensee to sell beer at the place of business designated in the brewery license, in closed containers which shall include growlers and other reusable containers, for off-premises consumption.

9. Retail on-and-off premises beer licenses to persons enumerated in subdivisions 6 a and 6 d, which shall accord all the privileges conferred by retail on-premises beer licenses and in addition, shall authorize the licensee to sell beer in closed containers for off-premises consumption.

10. Internet beer retailer license, which shall authorize persons located within or outside the Commonwealth to sell and ship beer, in accordance with § 4.1-209.1 and Board regulations, in closed containers to persons in the Commonwealth to whom beer may be lawfully sold for off-premises consumption. Such licensee shall not be required to comply with the monthly food sale requirement established by Board regulations.

B. Any farm winery or limited brewery that, prior to July 1, 2016, (i) holds a valid license granted by the Board in accordance with this title and (ii) is in compliance with the local zoning ordinance as an agricultural district or classification or as otherwise permitted by a locality for farm winery or limited brewery use shall be allowed to continue such use as provided in § 15.2-2307, notwithstanding (a) the provisions of this section or (b) a subsequent change in ownership of the farm winery or limited brewery on or after July 1, 2016, whether by transfer, acquisition, inheritance, or other means. Any such farm winery or limited brewery located on land zoned residential conservation prior to July 1, 2016 may expand any existing building or structure and the uses thereof so long as specifically approved by the locality by special exception. Any such farm winery or limited brewery located on land zoned residential conservation prior to July 1, 2016 may construct a new building or structure so long as specifically approved by the locality by special exception. All such licensees shall comply with the requirements of this title and Board regulations for renewal of such license or the issuance of a new license in the event of a change in ownership of the farm winery or limited brewery on or after July 1, 2016.

Code 1950, § 4-25; 1952, c. 535; 1956, c. 520; 1962, c. 532; 1964, c. 210; 1970, cc. 627, 723; 1972, c. 679; 1973, c. 343; 1974, c. 267; 1975, c. 408; 1976, cc. 134, 447, 496, 703; 1977, c. 439; 1978, c. 190; 1979, c. 258; 1980, cc. 526, 528; 1981, cc. 410, 412; 1982, c. 66; 1984, c. 200; 1987, c. 365; 1988, c. 893; 1989, c. 42; 1990, c. 707; 1991, c. 628; 1992, cc. 215, 350; 1993, cc. 828, 866; 1994, c. 585; 1995, cc. 497, 518, 544, 570; 1996, cc. 443, 604; 1997, cc. 489, 646, 662; 2000, c. 1047; 2003, cc.

329, 1029, 1030;2006, c. 845;2007, cc. 813, 870, 932;2012, c. 619;2014, c. 365;2015, c. 412;2016, cc. 671, 710;2017, cc. 76, 153;2018, cc. 63, 234, 337, 665.

The chapters of the acts of assembly referenced in the historical citation at the end of this section may not constitute a comprehensive list of such chapters and may exclude chapters whose provisions have expired.

Virginia Administrative Code

Title 9. Environment

Agency 25. State Water Control Board

Chapter 192. Virginia Pollution Abatement (VPA) Regulation and General Permit for Animal Feeding Operations and Animal Waste Management

## 9VAC25-192-10. Definitions.

The words and terms used in this chapter shall have the meanings defined in the State Water Control Law (§ 62.1-44.2 et seq. of the Code of Virginia) and the Permit Regulation (9VAC25-32) unless the context clearly indicates otherwise, except that for the purposes of this chapter:

"Agricultural stormwater discharge" means a precipitation-related discharge of manure, litter, or process wastewater that has been applied on land areas under the control of an animal feeding operation or under the control of an animal waste end-user in accordance with a nutrient management plan approved by the Virginia Department of Conservation and Recreation and in accordance with site specific nutrient management practices that ensure appropriate agricultural utilization of the nutrients in the manure, litter or process wastewater.

"Animal feeding operation" means a lot or facility where the following conditions are met:

1. Animals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period; and
2. Crops, vegetation, forage growth or post-harvest residues are not sustained in the normal growing season over any portion of the operation of the lot or facility.

Two or more animal feeding operations under common ownership are a single animal feeding operation for the purposes of determining the number of animals at an operation, if they adjoin each other, or if they use a common area or system for the disposal of wastes.

"Animal waste" means liquid, semi-solid, and solid animal manure and process wastewater, compost, or sludges associated with animal feeding operations including the final treated wastes generated by a digester or other manure treatment technologies.

"Animal waste end-user" or "end-user" means any recipient of transferred animal waste who stores or who utilizes the waste as fertilizer, fuel, feedstock, livestock feed, or other beneficial use for an operation under his control.

"Animal waste fact sheet" means the document that details the requirements regarding utilization, storage, and management of animal waste by end-users. The fact sheet is approved by the department.

"Beneficial use" means a use that is of benefit as a substitute for natural or commercial products and does not contribute to adverse effects on health or environment.

"Confined animal feeding operation," for the purposes of this regulation, has the same meaning as an "animal feeding operation."

"Department" means the Virginia Department of Environmental Quality.

"Director" means the Director of the Virginia Department of Environmental Quality or his designee.

"Nutrient management plan" or "NMP" means a plan developed or approved by the Department of Conservation and Recreation that requires proper storage, treatment, and management of animal waste and limits accumulation of excess nutrients in soils and leaching or discharge of nutrients into state waters; except that for an animal waste end-user who is not covered under the general permit, the requirements of 9VAC25-192-90 constitute the NMP.

"Organic source" means any nutrient source including, but not limited to, manures, biosolids, compost, and waste or sludges from animals, humans, or industrial processes, but for the purposes of this regulation it excludes waste from wildlife.

"Waste nutrient analysis rate" means a land application rate for animal waste approved by the board as specified in this regulation.

"Waste storage facility" means (i) a waste holding pond or tank used to store manure prior to land application, (ii) a lagoon or treatment facility used to digest or reduce the solids or nutrients, or (iii) a structure used to store manure or waste.

"Vegetated buffer" means a permanent strip of dense perennial vegetation established parallel to the contours of and perpendicular to the dominant slope of the field for the purposes of slowing water runoff, enhancing water infiltration, and minimizing the risk of any potential nutrients or pollutants from leaving the field and reaching surface waters.

"300 animal units" means 300,000 pounds of live animal weight, or the following numbers and types of animals:

- a. 300 slaughter and feeder cattle;
- b. 200 mature dairy cattle (whether milked or dry cows);
- c. 750 swine each weighing over 25 kilograms (approximately 55 pounds);
- d. 150 horses;
- e. 3,000 sheep or lambs;
- f. 16,500 turkeys;
- g. 30,000 laying hens or broilers.

**Statutory Authority**

§ 62.1-44.15 of the Code of Virginia.

**Historical Notes**

Derived from VR680-14-22 § 1, eff. November 16, 1994; amended, Virginia Register Volume 21, Issue 2, eff. November 3, 2004; Volume 30, Issue 18, eff. November 16, 2014.

# Virginia Cooperative Extension

PUBLICATION 446-049

## General Permit Requirements for Confined Animal Feeding Operations in Virginia

*David Kenyon, Professor of Agricultural and Applied Economics, Virginia Tech, Blacksburg, Virginia.*

### Introduction

A new waste management permit for confined animal feeding operations was adopted by the Virginia State Water Control Board on September 19, 1994, and became effective on November 16, 1994. The new regulation is referred to as the Virginia Pollution Abatement (VPA) General Permit Regulation for Confined Animal Feeding Operations [VR-680-14-22]. The purpose of this publication is to help producers understand who must have a permit to manage animal waste, how to apply for a permit, and the basic requirements contained in the general permit.

### Who Needs a Permit?

A “confined animal feeding operation” means a lot or facility, together with any associated treatment works, where both of the following conditions are met. One, animals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period. And two, crops, vegetation, forage growth, or post-harvest residues are not sustained over any portion of the operation lot or facility.

A permit is required for any confined animal feeding operation (CAFO) having 300 or more animal units utilizing a liquid manure collection and storage system. Table 1 contains the actual number of various livestock and poultry species equivalent to 300 animal units. The permit requirement only applies to liquid manure handling systems. Broiler, turkey, and laying hen operations using a dry manure handling system are excluded. The permit allows CAFO to operate and maintain waste storage facilities and to apply waste to land. The Department of Environmental Quality (DEQ) may require producers smaller than those listed in Table 1 to obtain a permit if public complaints and subsequent

DEQ inspections indicate the producer is not following acceptable waste management practices. No producer, regardless of size, is permitted to have a point source discharge of waste into surface waters.

Table 1. Animal Numbers Requiring Permit

Animal Type	Number
Dairy cattle	> 200
Feeder& slaughter cattle	> 300
Horses	> 150
Swine (>55 lbs)	> 750
Sheep	> 2,000
Turkeys**	> 16,500
Broilers & laying hens**	> 30,000

\* Number of animals equivalent to 300 animal units.

\*\* Permit required only with liquid waste system.

Producers still have the opportunity to obtain an individual VPA permit which is good for 10 years. For individual permits, the permit conditions will be designed specifically for each operation. In general, the individual permit takes longer to obtain, may require more monitoring and reporting, and involves a public notice in a local newspaper before the permit is issued. Hence, many producers may find the new general permit a good alternative to an individual permit. In the rest of this publication, the word permit refers to the new general permit unless otherwise indicated.

So, producers who have more than the DEQ designated number of animals on a bare lot confined or confinement facility for more than 45 days, and use a liquid manure handling system, must have a general or individual VPA permit to legally manage animal waste.

[www.ext.vt.edu](http://www.ext.vt.edu)



Produced by Communications and Marketing, College of Agriculture and Life Sciences,  
Virginia Polytechnic Institute and State University, 2009

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VIRGINIA STATE UNIVERSITY

## Application Process

Producers must file a complete VPA General Permit Registration Statement with the regional office of the DEQ. The statement form can be obtained at any regional DEQ office. The counties and cities included in each region, regional office locations, and contact persons are contained in ( Figure 1).

The registration form is one page. It requests the owner's name and address, the location of the CAFO, and the number of animals to be fed. The registration form also requires a signed statement by local county, town, or city officials indicating compliance with all local government zoning and ordinance requirements. This statement is called the local government ordinance form (LGOF). The LGOF can be obtained from the regional DEQ office. The DEQ permit registration form must also have attached a copy of a letter from the Department of Conservation and Recreation (DCR) certifying approval of a nutrient management plan (NMP). The DEQ will respond in less than a month to the request for a general permit if your registration statement is complete when submitted.

The requirement of a certified LGOF and NMP with the permit registration form means much work must be completed before the registration form can be completed and submitted. Thus, before a producer invests much time and money in planning a new or expanded animal feeding operation, the producer should arrange visits with local DEQ officials, county administrator or planner, and a DCR representative. At each of these meetings the producer should explain in general the proposed CAFO and ask each agency what information they will need to obtain their approval. In preparation for these meetings, a producer should know the size of the intended CAFO; the general type, size, and location of the facilities; the amount of waste to be generated; how the waste is to be stored; and where the waste will be applied. With this general information, the producer can determine what additional information will be required and the most logical sequence in which to proceed to obtain a permit.

The importance of these initial contacts with the various agencies cannot be over-emphasized. Some producers have spent considerable amounts of money purchasing land and designing facilities and waste management systems only to find later that the proposed operation did not meet local zoning ordinances or that not enough land was available to develop a satisfactory NMP. Therefore, producers need to contact these agencies early in the formative stages of a planned CAFO.

Once it has been determined that the operation appears feasible, detailed planning should begin. The producer should learn from local and state officials exactly what informa-

tion will be required to get a certified LGOF and NMP. The local offices of DEQ, DCR, Farm Service Agency, and Virginia Cooperative Extension can help provide information. The producer will also need to obtain private assistance in designing the facilities and waste management system. These two steps will take the most time in getting a VPA permit.

The LGOF and the NMP are the heart of the new general permit regulation. The LGOF assures that a producer is in compliance with local county, town, or city planning and zoning ordinances. These ordinances are developed through carefully monitored public meetings and hearings, and as a result, they are a reflection of the local land use desires of the community. Compliance with these regulations will help producers to be viewed as good citizens in the local community.

The NMP is designed to assure that no waste or potentially water impacting nutrients from the waste reach either ground or surface water supplies. The plan accounts for the production and utilization of all surplus (or waste) nutrients associated with the animal feeding operation. If the NMP is followed by the producer, the water supply in the local community and the state will be protected. Because the NMP is critical to the protection of the environment, the NMP is enforceable by law by the DEQ once a permit is granted. The NMP is the major tool in the general permit used to protect the environment, so most of the management and reporting requirements in the permit are related to monitoring and enforcing the NMP.

## Nutrient Management Plan

According to the general permit regulation, each NMP shall contain at a minimum the following information:

Site map indicating the location of the waste storage facilities and the fields where waste will be applied;

Site evaluation and assessment of soil types and potential productivity;

Soil, water, and waste sampling and monitoring plans;

Storage and land area requirements;

Calculation of waste application rates; and

## Waste application schedules.

Waste Storage. A critical component of any waste management system is the collection and storage system. The permit contains several requirements for storage facilities. Frequently, earthen lagoons are the type of waste storage



system used, but the regulation applies to all liquid waste storage facilities. Storage facilities must be designed to prevent point source discharges of pollutants to state waters except in the case of a storm event greater than a 25-year, 24-hour storm.\* The facility must provide adequate waste storage capacity to accommodate periods when the ground is frozen or saturated, periods when land application of nutrients should not occur due to limited or nonexistent crop nutrient uptake, and periods when physical limitations prohibit the land application of waste.

New waste storage facilities cannot be built on 100-year floodplains except under special circumstances. Lagoons shall include either a synthetic liner of at least 20 mils. thickness or a compacted soil liner of at least 1 foot thickness with a maximum permeability rating of 0.0014 inches per hour. After installation, the liner must be certified by a liner manufacturer, or by an approved professional engineer, Natural Resource Conservation Service employee, or soil and water conservation district employee. The certification of the lagoon liner must be maintained on site.

Lagoons installed to an elevation below the seasonal high water table (SHWT) or within one foot of the SHWT must have groundwater monitoring wells. A minimum of one up-gradient and one down-gradient well should be installed for monitoring when they are required. When lagoons are installed below the SHWT, the top surface of the waste must be maintained at least 2 feet above the water table. The lagoon shall maintain 1 foot of freeboard at all times, up to and including a 25-year, 24-hour storm.

[\*This is the maximum amount of rainfall predicted to occur within 24 hours once within any 25-year period. This is only a probability statement-such storms might occur more or less than once in 25 years.]

**Monitoring.** Each nutrient management plan requires soil and waste monitoring. Groundwater monitoring is required at some sites. Tables 2, 3, and 4 show the parameters monitored and the testing frequency required for each.

Table 2. Soil Monitoring Requirements

Parameters	Frequency
pH	once in 3 years
Phosphorus	once in 3 years
Potash	once in 3 years
Calcium	once in 3 years
Magnesium	once in 3 years
Nitrate	once in 3 years

Table 3. Waste Monitoring Requirements

Parameters	Frequency
Total Kjeldahl Nitrogen	once per year
Ammonia Nitrogen	once per year
Total Phosphorus	once per year
Total Potassium	once per year
Calcium	once per year
Magnesium	once per year
Moisture content	once per year.

Table 4. Groundwater Monitoring Requirements

Parameters	Frequency
Static Water Level	once in 3 years
Ammonia Nitrogen	once in 3 years
Nitrate Nitrogen	once in 3 years
pH	once in 3 years
Conductivity	once in 3 years

Each type of monitoring has specific rules for how to collect the sample. It is the producers' responsibility to properly collect the sample and to have the samples analyzed. DEQ, DCR, and Virginia Cooperative Extension agents can help producers locate reputable laboratories. The DEQ requires that all monitoring dates and analyses results be retained on site for two years.

**Buffer Zone.** The general permit mandates buffer zones for land application of waste. Table 5 gives these requirements. Local zoning ordinances may include greater distances or additional buffer requirements. Producers are required to keep records of when, where, at what rate, and to what crops the animal waste was applied. These records must be kept on site and made available to DEQ personnel upon request.

Table 5. Buffer Zones for Land Application of Waste\*

Object	Distance (ft)
Occupied dwellings **	200
Water supply wells	100
Surface water courses	
Surface application	50
Subsurface injection	25
Rock outcroppings (except limestone)	25
Limestone outcroppings	50

\* Waste shall not be applied in such a manner that it would discharge to sinkholes.

\*\* Unless the occupant signs a waiver of the buffer zone.



## Additional Permit Provisions

If, for any reason, the producer does not or cannot comply with any of the permit provisions, the producer is required to report to DEQ within 24 hours. This provision is designed primarily to report accidents or when weather conditions cause an unexpected discharge of wastes. It is to the producers' benefit to report as soon as possible to minimize damages to the environment and possible legal damages. Producers must take all reasonable steps to minimize, correct, or prevent any discharge that has a likelihood of adversely affecting human health or the environment. DEQ can require producers to halt or reduce permitted activity in order to maintain compliance with the conditions of this permit.

DEQ personnel have the right of entry to the CAFO to inspect for compliance with the permit during regular business hours or whenever the facility is discharging waste. If producers decide to expand the CAFO, they must request a permit modification. If the CAFO is sold, the permit can be transferred to the new owner, but DEQ requires a 30-day written request for transfer. DEQ can terminate a permit after public notice and an opportunity for a hearing if the CAFO does not comply with the provisions of the general permit and of the NMP that is part of the permit.

## Duration of General Permit

There is only one general VPA permit regulation for CAFOs. The permit became effective on November 16, 1994, and is good for 10 years. Each producer who registers under the general permit must meet the requirements of the general permit, including a site specific NMP. The general permit will expire on November 16, 2004. All producers who have registered under this permit will have their permit expire when the general permit expires. Hence, any producer who registers under this permit in 1996 will have the permit for approximately eight years. If a producer's registration under this general permit was accepted on November 16, 1998, that permit would be good until November 16, 2004, or six years.

When the current general permit nears expiration, DEQ will most likely write a new general permit. The new general permit would reflect any new environmental concerns and contain improvements based on experience gained under the current permit. The proposed new general permit would have to go through the public

hearing process and be approved by the SWCB. Then producers could register under the new general permit for another 10 years.

## Summary

Compared to the previous individual permit, the new general permit requires less time to obtain, is longer in duration, and may contain fewer mandatory monitoring and reporting requirements. With the NMP as an enforceable part of the permit, the general permit should continue to protect the environment. The LGOF requirement should ensure that new confined animal feeding operations are consistent with the local communities' land use plans for the future. If producers comply with the requirements of the permit, the environment will be protected, communities will achieve their land use plans, and producers can operate animal feeding operations without unnecessary costs and regulations.

The most important suggestion in this article is to meet with personnel from your regional office of DEQ, the local county administrator responsible for zoning, and your local Department of Conservation and Recreation official before making extensive plans or buying and developing land. At these initial meetings, producers need to make sure they understand all the requirements for a CAFO and to determine whether the planned operation can meet these requirements. The personnel from these agencies can be the most helpful if they are contacted early in the process when they can have considerable input in helping design an acceptable animal feeding operation.

*Reviewed by James W. Pease, professor, Agricultural and Applied Economics.*

### Community & Economic Development Committee Meeting

#### AGENDA

May 7, 2019 - 1:00 PM

Conference Room A/B/C, Second Floor

**Committee Members: Chairman Cindy Shelton, Wendy Maurer and Gary Snellings**  
**Community Economic Development Committee Meeting Agenda**

#### Subject:

Authorize the Purchase of Development Rights on Tax Map Parcels 17-49G, 49I and 49J (Caton Property); and authorize an application for matching funds through the US Department of Defense

#### Recommended Action:

Adopt proposed Resolution R19-140 to authorize the PDR Administrator to negotiate and execute a deed of easement on the Caton Property, and apply for matching funds.

#### Committee/Commission Recommendation:

The PDR Committee is scheduled to discuss this item at its regular meeting on May 6, 2019.

#### Fiscal Impact:

\$175,000 in PDR Funds, plus incidental costs, with a minimum of \$87,500 reimbursable through the Department of Defense.

#### District:

#### Overview:

The CEDC and Board are asked to consider authorizing the PDR Administrator to negotiate and execute a deed of easement on Tax Map Parcel Nos. 17-49G, 17-49H and 17-49J (Caton Property), and apply for matching funds. A PDR Program application round was initiated in June, 2017, and 10 applications were received. The PDR Administrator and PDR Committee reviewed applications submitted under the PDR/Land Conservation Program and ranked the applications in accordance with the requirements and criteria established in Stafford County Code, Section 22A-6. The Board previously authorized easement acquisition for four of the applications, based on available funds. Easement acquisition is contingent upon 50% matching funds from various state and federal funding sources. The Department of Defense (DoD) notified that County that it has unused funds available for land conservation through the Readiness and Environmental Protection Initiative (REPI). The Caton property falls within the REPI buffer area for Marine Corps Base Quantico and is therefore eligible to receive the funds. The County's PDR/Land Conservation Program currently has \$779,999 available for the purchase of development rights.

#### Discussion/Analysis:

The Caton Property is located on Dunbar Drive, and contains three parcels totaling 30.7 acres. The property has approximately 22 acres of pastureland and nine acres of forested land. A perennial stream falls within the forested lands, and contains an intact Critical Resource Protection Area (CRPA) timber buffer. The property has 75% prime farmland soils. It also has predictive suitable habitat for Threatened and Endangered Species, and falls within an area of General Conservation Significance (C-5) according to the Virginia Department of Conservation and Recreation. The property is 0.18 miles from a Virginia Outdoors Foundation easement property.

**Attachments:**

1. Attachment 1 - Aerial Map
2. Attachment 2 - Proposed Resolution R19-140

**Summary/Conclusion:**

Proposed Resolution R19-140 would authorize the PDR Administrator to negotiate and execute a deed of easement on the Caton Property, and apply for matching funds.

Staff recommends that the CEDC refer proposed Resolution R19-140 to the Board for approval, as this proposal is in accordance with the PDR program standards and financial policies.

**Strategic Priorities:**

**Reviewed By:**

This agenda may be amended on the day of the meeting. Participation of all citizens is encouraged. For all individuals with special needs, please notify County Administration of any accommodations required at least 24 hours in advance of the meeting. The agenda and related materials may be found on the County's website at [www.staffordcountyva.gov](http://www.staffordcountyva.gov)







R19-140

PROPOSED

BOARD OF SUPERVISORS  
COUNTY OF STAFFORD  
STAFFORD, VIRGINIA

RESOLUTION

At a regular meeting of the Stafford County Board of Supervisors (the Board) held in the Board Chambers, George L. Gordon, Jr., Government Center, Stafford, Virginia, on the    day of    , 2019:

MEMBERS:

Gary F. Snellings, Chairman  
L. Mark Dudenhefer, Vice Chairman  
Meg Bohmke  
Jack R. Cavalier  
Thomas C. Coen  
Wendy E. Maurer  
Cindy C. Shelton

VOTE:

On motion of    , seconded by    , which carried by a vote of    , the following was adopted:

A RESOLUTION AUTHORIZING THE PURCHASE OF DEVELOPMENT RIGHTS (PDR) ADMINISTRATOR TO NEGOTIATE AND EXECUTE A DEED OF EASEMENT FOR THE PURCHASE OF DEVELOPMENT RIGHTS ON TAX MAP PARCELS 17-49G, 17-49H and 17-49J (CATON PROPERTY); AND AUTHORIZE AN APPLICATION FOR MATCHING FUNDS THROUGH THE UNITED STATES DEPARTMENT OF DEFENSE

WHEREAS, a PDR Program round for applications was initiated in June, 2017;  
and

WHEREAS, the PDR Administrator and PDR Committee reviewed applications submitted under the PDR/Land Conservation Program and ranked the applications in accordance with the requirements and criteria established in Stafford County Code, Section 22A-6; and

WHEREAS, the PDR/Land Conservation Program currently has \$779,999 available for the purchase of development rights on properties located in the County;  
and

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WHEREAS, the Department of Defense's (DoD) Readiness and Environmental Protection Initiative (REPI) protects the Nation's military readiness, enhances relationships with communities, and preserves the environment through easements or other interests in land from willing sellers that preserve critical buffer areas near military installations; and

WHEREAS, REPI funds cost-sharing partnerships for the military with state and local governments and private conservation organizations, as authorized by Congress in 2002 under section 2684a of title 10, United States Code; and

WHEREAS, REPI funds are currently available for land conservation purposes; and

WHEREAS, the County has identified an eligible PDR application property on Tax Map Parcel Nos. 17-49G, 17-49I and 17-49J (Caton Property), within the Hartwood Election District, for potential acquisition of an easement through the REPI program; and

WHEREAS, the Board reviewed the recommendations of the PDR Administrator and PDR Committee and determined that the Caton Property be considered for the purchase of development rights under the PDR/Land Conservation Program; and

WHEREAS, the Board desires to apply for matching funds through DoD to leverage the County's PDR/Land Conservation allocation; and

WHEREAS, the Board finds that public necessity, convenience, general welfare, and good planning practices require adoption of this Resolution;

NOW, THEREFORE, BE IT RESOLVED by the Stafford County Board of Supervisors on this the     day of     , 2019, that it be and hereby does authorize the Purchase of Development Rights Administrator to negotiate and execute a deed of easement for the purchase of development rights on Tax Map Parcels 17-49G and 17-49J (Caton Property), within the Hartwood Election District; and apply for matching funds through DoD; for a total amount not to exceed One Hundred Seventy-Five Thousand Dollars (\$175,000), plus incidental costs, with a minimum of Eighty-Seven Thousand Five Hundred Dollars (\$87,500) reimbursable by the United States Government; and

BE IT FURTHER RESOLVED that consideration of the property is subject to appropriation and availability of funds through the County's PDR/Land Conservation Program and the availability of 50% matching funds through the United States Government; and

BE IT STILL FURTHER RESOLVED that the remaining applications under the 2017 PDR Program round may be considered for future easement acquisition as additional funds become available, as authorized by the Board.

TCF:KCB:kb