

Dam Safety Annex

Primary Agency

Emergency Management
Sheriff's Department

Supporting Agencies

County/City Administrator
Virginia Department of Conservation and Recreation (DCR)

Introduction

Purpose:

To facilitate the evacuation of downstream residents in the event of an imminent or impending dam failure.

Scope:

The Virginia Department of Conservation and Recreation provides detailed guidance to dam owners in developing an emergency action plan in the event of dam failure. Local government is also responsible for developing compatible procedures to warn and evacuate the public in the event of dam failure.

Policies:

Dam owners will:

- Develop an Emergency Action Plan for warning and evacuating the public in the event of dam failure;
- Obtain an Operation and Maintenance Certificate from the Virginia Department of Conservation and Recreation; and
- Operate and maintain the dam to assure the continued integrity of the structure.

Local Government will:

- Develop compatible procedures to warn and evacuate the public in the event of dam failure

Concept of Operations

Organization:

Dam owners are responsible for the proper design, construction, operation, maintenance, and safety of their dams. They are also responsible for reporting abnormal conditions at the dam to the Sheriff/Chief of Police, the County/City Administrator and the Coordinator of Emergency Management and to recommend evacuation of the public below the dam if it appears necessary. 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. 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 Management and to the Virginia Department of Emergency Management.

Standards have been established for Dam Classifications and Emergency Stages. See Tab 1. The affected public will be routinely notified of conditions at the dam during Stage I. If conditions escalate to Stage II, emergency services personnel will immediately notify the public affected to be on alert for possible

evacuation of the areas that would be flooded. If conditions deteriorate and overtopping or failure of a dam has occurred or is imminent, as in Stage III, the County Administrator and/or the Coordinator of Emergency Management and/or the Chairman/Director of Emergency Management will warn the public, order evacuation from the affected area, and declare a local emergency.

Responsibilities:

Dam Owners:

- Develop an Emergency Action Plan for warning and evacuating the Public in the event of dam failure;
- Obtain an Operation and Maintenance Certificate from the Virginia Department of Conservation and Recreation; and
- Operate and maintain the dam to assure the continued integrity of the structure.

Local Government

- Develop compatible procedures to warn and evacuate the public in the event of dam failure;
- Notify public of possible dam failure;
- Order immediate evacuation of residents in expected inundation areas;
- Sound warning through use of sirens, horns, and vehicles with loudspeakers, Emergency Alert System, telephone calls, and door-to-door notification to evacuate individuals immediately out of the area or to high ground in area for later rescue;
- Provide assistance to disaster victims;
- Clean up debris and restore essential services;
- All agencies tasked in this plan implement recovery procedures;
- Review emergency procedures used and revise, if necessary, to insure lessons learned are applied in future disasters; and
- Determine what mitigation measures, if any, should be initiated (zoning, design of dams, etc.).

Tab 1 to Dam Safety Annex

DAM CLASSIFICATIONS AND EMERGENCY STAGES

Dam Classifications

Dams are classified, as the degree of hazard potential they impose should the structure fail completely. This hazard classification has no correlation to the structural integrity or probability of failure.

Dams which exceed 25 feet in height **and** impound more than 50 acre feet in volume, or 100 acre feet if for agricultural purposes, are required to obtain an Operation and Maintenance Certificate which includes the development of an emergency action plan administered by the Department of Conservation and Recreation.

Class I (High Hazard) - Probable loss of life; excessive economic loss.

Class II (Moderate Hazard) - Possible loss of life; appreciable economic loss

Class III (Low Hazard) - No loss of life expected; minimal economic loss.

Emergency Stages

When abnormal conditions impact on a dam, such as flooding or minor damage to the dam, the dam owner should initiate specific actions that will result in increased readiness to respond to a potential dam failure. The following stages identify actions and response times which may be appropriate.

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.

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.

Stage III - Failure has occurred, is imminent, or already in flood condition; overtopping is probable. Only minutes may be available for response. Evacuation recommended.

Tab 2 to Dam Safety Support Annex**LOCAL DIRECTORY OF DAMS REGULATED BY
VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION AND REQUIRING
EMERGENCY ACTION PLANS**

Class I- High hazard, probable loss of life, and excessive economic loss in the event of complete failure.

Gathright Dam, Alleghany County, 96-100 river miles (James, Calfpasture, and Jackson upstream and west of Natural Bridge Station and Glasgow

Structural Height: 257' Maximum Capacity: 426,000 acre-feet

Type: Rockfill Purpose: Recreation, Flood Control

Owner: US Army Corps of Engineers

Contact: Safety Engineer: Pete Riley (757) 441-7698

Dam Safety Coordinator: (same as above)

Goshen Dam, Lake Merriweather, Little Calfpasture River, 1 mile upstream of State Route 39 between Goshen and Rockbridge Baths

Structural Height: 40' Maximum Capacity: 11,200 acre-feet

Type: Earth Purpose: Recreation

Owner: Boy Scouts of America

Operator: Mike Jolly (540) 255-3053

or Jack Lyle (540) 997-5353

Robertson Dam, Lake Robertson, Colliers Creek, 2-1/2 miles upstream of Collierstown

Structural Height: 55' Maximum Capacity: 678 acre-feet

Type: Earth Purpose: Recreation

Owner: Virginia Dept. of Game & Inland Fisheries

Acting Chief of Engineering: Larry Mohn, (540) 248-9360

Cave Mountain Dam, Buck Run, 2 miles west of Natural Bridge Learning Center

Structural Height: 30' Maximum Capacity: 37 acre-feet County of Rockbridge-

Type: Gravity Purpose: Recreation

Owner: USDA Forest Service

Operator: Thomas Jefferson National Forest,

Forest Ranger: Pat Egan (540) 997-1339 or Glenn Szarzynski (540) 377-5927

Class II- Moderate hazard, possible loss of life, and appreciable economic loss in the event of complete failure.

Moore's Creek Dam, 6.5 miles west of Murat

Structural Height: 89' Maximum Capacity: 1,220 acre-feet

Type: Earth Purpose: Water Supply, Recreation

Owner: City of Lexington

Contact: Engineering Firm, (276) 328-2161

Michael Hatfield, (276) 679-7586

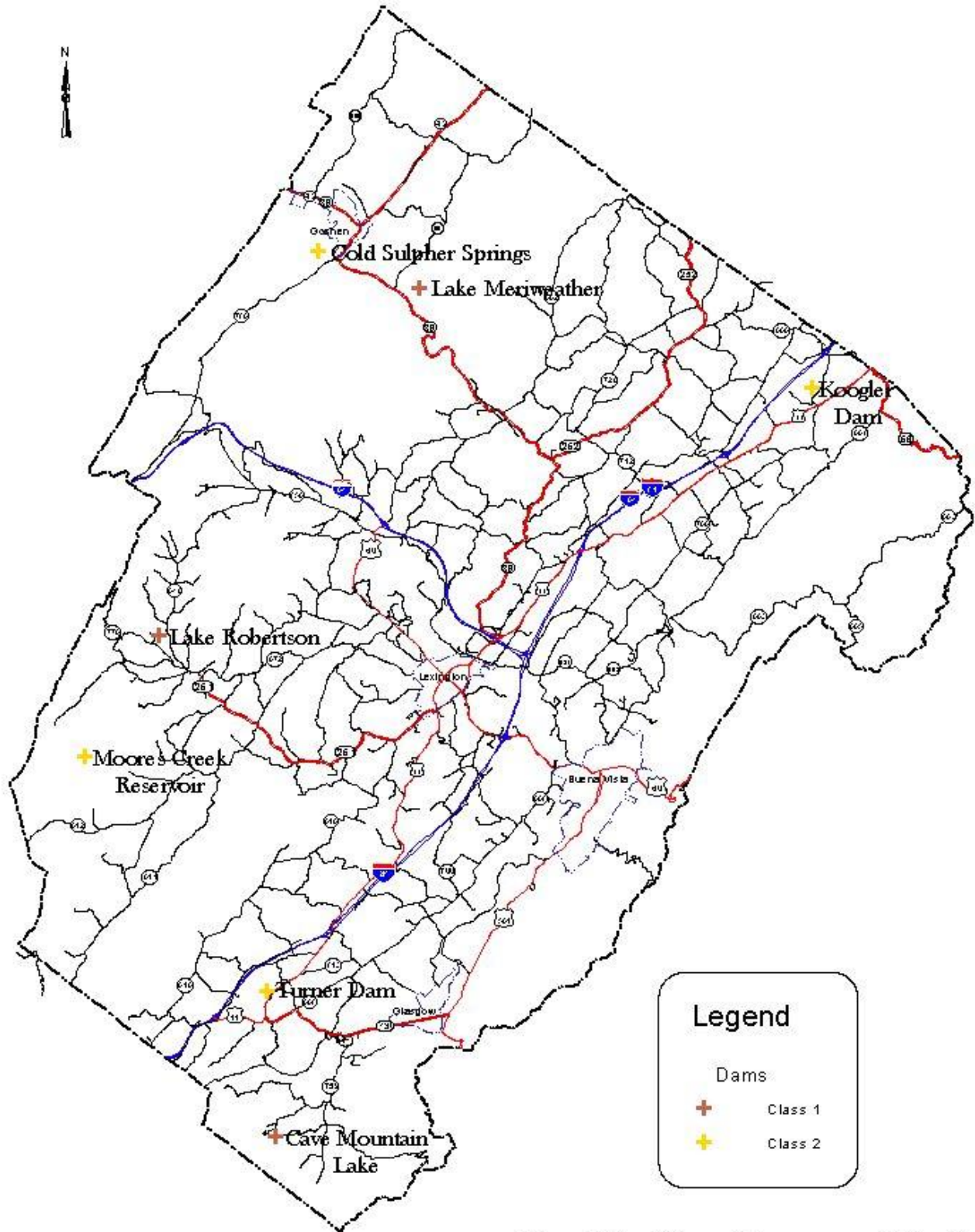
Turner Dam, Tributary of Cedar Creek
Structural Height: 50' Maximum Capacity: 355 acre-feet
Type: Earth Purpose: Recreation
Owner: Natural Bridge of Virginia, Inc., 291-2121

Koogler Dam, Moores Creek
Structural Height: 30' Maximum Capacity: 160 acre-feet
Type: Earth Purpose: Recreation
Owner: Glen Koogler (540) 377-2090

Cold Sulfur Springs Dam
Structural Height: 25' Maximum Capacity: 73 acre-feet
Type: Earth Purpose: Recreation
Owner: J. C. Goodbar, Harold Edwards, Willis Edwards
Contact: Harold Edwards (540) 463-5844 (W), (540) 463-5270 (H)
John Goodbar (540) 463-2168 (W), (540) 463-4994 (H)

Class III- Low hazard, no loss of life expected, and minimal economic loss in the event of complete failure.

None



Rockbridge County, Virginia
Class 1 & 2 Dams