



Emergency Operations Plan Dam Safety Annex

December 22, 2020



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PLAN DOCUMENTATION

RECORD OF CHANGES

| Change # | Page # | Section | Summary of Change | Change Made By | Date |
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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>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>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 |

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| | <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 |
|--|---|

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 |

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|-----------------------------------|--|-----|-----|---------|---|------------------------------------|
| 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 |

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| 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@gochlandva.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 |
| | | LINE TOTAL | |
| 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.

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|---|---------------------------|---|
| 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 | | |