



**EMERGENCY MANAGEMENT**  
VIRGINIA TECH.

# **Continuity Of Operations Plan**

School of Plant and Environmental Sciences

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## Table of Contents

Introduction	5
Purpose	5
Applicability and Scope	6
Concept of Operations	6
COOP Implementation	7
Activation	7
Orders of Succession	8
Delegations of Authority	8
Departmental Employees	9
Alert and Notification	9
Alternate Facilities and Relocation	10
Department Specific Facility Requirements	10
Reconstitution	12
Access to Vital Departmental Information and Systems	13
Continuity of Research	14
COOP Administration and Maintenance	15
Appendix A: COOP Implementation Procedures Checklist	17
Appendix B: Departmental Contact List	20
Appendix C: Essential Functions	21

## **Approvals**

*This Continuity of Operations plan was prepared by School of Plant and Environmental Sciences to develop, implement and maintain a viable COOP capability. This COOP complies with applicable internal department and university policy, local and state regulations, and supports recommendations provided in Federal Preparedness Circular 65. This COOP has been distributed internally within the School of Plant and Environmental Sciences and to Virginia Tech Emergency Management.*

Approved: \_\_\_\_\_ Date: \_\_\_\_\_  
(Title)

Approved: \_\_\_\_\_ Date: \_\_\_\_\_  
(Title)

## **Privacy Statement**

*Public disclosure of this document would have a reasonable likelihood of threatening public safety by exposing vulnerabilities. It contains sensitive and confidential information that is not subject to the Freedom of Information Act (FOIA) under Virginia Code 2.2-3705.2. Accordingly, the School of Plant and Environmental Sciences is withholding this plan from public disclosure. Refer to any request for a copy of this document to Virginia Tech's legal counsel of the Virginia Attorney General's office.*

## **Introduction**

*This Continuity of Operations Plan (COOP), based on departmental essential functions, takes an all-hazards approach preparing for natural, man-made, and technological incidents. The COOP includes key personnel and information necessary to continue business functions and implement strategic recovery operations post-incident.*

*University policies 5616 and 1005 require COOP updates and submission to Virginia Tech Emergency Management annually. This plan was developed using many authorities, references and best practices in COOP Planning.*

*The COOP Coordinator is the individual responsible for developing, updating and maintain the COOP as a viable means of operations and reconstitution. The department has designated Gregory E. Welbaum as the COOP Coordinator.*

*School of Plant and Environmental Sciences is responsible for...*

Capitalizing on the strengths of three departments in the College of Agriculture and Life Sciences — Crop and Soil Environmental Sciences; Horticulture; and Plant Pathology, Physiology, and Weed Science — the School of Plant and Environmental Sciences increases the college's capacity to tackle challenges in agriculture and food security, the green industry, plant biology, and the environment.

## **Purpose**

*This COOP for School of Plant and Environmental Sciences, hereinafter called Department, presents a management framework and establishes operational procedures to sustain and restore essential functions if normal operations in one or more of the Department's locations are not feasible.*

*This document establishes the Department COOP Program procedures for addressing three types of disruptions to operations that could result in loss of services:*

- *Loss of a facility, or portion of a facility;*
- *Loss of personnel / reduction in workforce; and*
- *Equipment or utilities failure*

*This document also details procedures to continue or recover departmental essential functions, while the Virginia Tech Primary COOP sets overarching recovery objectives based on the University Mission Essential Functions.*

*The department is committed to the safety and protection of its faculty, staff, students, operations, and facilities. This plan provides the department and its personnel with a framework that is designed to minimize impact due to an incident and set forth a value-driven path to recovery.*

## **Applicability and Scope**

*This Department COOP focuses on basic COOP elements: orders of succession, delegations of authority; alert and notification procedures; vital departmental information, systems, and equipment; research; alternate facilities; departmental contact list; and essential functions. It applies to all faculty and staff in all locations of the Department. The plan works in concert with Virginia Tech's Primary COOP, which provides information on university-wide planning assumptions, goals and processes.*

## **Concept of Operations**

*The COOP should be implemented no later than 12 hours after an incident has occurred that has disrupted business operations, and provide guidance to sustain operations for up to 30 days. The broad objective of this COOP is to maintain the department's essential business functions during recovery operations. Specific COOP objectives include the following:*

- *Enable staff to perform essential functions*
- *Identify key personnel for plan implementation*
- *Identify requirements for alternate location(s); and,*
- *Protect and maintain vital departmental information, systems and equipment.*

*An emergency, such as an explosion, fire or hazardous materials incident, may require the evacuation of one or more department locations with little or no advance notice. Building evacuation, if required, is accomplished via implementation of the Emergency Action Plan for each location. This COOP is not an evacuation plan; rather, it facilitates deliberate and preplanned movement of selected personnel and supporting staff to an alternate location, if required, in response to an interruption of business operations.*

*In the event of an incident that jeopardizes the department's essential functions, the COOP should be activated according to the delegations of authority. This activation can be a full or partial implementation of the COOP, depending on the situation.*

## **COOP Implementation**

*Implementation of the COOP occurs when an appropriate authority, as defined by this plan (See Delegations of Authority) calls for activation. COOP Implementation is based on the following:*

- *Activation, Notification, and Relocation (if required);*
- *Business Operations; and,*
- *Reconstitution*

*The COOP Implementation Procedures Checklist found in Appendix A, addresses the three COOP planning scenarios:*

- *Loss of facility, or portion of a facility;*
- *Loss of personnel / reduction in workforce; and*
- *Equipment or utilities failure*

*Not all the procedures listed in the checklist might be used, depending on the scenario that has caused the implementation of the plan. The checklist is a guide for actions to take during COOP implementation, and tasks should be assigned at the time of COOP activation.*

## **Activation**

*Activation is defined as the step to initiate the subsequent plan actions necessary to implement the COOP as required for recovery from a specific incident. This plan defines the authority responsible for activation under Delegations of Authority and defines the procedures for alert and notification below. Effective alert and notification are necessary to align the efforts of all department staff in the recovery effort as soon as possible post-incident.*

**See Appendix A for the COOP Implementation Procedures Checklist.**

## Orders of Succession

Orders of succession from the position of Department Chair/Director/Dean are established to ensure the Department can perform essential functions and remain a viable part of the University System.

Leadership Personnel	Title	Successor 1	Title	Successor 2	Title
Michael Evans	School Director	Ben Tracy	Senior Associate Director	Eric Beers	Associate Director for Graduate Programs

## Delegations of Authority

Delegations of authority transfer emergency or administrative responsibilities from the incumbent to a designee. These delegations provide for rapid response to situations that require policy determinations and decisions during when the incumbent is unavailable. Some examples include:

- Signatory authority
- Financial commitment
- Departure from established procedures or processes

Authority	Position Holding Authority	Position Delegated to	Triggering Conditions	Limitations
Signatory authority	Michael Evans	Ben Tracy	Michael Evans is not available	When Michael Evans becomes available again.
Financial commitment	Michael Evans	Ben Tracy	Michael Evans is not available	When Michael Evans becomes available again.
Departure from established procedure or processes	Michael Evans	Ben Tracy	Michael Evans is not available	When Michael Evans becomes available again.



## **Departmental Employees**

*One of Virginia Tech's greatest resources is its employees. The Department is prepared to continue essential operations, in the event an incident occurs that reduced the number of employees available to continue work on site, either through illness, loss of all or part of a facility, or other incident. Virtual instruction and telework are appropriate mitigation strategies to continue essential functions, for positions that allow for a virtual or remote work environment. For positions supporting essential functions (such as continuity of research) that are technical or hands-on in nature, considerations have been given to mitigation strategies, should the Department be unable to continue operations onsite.*

*Positions that are able to work remotely have been designated in the Departmental Contact List (Appendix B), and the Essential Functions (Appendix C) include those that can be done remotely with additional equipment.*

**See Appendix B for the Departmental Contact List and Appendix C for Essential Functions .**

## **Alert and Notification**

*Once the decision is made to activate the COOP, the following systems will be used to contact employees:*

- *Email*
- 

**See Appendix B for the Departmental Contact List .**

## **Alternate Facilities and Relocation**

*Virginia Tech recognizes that an incident may cause a building, office, or other physical resources to be unusable or unavailable for a variety of reasons, which disrupts the Department's normal operations and may force relocation to an alternate location. Physical relocation of a department to an alternate facility may be required if the incident renders the primary facility unusable for any reason. Essential Functions are performed at an alternate facility if the incident has forced relocation from the primary site. Alternate locations must be able to safely support operations in the event that essential functions and essential personnel are relocated to the site. A relocation site must have sufficient space and resources to sustain operations for up to 30 days, and include appropriate physical security and access controls. At least one alternate facility will be identified, which could include alternate uses of existing facilities or virtual office and remote work options.*

*The Department will coordinate with the University to establish suitable alternate locations. Departmental essential functions that can be maintained through alternative or remote work options instead of, or in addition to, physical relocation, are indicated in Appendix C Essential Functions.*

*List of buildings currently being occupied by the Department:*

Hahn Garden Pavilion
Price Hall
Hutcheson Hall
Latham Hall
Saunders Hall
Smyth Hall
Glade Road Research Center
Turfgrass Research Center
Greenhouse F1
Greenhouse F2
Greenhouse F3
Greenhouse F4
Greenhouse F5
Greenhouse F6
Greenhouse F7
Greenhouse F8
1880 Pratt Drive (Research Building 15; Cyber Range)

*List of potential alternate facilities for relocation:*

Hutcheson Hall
Smyth Hall
Price Hall
Glade Road Research Center
Saunders Hall
Latham Hall
1880 Pratt Drive (Research Building 15; Cyber Range)

## **Department Specific Facility Requirements**

*Due to the nature of emergency incidents, specific alternate locations are not always available, or feasible. The following information provides the necessary space and related functional requirements to maintain essential functions as defined in Appendix C.*

*In the event that your department must relocate or share resources with another group, the following are required by the Department when determining alternative facility locations. These space requirements take into consideration normal operations as well as reduced or essential operations. Physical space needs may vary depending on departmental capacity to incorporate remote work environments.*

*Physical resources required to perform departmental essential functions:*

Computers with internet access are the most important physical resources to perform most of our essential functions. These resources will be sufficient for most of our business operations, academic instruction, and some of our research. However, greenhouse operations, plant disease diagnostics, soil testing, and some of the laboratory and field research will only be possible with dedicated equipment, such as microscopes, centrifuges, refrigeration, controlled environments, and much more, including custom-built equipment.

**Space Requirement:** 150000 sq. ft.

**Special Facility Requirements**

Refrigeration, Temperature Control

**Special Security Requirements**

Some plant pathogens and parasitic plants and genetically modified bacteria and plants need to be located in locked rooms with restricted/controlled access.

## High Value Equipment

Kincaid 8XP plot combine with high-capacity grain gauge from Harvest Master
Elutriators for nematode extraction
Two Automated pH Analyzers, model AS-3010D, made by Labfit Pty Ltd in Australi
Two Inductively Coupled Plasma Atomic Emission Spectrometers (ICP-AES), model ARCOS-II MV, made by Spectro Analytical Instruments, Inc. in Germany
two custom built soil drying cabinets, and a soil grinder and dust scrubber setup with parts of it being custom-made decades ago
large dumbwaiter (small elevator)

*There is always the potential for the University or a portion of campus to be operational but experience an extended loss of power, typically due to a severe weather event. To mitigate the risk associated with an electrical power outage, the Department has identified the essential equipment or material that would be at risk should this occur.*

Affected Equipment	Estimated Time Without Power	Location	Possible Mitigation Strategies
-80 freezers, freezers, fridges	<12 hrs	In labs in many buildings: Glade Road, Price Hall, Saunders Hall, Hutcheson Hall, and Latham Hall. Latham Hall has a back up generator with outlets connected to it so less of a problem there.	back-up generators

## Reconstitution

*Reconstitution focuses on restoring the Department to normal operations. If relocation was necessary, this may mean returning to the original facility, the alternate location, or a new primary facility. As soon as practical, the COOP Coordinator, with the approval of appropriate emergency services, initiates operations to salvage, restore and recover the department location(s), if necessary. If the COOP is being implemented due to a reduction in workforce or loss of utilities, some implementation procedures may not apply.*

**See Appendix A for the COOP Implementation Procedures Checklist, which includes Reconstitution.**

## **Access to Vital Departmental Information and Systems**

*Records, systems and equipment are integral to supporting the essential functions of the Department. The University Division of Information Technology manages the process of backing up the data for central IT databases and files and retaining them in secure sites. Records Management Services (RMS) stores vital paper records in a properly-equipped, environmentally-controlled facility that is secure but also accessible when needed for departmental records retrieval. The Department maintains and updates all necessary files, computer software and databases required to carry out essential functions.*

*This plan considers departmental needs to maintain and access data, records, and other information independent of central IT services, and in the event that the primary resource is not available. Should remote access to information be necessary during an incident, considerations will be given to remote access needs of employees responsible for essential operations. Information, data, and files integral to the essential functions of the Department are maintained through:*

Remote Access or authorization to allow remote access, Backup of critical files off-site (flash drives, external hard drives, hard copy), Alternative email systems, Off-site storage/backups

**See Appendix C for Essential Functions and Resource Requirements.**

## **Continuity of Research**

*For many departments throughout the university, research is a critical essential function, both internally, as well as, for external partners. Research is often reliant on specialized utilities, core support facilities, hazardous materials, and highly technically-skilled people. Incidents impacting any of these elements poses risk of disruptions to on-going research, and protracted incidents may eventually lead to irreparable damages to equipment, infrastructure, unique collections of samples and specimens, and loss of intellectual property.*

*Applicable research (including the care and management of animals used for education and research), required support resources, and any unique space requirements were considered in the development of this COOP, and specifically the development of the department's essential functions. For information relating to continuity of research for this department, see Appendix C Essential Functions and Resource Requirements*

## **COOP Administration and Maintenance**

*The overall administration and maintenance of the COOP program at Virginia Tech is the responsibility of Virginia Tech Emergency Management (VTEM). VTEM develops the testing, training and exercise schedule; the plan maintenance schedule; and the short and long term initiatives for COOP planning. It is the responsibility of VTEM to ensure the viability and effectiveness of the COOP program. The office will review COOPs periodically to verify accuracy, completeness, and applicability. The department responsibilities for administration and maintenance of the Department COOP including the following:*

- *Assigning a point of contact or COOP Coordinator who will serve as a liaison with VTEM, as appropriate;*
- *Maintaining and revising the COOP annually, or as needed to reflect changes to the department, within the Emergency Planning Portal*
- *Updating the departmental contact list (Appendix B);*
- *Conducting departmental notification tests of internal and external call lists;*
- *Conducting periodic exercises of the COOP Plan;*
- *Preparing back-up copies or updates of vital departmental/programmatic records; and*
- *Reviewing and understanding department roles and responsibilities related to COOP support functions*

## **Appendices**

*Appendix A: Implementations Procedures*

*Appendix B: Departmental Contact List*

*Appendix C: Essential Functions and Resource Requirements*

*Appendix D: Additional Departmental Plans (if applicable)*



## Appendix A: COOP Implementation Procedures Checklist

You may have specific people in mind to perform the identified tasks prior to an incident; however, Appendix A is designed to be used at the time of notification to assign available individuals to necessary tasks.

COOP ACTIVATION			
	Task	Personnel Assigned	Time/Date Completed
1	Activate COOP		
2	If necessary, invoke Succession Plan		
3	Notify key departmental personnel (listed in Appendix B: Departmental Contact List)		
4	Convene department meeting (this could be at predetermined site or virtually)		
5	Assemble support resources required for re-establishing and performing Essential Functions at alternate work location* (e.g.: records, databases and other files/documents; critical software; critical equipment and accessories). List specific resources and personnel assigned below.		
6	If applicable, communicate with external contacts and vendors		
7	Prepare designated equipment for relocation		
8	If applicable, take appropriate preventive measures to protect other equipment that will not be relocated		
9	If applicable, arrange for computer connectivity and phone line transfers to designated alternate work location*		
10	Ensure departmental go-kits are complete and ready for transfer. (Go kits may include hard copies and digital versions of your COOP, SOPs, computer accessories, back-up communications devices, multi-factor authentication keys, departmental and vendor contact information, etc.)		
11	Essential personnel begin movement to alternate work location*		
12	Develop and distribute status report to departmental leadership		
13	Communicate status to departmental personnel and other departments that may be impacted by the operational changes to departmental functions.		
	<i>Add additional department-specific tasks below:</i>		
14			
15			
16			

\* Alternate work location could be a physical facility or a remote work location, depending on the Essential Functions impacted and how each department can maintain functionality during a continuity event.

## ALTERNATE OPERATIONS

	Task	Personnel Assigned	Time/Date Completed
1	Organize departmental personnel		
2	If applicable, develop shift rotations. Consider if lodging and dining plans will be necessary.		
3	Confirm which Essential Functions have been affected, and prioritize for restoration		
4	Develop and communicate status report		
5	Track status and restoration efforts of all Essential Functions		
6	Assemble resources necessary for administrative functions (e.g., onsite telephone, Departmental Contact List and external dependencies information, personnel work schedules). List necessary resources and assigned personnel below:		
7	Confirm all needed records, systems and equipment are available at alternate work location*		
8	Occupy alternate work location and complete the following (if applicable):		
	‡ Operationalize equipment and test telephone and network connections		
	‡ Establish communications with essential personnel and support resources		
	‡ Organize vital files, records and other documents related to administrative Essential Functions		
9	Coordinate procurement of additional equipment, as required		
10	<i>Add additional department-specific tasks below:</i>		

\* Alternate work location could be a physical facility or a remote work location, depending on the Essential Functions impacted and how each department can maintain functionality during a continuity event.

## RECONSTITUTION

1	Resume operations**		
2	Survey condition of damaged building and determine feasibility returning to original facility (work with VTEM and CPIF as necessary)**		
3	If applicable, inventory and salvage usable equipment, materials, records and supplies from damaged facility		
4	Develop long term reconstitution and recovery plans (work with VTEM and CPIF as necessary)		
5	Track status and restoration efforts of all Essential Functions		
6	Conduct transition of ALL functions, personnel and equipment from alternate work location back to designated facility **		

7	Determine loss of the department's inventory for Risk Management		
8	Schedule and conduct initial debrief with departmental personnel		
9	<i>Add additional department-specific tasks below:</i>		

\*\* Designated facilities could include returning to your restored original facility, continuing operations in a temporary facility, or returning to a new permanent facility.

## Appendix B: Departmental Contact List

Communication with employees and affiliates is critical during COOP activation. The following contact list will identify key departmental personnel essential to the implementation of the COOP. This departmental contact list will be used as a reference for who should receive communications from the department, or university officials, as appropriate based on the level of activation of the department's COOP.

Personnel Contact List					
Employee List	Title	Work Schedule	Email	Phone 1	Phone 2
Gregory E. Welbaum	<b>COOP Coordinator</b>		welbaum@vt.edu		+1 540-357-5801
Michael Evans	<b>Department Head/Director/Dean</b>	Hybrid	mrevans1@vt.edu	+1 540-231-9775	+1 479-601-7832
Ben Tracy	Associate Director	Hybrid	bftracy@vt.edu	+1 540-231-2988	+1 540-553-1232
Eric Beers	Associate Director	Hybrid	ebeers@vt.edu	+1 540-231-3210	+1 540-750-4977
Matthew Chapell	Associate Director	Hybrid	chappell@vt.edu	+1 757-807-6537	+1 757-807-6535
Sheila Young	Administrative assistant	Hybrid	snorman@vt.edu	+1 540-231-9775	+1 540-392-0823
Emergency Services					
Virginia Tech Police		911		540-231-6411	
Virginia Tech Rescue Squad		911		540-231-7138	
Blacksburg Fire Department		911		540-961-1175	
EHS	540-231-3600				
Facilities	540-231-3400				
VT Switchboard	540-231-6000				
VT Hotline	540-231-6668				

## Appendix C: Essential Functions

### School of Plant and Environmental Sciences: SPES Business Operations

Function Details	
Department Name	School of Plant and Environmental Sciences
Function Name	SPES Business Operations
Function type	Operations
Semester	Year-Round
Description of Function	All daily business functions that keep SPES going from HR to accounting to ordering supplies.
Dependencies	Yes
Impact	If interrupted, employees may not get paid, orders may not get placed, accounts may get overspent.
Interim Process	There is no alternative process but there are reduced processes. Most office staff can work remotely for a prolonged period of time. However, for receiving orders, shipping materials out, and some other activities at least one person needs to be present.

Key Personnel				
Refer to Departmental Contact List for Contact Information				
Additional Personnel				
Name	Title	Work Phone	Alternate Phone	Email
Michael Evans	School Director	+1 540-231-9775	+1 479-601-7832	mrevans1@vt.edu
Sheila Young	Admin. Asst. to the Director, HR questions	+1 540-231-9775	+1 540-392-0823	snorman@vt.edu
Sabrina Allen	State funding, activity codes specialist	+1 540-231-9776		clemson@vt.edu
Tetyana Early	HokieMart, purchasing, receiving, mail specialist	+1 540-231-6972		etetyana@vt.edu
Judy Fielder	Leave reports, student hiring, payroll specialist	+1 540-231-7876		jfielder@vt.edu
Patty Mitchell	Faculty hiring, HR questions specialist	+1 540-231-7931		pmitchel@vt.edu
Rachel Saville	Communications and Marketing Coordinator	+1 540-231-6300		saville@vt.edu
Crystal Wall	Salaries, Foundation specialist	+1 540-231-0638		cdwall@vt.edu
Karen Drake-Whitney	Student and Instructional Services	+1 540-231-9785		kdrake@vt.edu
Sally Shupe	Human Resources			sashupe@vt.edu
Lek Jackson	Financial and Reporting			tujackso@vt.edu
Teresa Dickerson	Travel – Input Travel Information into ChromeRiver and Foundation (Depart)			Teresa1@vt.edu
Meagan Sparks	VT Foundation Payments & Reimbursements			mnsparks@vt.edu

Cross Training				
Who typically performs this function/task?	Title/Position	Who can be cross-trained?	Title/Position	Comments

Cross Training				
Everyone listed above		Sheila Young	Admin. Asst. to the Director, HR questions	Would field questions in the event there is not a backup in place.
Sheila Young, Sabrina Allen, Lek Jackson		Crystal Wall	Salaries, Foundation specialist	Would handle their respective responsibilities, issue keys and handle mail.
Crystal Wall, Lek Jackson		Sabrina Allen	State funding, activity codes specialist	Would handle their respective responsibilities.
Crystal Wall, Sabrina Allen		Lek Jackson	Grants specialist	Would handle their respective responsibilities.
Teresa Dickerson, Meagan Sparks		Tetyana Early	HokieMart, purchasing, receiving, mail specialist	Would handle their respective responsibilities.
Tetyana Early, Meagan Sparks		Teresa Dickerson	Travel, keys, state vehicle, surplus specialist	Would handle their respective responsibilities.
Tetyana Early, Teresa Dickerson		Meagan Sparks	P-cards, foundation deposits specialist	Would handle their respective responsibilities.
Judy Fielder		Patty Mitchell	Faculty hiring, HR questions specialist	Would handle their respective responsibilities.
Patty Mitchell		Judy Fielder	Leave reports, student hiring, payroll specialist	Would handle their respective responsibilities and issue keys and handle mail.

Internal Dependencies					
Dependency	VT Provider	Contact Name	Contact Phone	Contact Email	Comments
Fiscal and personnel services and approvals	CALS Dean's office	Alan Grant	+1 540-231-4152	algrant@vt.edu	

External Dependencies					
Dependency	Provider	Contact Name	Contact Phone	Contact Email	Frequency of Service
Shipping	FedEx				

Critical Resources - Equipment & Other Resources					
Resource	Minimum Number	Additional needed for remote work	Contact Name	Contact Phone	Contact Email
Printers	2	2		+1 540-231-4865	aghhelp@vt.edu
Phones	10	10		+1 540-231-4865	aghhelp@vt.edu
Copier	1	1		+1 540-231-4865	aghhelp@vt.edu
Computers	10	10		+1 540-231-4865	aghhelp@vt.edu

**Critical Resources - Vital Files, Information Systems and Databases**

<b>File/Database:</b> <b>Banner</b>	<p><b>Format:</b> Electronic</p> <p><b>Back-up Frequency:</b></p> <p><b>Back-up location or process:</b></p> <p><b>Contact Name:</b> Sheila Young</p> <p><b>Contact Phone:</b> +1 540-231-9775</p> <p><b>Contact Email:</b></p>
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Function Details	
Department Name	School of Plant and Environmental Sciences
Function Name	Plant Disease Diagnostic Clinic
Function type	Clinical
Semester	Year-Round
Description of Function	Diagnose plant disease and abiotic problems for Virginia growers.
Dependencies	No
Impact	Lack of accurate diagnosis and appropriate disease management recommendation, resulting in decrease in crop quality/yield for commercial grower, application of inappropriate pesticides and potential for non-detection of emerging or high-consequence pathogens.
Interim Process	Virtual diagnosis could be implemented and suspect high consequence samples could be shipped to the SPDN regional plant diagnostic lab: UF/IFAS Plant Diagnostic Center at Univ. of Florida.

Key Personnel				
Refer to Departmental Contact List for Contact Information				
Additional Personnel				
Name	Title	Work Phone	Alternate Phone	Email
Lina Rodriguez Salamanca	Clinic Director	+1 540-231-6530	+1 540-231-6758	linar@vt.edu
Elizabeth Bush	Diagnostician	+1 540-231-8020	+1 540-808-8259	clinic@vt.edu

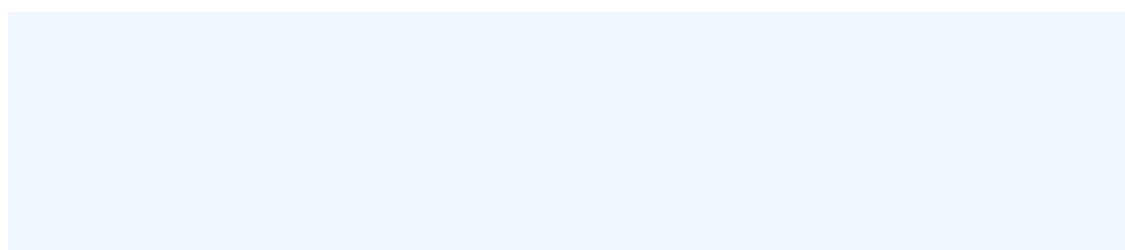
Cross Training				
Who typically performs this function/task?	Title/Position	Who can be cross-trained?	Title/Position	Comments
Mary Ann Hansen	Clinic Director	Elizabeth Bush	Diagnostician	

Internal Dependencies					
Dependency	VT Provider	Contact Name	Contact Phone	Contact Email	Comments

External Dependencies					
Dependency	Provider	Contact Name	Contact Phone	Contact Email	Frequency of Service

Critical Resources - Equipment & Other Resources					
Resource	Minimum Number	Additional needed for remote work	Contact Name	Contact Phone	Contact Email
Desktop computer	2	2		+1 540-231-4865	AgHelp@vt.edu
Laptop computer	1	1		+1 540-231-4865	AgHelp@vt.edu

**Critical Resources - Vital Files, Information Systems and Databases**



<b>File/Database:</b>	<b>Format:</b> <b>Back-up Frequency:</b> <b>Back-up location or process:</b> <b>Contact Name:</b> <b>Contact Phone:</b> <b>Contact Email:</b>
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School of Plant and Environmental Sciences: Field Research

Function Details	
Department Name	School of Plant and Environmental Sciences
Function Name	Field Research
Function type	Research
Semester	Year-Round
Description of Function	Field (outdoor) research activities, generally conducted on living things
Dependencies	Yes
Impact	Short-term, an entire year can be lost because of the seasonality of the work. Long-term, many programs are mostly field-based, so those programs would be non-functional.
Interim Process	Delays of approximately one week can be tolerated. Further delays at critical times will likely result in research failure.

Key Personnel				
Refer to Departmental Contact List for Contact Information				
Additional Personnel				
Name	Title	Work Phone	Alternate Phone	Email
Michael Evans	School Director	+1 540-231-9775		mrevans1@vt.edu
Wade Thomason	Associate Director for Extension	+1 540-231-2988	+1 540-553-1773	wthomaso@vt.edu

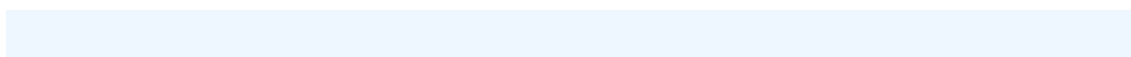
Cross Training				
Who typically performs this function/task?	Title/Position	Who can be cross-trained?	Title/Position	Comments
Michael Evans	School Director	Wade Thomason	Associate Director for Extension	

Internal Dependencies					
Dependency	VT Provider	Contact Name	Contact Phone	Contact Email	Comments

External Dependencies					
Dependency	Provider	Contact Name	Contact Phone	Contact Email	Frequency of Service

Critical Resources - Equipment & Other Resources					
Resource	Minimum Number	Additional needed for remote work	Contact Name	Contact Phone	Contact Email
Laptop/desktop computers	10				
dataloggers	10				
smart-scales	10				
tablets and portable PC's	10				

Critical Resources - Vital Files, Information Systems and Databases



<b>File/Database:</b>	<b>Format:</b> <b>Back-up Frequency:</b> <b>Back-up location or process:</b> <b>Contact Name:</b> <b>Contact Phone:</b> <b>Contact Email:</b>
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School of Plant and Environmental Sciences: Laboratory Research

Function Details	
Department Name	School of Plant and Environmental Sciences
Function Name	Laboratory Research
Function type	Research
Semester	Year-Round
Description of Function	Maintain growth chambers, freezers, refrigerators, etc., to preserve experimental materials
Dependencies	Yes
Impact	Most of the research depends on maintaining the integrity of samples in -20C and -80C freezers. If power is lost for more than a day, most samples may get damaged and research may be interrupted for months or years.
Interim Process	In Latham Hall and the CRC Building 15, there are back-up generators to cover some of the equipment. In Saunders, Price, Smyth, and Hutchison, there is no back-up.

Key Personnel				
Refer to Departmental Contact List for Contact Information				
Additional Personnel				
Name	Title	Work Phone	Alternate Phone	Email
Michael Evans	School Director	+1 540-231-9775		mrevans1@vt.edu
Eric Beers	Associate Director for Graduate Programs	+1 540-231-3210		ebeers@vt.edu

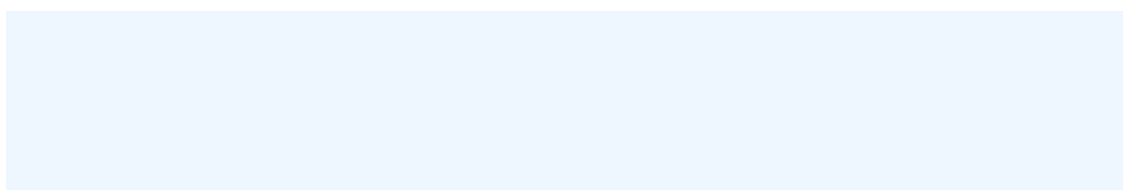
Cross Training				
Who typically performs this function/task?	Title/Position	Who can be cross-trained?	Title/Position	Comments
Micke Evans	School Director	Eric Beers	Associate Director for Graduate Programs	

Internal Dependencies					
Dependency	VT Provider	Contact Name	Contact Phone	Contact Email	Comments

External Dependencies					
Dependency	Provider	Contact Name	Contact Phone	Contact Email	Frequency of Service

Critical Resources - Equipment & Other Resources					
Resource	Minimum Number	Additional needed for remote work	Contact Name	Contact Phone	Contact Email
Printer(s)	1	0	Eric Beers	+1 540-231-3210	

**Critical Resources - Vital Files, Information Systems and Databases**



<b>File/Database:</b> Google Drive	<b>Format:</b> Electronic <b>Back-up Frequency:</b> Other <b>Back-up location or process:</b> <b>Contact Name:</b> <b>Contact Phone:</b> <b>Contact Email:</b>
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<b>File/Database:</b> Crash Plan Code42	<b>Format:</b> Electronic <b>Back-up Frequency:</b> Other <b>Back-up location or process:</b> <b>Contact Name:</b> <b>Contact Phone:</b> <b>Contact Email:</b>
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School of Plant and Environmental Sciences: Greenhouse Operations

Function Details	
Department Name	School of Plant and Environmental Sciences
Function Name	Greenhouse Operations
Function type	Research
Semester	Year-Round
Description of Function	Maintain research and specimen plants. Maintain research and specimen plants. Also serves as a classroom and laboratory facility for SPES teaching mission.
Dependencies	Yes
Impact	Without functioning greenhouse facilities available for the teaching mission and research projects, SPES faculty would be limited in what they could accomplish.
Interim Process	If the greenhouse is non functioning, the classes utilizing it for teaching would need to be either canceled or modified to eliminate lab sections. Researchers and graduate students would not be able to accomplish research projects here but might be able to rent space in the Biology greenhouse on Plantation Road or the Glade Road greenhouse facility.

Key Personnel				
Refer to Departmental Contact List for Contact Information				
Additional Personnel				
Name	Title	Work Phone	Alternate Phone	Email
Burr, Jeff	Research Specialist Sr.	+1 540-231-6883	+1 540-250-0115	jburr@vt.edu
Michael Evans	School Director	+1 540-231-9775	+1 479-601-7832	mrevans1@vt.edu

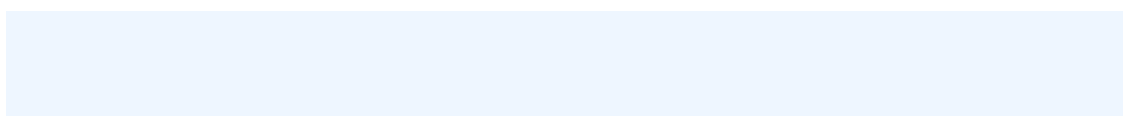
Cross Training				
Who typically performs this function/task?	Title/Position	Who can be cross-trained?	Title/Position	Comments
Burr, Jeff	Research Specialist Sr.	Michael Evans	School Director	

Internal Dependencies					
Dependency	VT Provider	Contact Name	Contact Phone	Contact Email	Comments

External Dependencies					
Dependency	Provider	Contact Name	Contact Phone	Contact Email	Frequency of Service
user	Entomology	Tim Kring	+1 540-231-6341	timkring@vt.edu	
user	Biology	Robert Cohen		rscohen1@vt.edu	
user	Forestry	Jay Sullivan		sulliv@vt.edu	

Critical Resources - Equipment & Other Resources					
Resource	Minimum Number	Additional needed for remote work	Contact Name	Contact Phone	Contact Email
Desktop computers or laptops	2	2	Brandon Lester		brandon9@vt.edu

Critical Resources - Vital Files, Information Systems and Databases



<b>File/Database:</b>	<b>Format:</b> <b>Back-up Frequency:</b> <b>Back-up location or process:</b> <b>Contact Name:</b> <b>Contact Phone:</b> <b>Contact Email:</b>
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Function Details	
Department Name	School of Plant and Environmental Sciences
Function Name	Academic Instruction
Function type	Instruction
Semester	Year-Round
Description of Function	Graduate and undergraduate teaching, including lecture, on-line, and laboratory classes
Dependencies	Yes
Impact	Teaching can occur in a variety of locations except for laboratory courses. Lecture and on-line courses could be moved quite readily as long as computer projection, computers, and internet access is provided. Labs are problematic in that they require stored specimens and samples.
Interim Process	All teaching can temporarily be done online.

Key Personnel				
Refer to Departmental Contact List for Contact Information				
Additional Personnel				
Name	Title	Work Phone	Alternate Phone	Email
Michael Evans	School Director	+1 540-231-9775		wdaniels@vt.edu
Young, Sheila	Admin. Asst.	+1 540-231-9775	+1 540-392-0823	snorman@vt.edu
Ben Tracy	Associate Director for Undergraduate Studies	+1 540-231-8259		bfracy@vt.edu
Jen Stewart	Student Support Coordinator	+1 540-231-9785		jen.stewart@vt.edu
Matthew Eick	Advising	+1 540-231-8943		eick@vt.edu

Cross Training				
Who typically performs this function/task?	Title/Position	Who can be cross-trained?	Title/Position	Comments

Internal Dependencies					
Dependency	VT Provider	Contact Name	Contact Phone	Contact Email	Comments
Student services, admissions, tracking, DARS, classroom assignments, etc.	Registrar's office	registrar		registrar@vt.edu	
Oversight of college academic programs	CALS Academic Programs	Susan Sumner		ataylor@vt.edu	
IT support	CALS IT		+1 540-231-4865	aghel@vt.edu	

External Dependencies					
Dependency	Provider	Contact Name	Contact Phone	Contact Email	Frequency of Service
Canvas	Instructure, Inc.				
Kaltura	Kaltura, Inc.				
Google Drive	Google				

Critical Resources - Equipment & Other Resources					
Resource	Minimum Number	Additional needed for remote work	Contact Name	Contact Phone	Contact Email
Laptops	40	40	CALS IT	+1 540-231-4865	aghel@vt.edu

<b>File/Database:</b>	<b>Format:</b> <b>Back-up Frequency:</b> <b>Back-up location or process:</b> <b>Contact Name:</b> <b>Contact Phone:</b> <b>Contact Email:</b>
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School of Plant and Environmental Sciences: Soil Testing

Function Details	
Department Name	School of Plant and Environmental Sciences
Function Name	Soil Testing
Function type	Service
Semester	Year-Round
Description of Function	Analyze soil samples submitted from across Virginia to evaluate the soil's nutrient potential and to determine the most beneficial application rates of fertilizer and lime for optimum plant growth.
Dependencies	Yes
Impact	Farmers will not know the most beneficial rates of lime and fertilizer to apply in order to obtain maximum economic yields while protecting the environment. Without a soil test, would be unable to write a Nutrient Management Plan which some farmland is required to have by the state.
Interim Process	None.

Key Personnel				
Refer to Departmental Contact List for Contact Information				
Additional Personnel				
Name	Title	Work Phone	Alternate Phone	Email
Steve Heckendorn	Laboratory Manager	(540) 231-9807	(540) 750-5663	soiltesting@vt.edu
Jason Doby	Soil Analyst	(540) 231-6893	(540) 771-3942	doby2017@vt.edu
Ethan Frederick	ICP Spectroscopist	(540) 231-9806	(540) 230-5029	ethansf@vt.edu

Cross Training				
Who typically performs this function/task?	Title/Position	Who can be cross-trained?	Title/Position	Comments

Internal Dependencies					
Dependency	VT Provider	Contact Name	Contact Phone	Contact Email	Comments

External Dependencies					
Dependency	Provider	Contact Name	Contact Phone	Contact Email	Frequency of Service

Critical Resources - Equipment & Other Resources					
Resource	Minimum Number	Additional needed for remote work	Contact Name	Contact Phone	Contact Email
desktop or laptop	3	3	Patrick Robinson	(540) 231-9418	pgr@vt.edu

Critical Resources - Vital Files, Information Systems and Databases

File/Database:	<p><b>Format:</b></p> <p><b>Back-up Frequency:</b></p> <p><b>Back-up location or process:</b></p> <p><b>Contact Name:</b></p> <p><b>Contact Phone:</b></p> <p><b>Contact Email:</b></p>
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**Appendix D: Additional Departmental Plans**

[SPES F-S by location 02-28-2023.xlsx](#)