



Emergency Operations Plan Dam Safety Annex

December 22, 2020



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PREFACE

RELATED AUTHORITIES

Legal authority to undertake the development of the Emergency Operations Plan and subsequent actions in an emergency derives from the Goochland County Board of Supervisors.

See Authorities in the EOP Base Plan for general authorities and references.

STATE AUTHORITIES

- The Virginia Dam Safety Act (All dams are included except those which are specifically excluded).

ABBREVIATIONS AND ACRONYMS

CDC	Centers for Disease Control and Prevention
COOP	Continuity of Operations
EOP	Emergency Operations Plan
EPT	Emergency Planning Team
FEMA	Federal Emergency Management Agency
FMA	Flood Mitigation Assistance
HAZMAT	Hazardous Materials
HMC	Hazard Mitigation Coordinator
HMGP	Hazard Mitigation Grant Program
HMP	Hazard Mitigation Plan
IA	Individual Assistance
NFIP	National Flood Insurance Program
PA	Public Assistance
PDM	Pre-Disaster Mitigation
PPE	Personal Protective Equipment
SDS	Safety Data Sheets
VDH	Virginia Department of Health
VDOT	Virginia Department of Transportation
WHO	World Health Organization

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INTRODUCTION

PURPOSE

The purpose of this annex is to identify and locate dams in the County that may cause problems in the event they collapse or are breached in some manner and to provide for the protection of those people who may be affected but such conditions.

MISSION

To provide protection to those residents in the vicinity of dams by taking actions necessary to prevent dam failures and, in the event there is a dam failure, to keep personal injury and property damage to a minimum.

SCOPE

This Annex applies to all dams located in the County and those agencies that are involved in dam safety as well as those that would be involved in responding to a dam collapse event. **See Attachment 1: Directory of Dams.**

CONCEPT OF OPERATIONS

GENERAL

The Virginia Dam Safety Act covers the basic dam safety responsibility for dams in the Commonwealth. The Virginia Dam Safety Act covers the basic dam safety responsibility for dams in the Commonwealth. All dams are included except those which are specifically excluded.

The owner of each dam is responsible for its safe and proper design, construction, operation, and maintenance. Owners of dams that exceed 25 feet in height, impound more than 50 acre-feet (100 acre-feet for agricultural purposes) of water, and are not regulated by others must comply with the Virginia Dam Safety Act. Smaller dams are excluded.

Dams that exceed 25 feet in height and impound more than 50 acre-feet (100 acre-feet for agricultural) are classified in one of four classifications according to the degree of hazard potential they impose should the structure fail.

PLAN REQUIREMENTS

All regulated dams except Class IV (potential damage confined to the owner) require that the owner prepare an Emergency Action Plan.

The owner of each Class I, II, and III dam covered by the Virginia Dam Safety Act is required to prepare an Emergency Action Plan (EAP) which shall include a method of notifying local authorities and notifying and warning persons downstream of the dam in the event of an impending dam failure or overtopping. A copy of each EAP must be provided to the affected local government.

An "Emergency Action Plan" is one of three items required prior to issuance of an Operation and Maintenance Certificate by the Virginia Department of Conservation and Recreation. In addition to the Virginia Department of Conservation and Recreation, a copy of the plan must be provided to the local Director of Emergency Services and to the Virginia Department of Emergency Management.

CLASSIFICATION

Dams are ranked by level of risk, as follows:

Classification	Description	Quantity in Goochland Co.
Class I (High Hazard)	<ul style="list-style-type: none"> • Probable loss of life • Excessive economic loss 	0
Class II (Moderate Hazard)	<ul style="list-style-type: none"> • Possible loss of life • Appreciable economic loss 	1 Regulated 2 Non-Regulated
Class III (Low Hazard)	<ul style="list-style-type: none"> • No loss of life expected • Minimal economic loss 	7 Regulated 17 Non-Regulated
Class IV (Low Hazard)	<ul style="list-style-type: none"> • No loss of life expected • No economic loss to others 	N/A

DAM EMERGENCY STAGES

The following table identifies and defines Goochland County's Dam Emergency Stages:

Stage	Description	Actions
Stage I	Slowly developing conditions; five days or more may be available for response. Owner should increase frequency of observations and take appropriate readiness actions.	The affected public will be routinely notified of conditions at a dam.
Stage II	Rapidly developing conditions; overtopping is possible. One to five days may be available for response. Increase readiness measures. Notify local Coordinator of conditions and keep him informed.	The public in the potential inundation area downstream will be alerted for possible evacuation.
Stage III	Failure has occurred, is imminent, or already in flood condition; overtopping is probable. Only minutes may be available for response. Evacuation recommended.	Local government will declare a local emergency and order an evacuation. It is recognized, of course, that a dam may collapse without warning.

RESPONSE ROLES AND RESPONSIBILITIES

Role	Responsibilities
<p style="text-align: center;">Dam Owners</p>	<ul style="list-style-type: none"> • Report abnormal conditions at the dam to the Sheriff and the Coordinator of Emergency Services • Owners of dams that exceed 25 feet in height and impound more than 50 acre-feet (100 acre-feet for agricultural purposes) of water must develop and maintain an "Emergency Action Plan." This plan shall include a method of notifying and warning persons downstream and of notifying local authorities in the event of impending failure of the dam. • Each dam EAP will identify the inundation area and persons to be evacuated.
<p style="text-align: center;">Emergency Services</p>	<ul style="list-style-type: none"> • Develop and maintain a local Emergency Operations Plan (EOP) which identifies any federal or state regulated dams in their jurisdiction and which sets forth procedures for the evacuation of persons downstream. • Coordinate technical assistance in evacuation planning, and in determining most viable and alternate transportation routes and modes of transport • Facilitate evacuation from affected areas • Identify evacuation site(s) • Develop evacuation and emergency operations procedures for at-risk locations • Develop evacuation traffic management plan • Monitor evacuation traffic flow/demand and adjust evacuation traffic management plan and measures as appropriate • Develop, coordinate, and deliver evacuation traveler information directly to the public and through the media • Develop plans, procedures and policies for coordinating, managing and disseminating public information

	<ul style="list-style-type: none">• Develop procedures for notifying residents and general public related to entering, repairing, and reoccupying condemned and damaged buildings• Identify public information needs of the affected area• Provide recovery and re-entry information• Notify residents and general public about entering, repairing, and reoccupying condemned and damaged buildings• Notify building owners about standards and permitting requirements for repairing and reoccupying condemned or damaged buildings or having utilities reconnected
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ATTACHMENT 1: DIRECTORY OF DAMS

Class	Name	Height	Max Capacity (acre-feet)	Type	Purpose	Owner
Class I	None					
Class II Regulated	Dover Lake Dam	36'	1,631	Earth	Irrigation & Recreation	Sabot Hill Farm, Inc.
Class II Non-regulated	Gathright's Dam	20'	60	Earth	Recreation	L.K. Gathright
	Harris Pond Dam	17'	143	Earth	Recreation	D.H. Leake
Class III Regulated	Bowles Dam	37'	137	Earth	Recreation	William DeRushe
	Broad Branch Dam	29'	1,188	Earth	Recreation	CBR Associates, Inc.
	Lake Dillon Dam	39'	600	Earth	Recreation	BSA, RE Lee Council
	Pickett's Creek	37'	1,318	Earth	Water supply, recreation, flood control, irrigation	Southbury Corp. Farm Mgmt.
	Pruitts Dam	26'	180	Earth	Recreation	Lee Hoehny
	Reservoir No. 1	28'	360	Earth	Irrigation	Hermitage CC
	Westview Dam	44'	273	Earth	Recreation	Westview on the James

Class III Non-regulated	Bolling Hall	20'	224	Earth	Recreation, Water Supply	B.C. Gottwald
	Bonneys Dam	15'	64	Earth	Recreation	Henley, Bonney, Markowitz
	Broad Branch Dam (Reservoir No. 2)	24'	333	Earth	Irrigation	Hermitage CC
	Carter & Harrell	24'	248	Earth	Recreation, water supply	Camptown Owners Assoc., Inc.
	Childress Dam	16'	76	Earth	Recreation	C. P. Childress
	Fairfield Dam	19'	78	Earth	Recreation	Martha Hume
	Killerney Dam	24'	234	Earth	Recreation	Thomas Knox Lively
	Lake Fullstream	24'	83	Earth	Irrigation & Recreation	Dr. J. A. Shield
	Licking Hole Farm Dam	24'	252	Earth	Recreation, water	F. D. Gottwald, Jr.
	Mayo- Alexander's	23'	165	Earth	Recreation	Howard and Mayo
	Mt. Bernard Dam	16'	240	Gravity	Recreation, flood control, water supply, irrigation	J. K. Perrin-T. J. Starke
	Patterson & Stettinius Dam	26'	98	Earth	Recreation	Andrew W. & Nancy N. Dykers
	Queensmere Dam	21'	113	Earth	Irrigation, recreation	Jack Cronley

Class III Non-regulated <i>(continued)</i>	Reynolds Dam	24'	105	Earth	Recreation	Lawrence J. Page
	Richmonds Dam	23'	62	Earth	Recreation	C. F. Richmond
	Volchers Dam	24'	66	Earth	Recreation	F. R. Volcher
	Windsor Park Lake Dam	21'	105	Earth	Recreation	Windsor Park Land Owners

Name	LAT / LONG	E-911 Address
Dover Lake Dam	37.62553 -77.74451	755 Merry Go Round Rd., Manakin Sabot, VA 23103
Gathright's Dam	37.68649 -77.89114	2940 Pitts Dr., Goochland, VA 23063
Harris Pond Dam	37.82056 -77.96013	4146 Broad Street Rd., Gum Spring, VA 23065
Bowles Dam	37.71350 -77.80140	1686 Broad Street Rd., Maidens, VA 23102
Broad Branch Dam	37.63339 -77.68733	100 Kinloch Ln., Manakin Sabot, VA 23103
Lake Dillon Dam	37.67613 -77.86254	1723 Maidens Rd., Maidens, VA 23102
Pickett's Creek	37.66442 -78.04779	5345 Whittcamp Rd., Goochland, VA 23063
Pruitts Dam	37.78736 -77.97367	3350 Lake Dr., Sandy Hook, VA 23153

Reservoir No. 1	37.64561 -77.70573	1248 Hermitage Rd., Manakin Sabot, VA 23103
Westview Dam	37.64592 -78.0028	1231 West View Rd., Goochland, VA 23063
Bolling Hall	37.66864 -77.96393	1705 Rock Castle Rd., Goochland, VA 23063
Bonneys Dam	37.78442 -78.05714	5380 Community House Rd., Goochland, VA 23063
Broad Branch Dam (Reservoir No. 2)	37.64198 -77.70037	1248 Hermitage Rd., Manakin Sabot, VA 23103
Carter & Harrell	37.63736 -77.78062	585 Blue Goose Rd., Crozier, VA 23039
Childress Dam	37.69843 -77.69371	183 Childress Rd., Rockville, VA 23146
Fairfield Dam	37.70018 -77.95730	3884 Big Hickory Dr., Goochland, VA 23063
Killarney Dam	37.83258 -77.97648	4070 Lake Killarney, Gum Spring, VA 23065
Lake Fullstream	37.65930 -77.76371	1289 Full Stream Farm Rd., Manakin Sabot, VA 23103
Licking Hole Farm Dam	37.69095 -77.99075	1550 Rock Castle Rd., Goochland, VA 23063
Mayo-Alexander's	37.79573 -78.07304	5722 Mayo Lake Drive, Columbia, VA 23038
Mt. Bernard Dam	37.66716 -77.85537	2210 Denver Ln., Maidens, VA 23102
Patterson & Stittius Dam	37.69968 -77.94528	3831 River Road W., Goochland, VA 23063

Queensmere Dam	37.68204 -78.05041	1500 Old Bunker Hill Rd., Goochland, VA 23063
Reynolds Dam	37.67574 -77.78809	1614 Genito Rd., Manakin Sabot, VA 23103
Richmonds Dam	37.64837 -77.81604	1858 River Road W., Crozier, VA 23039
Volchers Dam	37.67183 -78.06136	5450 Whittcamp Rd., Goochland, VA 23063
Windsor Park Lake Dam	37.86928 -78.01638	4369 Windsor Lake Dr., Louisa, VA 23093

ATTACHMENT 2: DAM SAFETY CORRECTIVE ACTION FORM

Instructions: This form is used to document, report, and act on identified concerns. Please email the completed form with the top portion completed to: rhillman@goochlandva.us. The issue will be tracked and routed to the appropriate department for action.

CORRECTIVE ACTION FORM		Date:	
Name:		Department:	
Phone:		Email:	
ISSUE IDENTIFIED			
Location:		Description of the issue:	
COUNTY EMERGENCY SERVICES USE			
Reviewed by:		Department referred to:	
Corrective Action Needed:			
RESOURCES		UNIT COST	QUANTITY
Labor:			
Parts:			
Supplies:			
		TOTAL COST ESTIMATE	
Additional Notes or Instructions:			Approved by:

ATTACHMENT 3: PROPOSED ANNEX CHANGE FORM

Instructions: This form is used for a change to the Dam Safety Annex. Please email the completed form with the top portion completed to: rhillman@goochlandva.us.

ANNEX CHANGE FORM		Date:
Name:	Department:	
Phone:	Email:	
CHANGE REQUESTED		
Annex Page(s)	Reason for Change:	
	Proposed Change Language:	
COUNTY EMERGENCY SERVICES USE		
Reviewed by:	Change Approved? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Approved Change Language:		
<input type="checkbox"/> Recorded in Record of Changes Date: <input type="checkbox"/> Updated Annex Sent to Plan Holders		