

GUIDELINES FOR DEVELOPING AN  
**EMERGENCY  
ACTION PLAN**  
FOR HAZARD POTENTIAL CATEGORY 1 & 2 DAMS

**pennsylvania**  
STATE OF INDEPENDENCE



**JANUARY 2009**

**THIS EDITION OF GUIDELINES FOR DEVELOPING AN EMERGENCY ACTION PLAN (EAP) FOR HAZARD POTENTIAL CATEGORY 1 & 2 DAMS UTILIZES AN IMPROVED FORMAT. SIGNIFICANT REVISIONS FROM THE JULY 2005 EDITION ARE: 1) THE DAM OWNER OR THEIR ENGINEER MUST SCHEDULE A MEETING WITH THE COUNTY EMC(s) PRIOR TO SUBMISSION OF THE DRAFT EAP, 2) ADDITION OF A DAM WATCH REQUIREMENT, 3) ADDITION OF AN EARLY WARNING NOTIFICATION TO PSAP/911, 4) THE LOCAL EMC(s) MUST ADVISE KNOWN FACILITIES WITH SPECIAL NEEDS INDIVIDUALS OF A DAM EMERGENCY EVACUATION**

COMMENTS CONCERNING THIS PUBLICATION SHOULD BE SENT TO:

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WATERWAYS ENGINEERING  
DIVISION OF DAM SAFETY  
P.O. BOX 8554  
HARRISBURG, PA 17105-8554  
717-787-8568

For more information,  
visit DEP's Web site at [www.depweb.state.pa.us](http://www.depweb.state.pa.us), keyword: Dam Safety.

3140-BK-DEP1956 Rev. 2/2009

# TABLE OF CONTENTS

<b>1. INTRODUCTION</b>	<b>2</b>	
A. WHAT IS A HAZARD POTENTIAL CATEGORY 1 OR 2 DAM?	2	
B. WHAT IS A DAM EMERGENCY?	2	
C. WHAT IS AN EMERGENCY ACTION PLAN (EAP)?	2	
D. WHY MUST YOU HAVE AN EAP?	2	
E. YOUR RESPONSIBILITY AS A DAM OWNER	3	
<b>2. HOW TO DEVELOP AN EMERGENCY ACTION PLAN</b>	<b>4</b>	
A. USE THE ATTACHED SAMPLE EAP	4	
B. INVOLVE YOUR ENGINEER	4	
C. HOW THE COUNTY EMERGENCY MANAGEMENT COORDINATOR CAN HELP	5	
D. FIVE YEAR UPDATE REQUIREMENTS	5	
<b>3. REVIEW AND APPROVAL PROCEDURES</b>	<b>6</b>	
A. NEWLY DEVELOPED EAPs	6	
B. REVIEWING AND REVISING AN EXISTING APPROVED EAP	7	
<b>4. PUBLIC NOTICE POSTING FOR AN EAP</b>	<b>7</b>	
<b>5. DEP'S ENFORCEMENT ACTIONS FOR FAILURE TO DEVELOP AN EAP</b>	<b>8</b>	
<b>APPENDIX I</b>	<b>DEPARTMENT OF ENVIRONMENTAL PROTECTION'S REGIONAL OFFICES</b>	<b>9</b>
<b>APPENDIX II</b>	<b>COUNTY EMERGENCY MANAGEMENT AGENCIES</b>	<b>10</b>
<b>APPENDIX III</b>	<b>PENNSYLVANIA EMERGENCY MANAGEMENT AREA OFFICES</b>	<b>14</b>
<b>APPENDIX IV</b>	<b>EMERGENCY ACTION PLAN DEVELOPMENT FLOW CHART</b>	<b>15</b>
<b>APPENDIX V</b>	<b>POSTING NOTICE SAMPLE</b>	<b>16</b>
<b>ATTACHMENT A</b>	<b>SAMPLE EMERGENCY ACTION PLAN</b>	<b>18</b>

## 1. INTRODUCTION

These guidelines are a tool for the owner or operator of a hazard potential category 1 or 2 dam to learn of the inherent potential dangers a dam might impose upon an unsuspecting public, which lives, works, conducts business and plays in areas below a dam. The guidelines assist the dam owner in recognizing the potential dangers and outline steps to help prevent the loss of life or property and to minimize economic losses.

### A. *What is a Hazard Potential Category 1 or 2 Dam?*

The Department of Environmental Protection's Regulations, Chapter 105, Dam Safety and Waterway Management defines a hazard potential category 1 dam as a dam where its failure could result in significant loss of life, excessive economic losses, and significant public inconvenience. A hazard potential category 2 dam is a dam where its failure could result in loss of a few lives, appreciable property damage, and short-duration public inconvenience. Public inconvenience would include a flooded road, washout of a bridge or driveway, disruption of utilities, etc.

### B. *What is a Dam Emergency?*

An emergency in terms of a dam's operation is identified as any condition that:

- (1) develops unexpectedly,
- (2) endangers the structural integrity of the dam,
- (3) might result in the dam's failure producing downstream flooding, or
- (4) requires immediate action by the dam owner/operator, emergency agencies and/or the public.

### C. *What is an Emergency Action Plan (EAP)?*

An EAP is a formal document that identifies potential emergency conditions at a dam and specifies preplanned actions to be followed to minimize property damage and loss of life. It contains procedures and information to assist the dam owner in issuing early warning and notification messages to responsible downstream emergency management authorities of the emergency situation. It also contains inundation maps to show the emergency management authorities the critical areas for action in case of an emergency.

Every Emergency Action Plan must be tailored to each dam's specific conditions, to the capabilities of the owner and operator, and to the emergency response organizations that will implement the EAP.

### D. *Why must you have an EAP?*

An EAP is needed for four reasons:

- (1) To pre-plan the coordination of necessary actions by the dam owner/operator and the responsible local, state and federal emergency organizations.

- (2) To provide timely notification of a dam emergency and evacuation in the event of potential failure of the dam.
- (3) To minimize the risk of loss of life and reduce the risk of property damage in downstream areas resulting from a dam's failure. The design, construction, operation, maintenance and inspection of dams are all intended to minimize the risk of future dam failures. Despite the adequacy of these efforts, unique situations do sometimes develop that might result in a dam failure. Therefore, it is necessary for the dam owner's engineer to identify conditions that could lead to a failure in order to initiate emergency measures that could prevent or minimize the loss of life and property.
- (4) In Pennsylvania, "*It's the law.*" The Pennsylvania Dam Safety and Encroachments Act (Act 325 and Act 70) mandates emergency warning and action plans. The Pennsylvania Code - Title 25, Chapter 105 Dam Safety and Waterways Management, Section 105.63 and 105.134 details the conditions and requirements of emergency procedures, emergency warning systems and their operation plan. The Emergency Management Services Code, (35 Pa. C.S. Section 7101 et seq.) as amended, authorizes the Pennsylvania Emergency Management Agency (PEMA) to implement a comprehensive emergency management program of prevention, mitigation, preparedness, response and recovery activities for any kind of man-made or natural disaster, or an emergency.

***E. Your responsibility as the dam owner includes the following:***

- (1) Operation – The owner or operator must conduct periodic inspections (minimum once every three months) of the dam and its appurtenant structures and maintain a written dated log of the dam's conditions.
- (2) Maintenance – The owner or operator is required to cut vegetation on embankments and below the toe of the dam, to check the dam's appurtenances and operating valves, plus conduct timely repairs when needed. Controlling the growth of vegetation on a dam is essential to facilitate visual inspection of the dam, by the owner/operator and their engineer, for cracks, subsidence areas, holes, seepage and boils.
- (3) Annual Dam Inspection – The owner or operator is required to have an experienced professional engineer conduct a detailed inspection of the dam, including a field review of the downstream inundation map in the EAP. This report must be signed and sealed by a professional engineer registered in Pennsylvania and submitted to the Department of Environmental Protection (DEP), Division of Dam Safety, by December 31<sup>st</sup> of each year.
- (4) Development of the EAP - With assistance by a registered professional engineer, and county emergency management office cooperation, the owner must develop an acceptable EAP. The EAP will be reviewed and approved by PEMA and the DEP, Division of Dam Safety.
- (5) Review and Update EAP - Every five years. The owner need not totally rewrite the EAP, but it must be thoroughly reviewed, then revised in those areas where needed, including the inundation map. New concurrence signatures must be obtained. DEP and PEMA review and approve all updated EAPs.

- (6) Cooperation with DEP - The Department has the legal authority to issue dam permits and enforce compliance with dam regulations. Owner-Department cooperation is the key ingredient to a safe dam. Please call the Division of Dam Safety at 717-787-8568 should you have any questions or concerns regarding your dam. We will be pleased to assist you.

## 2. HOW TO DEVELOP AN EMERGENCY ACTION PLAN

### A. *Use the attached Sample EAP*

The attached Sample EAP is a recommended format to be utilized by dam owners developing their dam's EAP. The Sample EAP has an "Instruction" column to explain each component to you. The instructions column should not appear in your dam's EAP. Any questions regarding the Sample EAP should be addressed to the county Emergency Management Agency or DEP's Division of Dam Safety (717-787-8568).

### B. *Involve Your Engineer*

The owner should retain a professional engineer registered in Pennsylvania who is experienced in design, operation and maintenance of dams similar in size and characteristics as their dam. The engineer should conduct a field review of the dam, review its design plans and operational records, if available (DEP files are available for the dam owner's or their engineer's use), and field review the conditions of the downstream inundation area. A hydrologic and hydraulic study, including a sudden dam failure downstream flood analysis (dam breach analysis) might be required. These studies will be used to establish critical reservoir water levels in the EAP, and the limits of potential downstream flooding to be shown on the downstream inundation map. The owner's engineer must develop the downstream inundation map. The engineer's dam breach analysis used to determine the flood levels must be submitted to the Department for review and approval. **The dam breach analysis and inundation map must be signed and sealed by a professional engineer registered in Pennsylvania.**

The downstream inundation map is the basis for developing the EAP. This map defines the approximate limits of the maximum flood wave that would result from a sudden failure of your upstream dam. We require that a U.S. Geological Survey (U.S.G.S.) quadrangle map, or a more accurate/better quality map, with a scale of 1" = 1000' at a minimum, be used as the base map. If an electronic version of the inundation map is submitted, a paper copy must also be included in the EAP. The following items, at a minimum, should be shown on this map:

- (1) Title block with the dam's name, county, municipality, map scale, date, etc., and the name and address of the engineer who developed the map. The base map, showing the limits of inundation, must be signed and sealed by a professional engineer registered in Pennsylvania. If the engineer is only providing the base map, the engineer should provide a statement on the map to that effect and that the owner is providing the other information (TCPs, road names, etc.) on the map.
- (2) Show and identify the dam, the access road(s) to the dam, the county boundaries and the township/borough/city boundaries.

- (3) Show and identify the dam break flood (inundation) limit boundaries (worst-case scenario).
- (4) Identify roads by name and/or route number. Also, show required Traffic Control Points (TCP) to be established by emergency personnel as indicated in Section IV of the EAP. TCPs restrict access to flooded areas in time of emergency and afterwards during clean up operations. The TCPs should be consecutively numbered on this map and an Attachment B provided to include the number, location, and the emergency response agency responsible for establishing each TCP.

***C. How the County Emergency Management Coordinator can help***

Each of Pennsylvania's 67 counties has an Emergency Management Coordinator (EMC). The EMC for the county in which your dam is located, as well as the EMCs for counties downstream, which might be affected by the flood limits on the inundation map, can assist in the development of your EAP. **(Note: Although the county EMC will provide information essential to your plan, they will not write your EAP).** Failure of the dam owner to meet with the county EMC(s) and obtain the county EMC(s) signature(s) will result in the EAP being returned prior to the DEP and PEMA performing a review of the plan.

Schedule a meeting and provide the county EMC(s) with an inundation map that shows the municipal boundaries. The EMC(s) will provide or assist you with determining the name of the emergency response agencies with jurisdiction in each affected municipality, including:

- (1) Fire Departments,
- (2) Police Departments,
- (3) Emergency Medical Services,
- (4) Local Emergency Management Coordinator(s).

Additionally, the county EMC(s) will be able to provide insight into the capabilities and workings of the emergency response agencies in the county, such as:

- Some police departments might be part-time or not have sufficient manpower to staff all required traffic control points in their jurisdiction;
- Notifying the appropriate highway departments (PennDOT or municipal departments) of road closures;
- The correct name of the communications center responsible for dispatching each of the emergency response agencies;

**PLEASE DO NOT EXPECT THE COUNTY EMC TO WRITE YOUR EAP!** The EAP is the dam owner's responsibility. We are sure your engineer will be pleased to develop your EAP if you are not able to do so. EAPs should be consistent with existing county and municipal Emergency Action Plans.

***D. Five Year Update Requirements***

Every fifth year on the anniversary date of the EAP's approval by DEP, the owner or the owner's engineer must field review the downstream inundation map for new

developments or other significant hydraulic changes. If changes have occurred, the owner's engineer shall revise the downstream inundation map accordingly. Based upon the owner or owner's engineer's inspection, the engineer will review and revise, as necessary, any of the potential hazard conditions in the surveillance section and on the inundation map of the EAP. The owner will review the EAP with the county EMC(s) to assure any changes in emergency response organizations, phone numbers, etc., are correct in the revised EAP. Remember, an EAP need not be rewritten, but it must be reviewed and revised appropriately and new concurrence signatures obtained.

### 3. REVIEW AND APPROVAL PROCEDURES

#### A. *Newly Developed EAPs*

- (1) Upon meeting with the county EMC(s), for each county affected by the dam's failure, and completing the draft EAP, the owner will submit one copy of the draft EAP to the county Emergency Management Agency(s) for review. The county EMC(s) must sign and date their review block(s) on the Promulgation and Concurrence page of the draft EAP.
- (2) After the county EMC(s) has reviewed, signed and dated the review block(s) on the Promulgation and Concurrence page of the draft EAP, the owner and operator must sign and date their review blocks on the Promulgation and Concurrence page of the draft EAP. The owner will then submit two copies of the draft EAP to:

Department of Environmental Protection Bureau of Waterways Engineering Division of Dam Safety P.O. Box 8554 Harrisburg, PA 17105-8554
---

- (3) The draft EAP will be reviewed by DEP and PEMA. PEMA will provide comments in accordance with the Emergency Management Services Code to DEP. The owner will subsequently be instructed by letter from DEP as to:
  - a. How to proceed with the EAP's final development.
  - b. How to make required minor revisions explained in the letter and proceed with final development.
  - c. How to make major required revisions explained in the letter and resubmit a revised draft EAP. If the Guidelines and Sample EAP are followed, major revisions should not be necessary.
- (4) The owner will submit the final EAP with the original concurrence signature page(s) and 5 copies (6 total) at a minimum to the DEP at the address in paragraph 3.A.(2) above.
- (5) DEP will forward the final EAP to PEMA for review and approval. Once PEMA has approved the final EAP, the DEP will review and approve the final EAP. An approval letter with a copy of the completed PEMA and DEP Approvals page will be returned to the owner with instructions for distribution. DEP will distribute a copy of the approved EAP to PEMA's Area Office, the affected



county Emergency Management Agency(s) and 911 Center(s), the National Weather Service, and the DEP's Regional Office. DEP will retain the original concurrence page signatures in its file.

- (6) The owner will provide a copy of the approved EAP to each emergency response organization and each affected municipal EMC listed in Section IV. of the plan. Within 60 days of the date of the Department's approval letter, a statement by the owner certifying that an approved copy of the EAP has been distributed to each emergency response organization and each affected municipal EMC listed must be submitted to DEP, Division of Dam Safety.

***B. Reviewing and Revising an Existing DEP-Approved EAP***

- (1) Upon reviewing and revising the EAP, the owner will submit the revised pages to DEP as in Sections 3.A.(1) and (2) on page 6.
- (2) If the revisions are administrative only (i.e., names, phone numbers and new approvals on the Promulgation and Concurrence Signature page), or if no revisions are required, proceed as in paragraphs 3.A.(3) thru (6) above.

**4. PUBLIC NOTICE POSTING FOR AN EAP**

The Dam Safety and Encroachments Act requires the owner or operator of any high hazard dam to post a NOTICE in public places in any area that might be affected by the dam's failure. In order to comply with the notice requirement, such notices must be posted in the public places within each political subdivision affected by the downstream flood area of the dam as shown on the inundation map. The NOTICE should be posted at the following locations:

- (1) The city, borough or township building in the affected municipalities.
- (2) Other public buildings such as post offices, libraries, grocery stores, and gas stations with the management's permission.

The notice should state that a copy of the Emergency Action Plan for the dam is available for inspection at the following locations:

- (1) County Emergency Management Office(s).
- (2) Local Emergency Management or Municipal Office(s).
- (3) The office of the dam owner.

**List the physical address of each office. A P.O. Box address is not acceptable. Enclosed at Appendix V is a copy of a suggested NOTICE form for your use.**

Within 60 days of the date of the Department's approval letter, a statement by the owner certifying that public posting has been completed must be submitted to DEP, Division of Dam Safety.

**5. DEP'S ENFORCEMENT ACTIONS FOR FAILURE TO DEVELOP AN EAP**

*The Dam Safety and Encroachment Act* of November 26, 1978, P.L. 1375, No. 325, as amended, provides for both civil penalties and criminal penalties of \$100 to \$10,000, plus \$500 per day in each day of continued violation, as well as imprisonment up to one year. Dam owners who fail to develop and/or implement any **Emergency Action Plan**, when advised by the Department that an **Emergency Action Plan** for their hazard potential category 1 or 2 dam is required will be subject to legal action by the Department of Environmental Protection.

DEP is waiting to assist you with your EAP. We will provide sufficient notice to a dam owner to develop or revise an EAP for their dam. We will also allow a reasonable amount of time for you and your engineer to develop the EAP.

**WE WILL NOT ALLOW NON-COMPLIANCE.**

**APPENDICES:**

- I. Department of Environmental Protection Regional Offices
- II. County Emergency Management Agencies
- III. Pennsylvania Emergency Management Area Offices
- IV. Emergency Action Plan Development Flow Chart
- V. Posting NOTICE Sample

**ATTACHMENTS:**

- A. Sample Emergency Action Plan

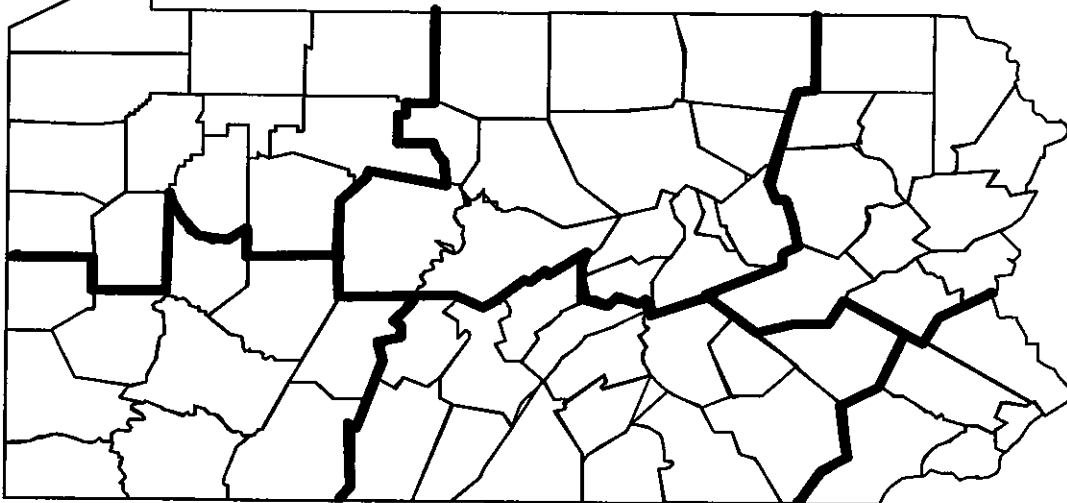
# APPENDIX I

## DEP REGIONAL OFFICES

**Northwest Regional Office**  
230 Chestnut Street  
Meadville, PA 16335  
814-332-6945  
800 373-3398 (24 Hr.)

**Northcentral Regional Office**  
208 W. Third Street, Suite 101  
Williamsport, PA 17701  
570-327-3636 (24 Hr.)

**Northeast Regional Office**  
2 Public Square  
Wilkes-Barre, PA 18711  
570-826-2511 (24 Hr.)



**Southwest Regional Office**  
400 Waterfront Drive  
Pittsburgh, PA 15222-4725  
412-442-4187  
412-442-4000 (24 Hr.)

**Southcentral Regional Office**  
909 Elmerton Ave.  
Harrisburg, PA 17110  
717-705-4741 Day  
877-333-1904 (After Hrs.)

**Southeast Regional Office**  
2 East Main Street  
Norristown, PA 19401  
484-250-5900 (24 Hr.)

**Bureau of Waterways Engineering**  
Division of Dam Safety  
717-787-8568  
717-787-4343 (24 Hr.)  
800-541-2050 (24 Hr.)

# APPENDIX II

## COUNTY EMERGENCY MANAGEMENT AGENCIES

<p><b>ADAMS COUNTY</b>  <b>DEPARTMENT OF EMERGENCY SERVICES</b>                  230 Greenamyer Lane                  Gettysburg, PA 17325-2313                  Business Phone: 717-334-8603                  24-Hour Phone: 717-334-8603/8101  <b>PEMA CENTRAL AREA OFFICE</b>  <b>DEP SOUTHCENTRAL REGION</b></p>	<p><b>ALLEGHENY COUNTY</b>  <b>EMERGENCY SERVICES</b>                  400 North Lexington Street, Suite 200                  Pittsburgh, PA 15208                  Business Phone: 412-473-2550                  24-Hour Phone: 412-473-3000  <b>PEMA WESTERN AREA OFFICE</b>  <b>DEP SOUTHWEST REGION</b></p>	<p><b>ARMSTRONG COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>                  450 East Market Street                  Kittanning, PA 16201-1409                  Business Phone: 724-548-3431                  24-Hour Phone: 724-548-5105  <b>PEMA WESTERN AREA OFFICE</b>  <b>DEP SOUTHWEST REGION</b></p>
<p><b>BEAVER COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>                  250 East End Avenue                  Beaver, PA 15009                  Business Phone: 724-775-1700                  24-Hour Phone: 724-775-0880  <b>PEMA WESTERN AREA OFFICE</b>  <b>DEP SOUTHWEST REGION</b></p>	<p><b>BEDFORD COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>                  200 South Juliana Street                  Bedford, PA 15522                  Business Phone: 814-623-9117                  24-Hour Phone: 814-623-1105  <b>PEMA CENTRAL AREA OFFICE</b>  <b>DEP SOUTHCENTRAL REGION</b></p>	<p><b>BERKS COUNTY</b>  <b>DEPARTMENT OF EMERGENCY SERVICES</b>                  2561 Bernville Road                  Reading, PA 19605                  Business Phone: 610-374-4800                  24-Hour Phone: 610-655-4921  <b>PEMA EASTERN AREA OFFICE</b>  <b>DEP SOUTHCENTRAL REGION</b></p>
<p><b>BLAIR COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>                  615 Fourth Street                  Altoona, PA 16602                  Business Phone: 814-940-5905                  24-Hour Phone: 814-695-7553  <b>PEMA CENTRAL AREA OFFICE</b>  <b>DEP SOUTHCENTRAL REGION</b></p>	<p><b>BRADFORD COUNTY</b>  <b>DEPARTMENT OF EMERGENCY SERVICES</b>                  R.D. #1, Box 179-C                  Towanda, PA 18848                  Business Phone: 570-265-5022                  24-Hour Phone: 570-265-9101/9102 or 265-5022  <b>PEMA CENTRAL AREA OFFICE</b>  <b>DEP NORTHCENTRAL REGION</b></p>	<p><b>BUCKS COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>                  911 Freedom Way                  Ivyland, PA 18974                  Business Phone: 215-340-8700                  24-Hour Phone: 215-345-1411  <b>PEMA EASTERN AREA OFFICE</b>  <b>DEP SOUTHEAST REGION</b></p>
<p><b>BUTLER COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>                  120 McCune Drive                  Butler, PA 16001                  Business Phone: 724-284-5211                  24-Hour Phone: 724-287-7769  <b>PEMA WESTERN AREA OFFICE</b>  <b>DEP NORTHWEST REGION</b></p>	<p><b>CAMBRIA COUNTY</b>  <b>DEPARTMENT OF EMERGENCY SERVICES</b>                  110 Franklin Street, Suite 200                  Johnstown, PA 15901                  Business Phone: 814-534-4342                  24-Hour Phone: 814-472-2100/2072  <b>PEMA WESTERN AREA OFFICE</b>  <b>DEP SOUTHWEST REGION</b></p>	<p><b>CAMERON COUNTY</b>  <b>DEPARTMENT OF EMERGENCY SERVICES</b>                  Court House                  20 East 5<sup>th</sup> Street                  Emporium, PA 15834                  Business Phone: 814-486-9352                  24 Hour Phone: 814-486-0952  <b>PEMA WESTERN AREA OFFICE</b>  <b>DEP NORTHCENTRAL REGION</b></p>
<p><b>CARBON COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>                  1264 Emergency Lane                  Nesquehoning, PA 18240-8948                  Business Phone: 570-325-3097                  24-Hour Phone: 570-325-9111  <b>PEMA EASTERN AREA OFFICE</b>  <b>DEP NORTHEAST REGION</b></p>	<p><b>CENTRE COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>                  420 Holmes Street, Room 134                  Bellefonte, PA 16823                  Business Phone: 814-355-6745                  24-Hour Phone: 814-355-6904  <b>PEMA CENTRAL AREA OFFICE</b>  <b>DEP NORTHCENTRAL REGION</b></p>	<p><b>CHESTER COUNTY</b>  <b>DEPARTMENT OF EMERGENCY SERVICES</b>                  Chester County Government Services Center                  601 Westtown Road, Suite 12, Box 2747                  West Chester, PA 19380-0990                  Business Phone: 610-344-5000                  24-Hour Phone: 610-344-5000  <b>PEMA EASTERN AREA OFFICE</b>  <b>DEP SOUTHEAST REGION</b></p>
<p><b>CLARION COUNTY</b>  <b>OFFICE OF EMERGENCY SERVICES</b>                  421 Madison Road                  Clarion, PA 16214                  Business Phone: 814-226-6631                  24-Hour Phone: 814-226-7020-1  <b>PEMA WESTERN AREA OFFICE</b>  <b>DEP NORTHWEST REGION</b></p>	<p><b>CLEARFIELD COUNTY</b>  <b>DEPARTMENT OF EMERGENCY SERVICES</b>                  911 Leonard Street                  Clearfield, PA 16830-3245                  Business Phone: 814-765-5357                  24-Hour Phone: 814-765-5357  <b>PEMA WESTERN AREA OFFICE</b>  <b>DEP NORTHCENTRAL REGION</b></p>	<p><b>CLINTON COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>                  22 Cree Drive                  Lock Haven, PA 17745                  Business Phone: 570-893-4090 x. 208                  24-Hour Phone: 570-748-2936  <b>PEMA CENTRAL AREA OFFICE</b>  <b>DEP NORTHCENTRAL REGION</b></p>

<p><b>COLUMBIA COUNTY</b>  <b>DEPARTMENT OF PUBLIC SAFETY</b>  Court House, P.O. Box 380  West Main Street  Bloomsburg, PA 17815  Business Phone: 570-389-5720  24 -Hour Phone: 570-389-5720  <b>PEMA EASTERN AREA OFFICE</b>  <b>DEP NORTHCENTRAL REGION</b></p>	<p><b>CRAWFORD COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>  903 Diamond Park  Meadville, PA 16335  Business Phone: 814-724-2552  24-Hour Phone: 814-724-2548  <b>PEMA WESTERN AREA OFFICE</b>  <b>DEP NORTHWEST REGION</b></p>	<p><b>CUMBERLAND COUNTY</b>  <b>OFFICE OF EMERGENCY PREPAREDNESS</b>  1101 Claremont Road  Carlisle, PA 17013  Business Phone: 717-240-6400  24-Hour Phone: 717-243-4121  <b>PEMA CENTRAL AREA OFFICE</b>  <b>DEP SOUTHCENTRAL REGION</b></p>
<p><b>DAUPHIN COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>  911 Gibson Blvd.  Steelton, PA 17113-1988  Business Phone: 717-558-6900  24-Hour Phone: 717-558-6900  <b>PEMA CENTRAL AREA OFFICE</b>  <b>DEP SOUTHCENTRAL REGION</b></p>	<p><b>DELAWARE COUNTY</b>  <b>EMERGENCY SERVICES</b>  360 North Middletown Road  Media, PA 19063-5594  Business Phone: 610-565-8700  24-Hr. Phone: 610-565-8700  <b>PEMA EASTERN AREA OFFICE</b>  <b>DEP SOUTHEAST REGION</b></p>	<p><b>ELK COUNTY</b>  <b>DEPARTMENT OF EMERGENCY SERVICES</b>  Court House  Ridgway, PA 15853  Business Phone: 814-776-5314  24-Hr. Phone: 814-772-0000  <b>PEMA WESTERN AREA OFFICE</b>  <b>DEP NORTHWEST REGION</b></p>
<p><b>ERIE COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>  2880 Flower Road  Erie, PA 16501  Business Phone: 814-451-7911  24 -Hour Phone: 814-451-7911  <b>PEMA WESTERN AREA OFFICE</b>  <b>DEP NORTHWEST REGION</b></p>	<p><b>FAYETTE COUNTY</b>  <b>OFFICE OF EMERGENCY MANAGEMENT</b>  Fayette County Public Service Bldg., 4<sup>th</sup> Floor  24 East Main Street  Uniontown, PA 15401  Business Phone: 724-430-1277  24-Hour Phone: 724-430-9114  <b>PEMA WESTERN AREA OFFICE</b>  <b>DEP SOUTHWEST REGION</b></p>	<p><b>FOREST COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>  P.O. Box 217  Tidioute, PA 16353  Business Phone: 814-755-3541  24-Hour Phone: 814-755-3200  <b>PEMA WESTERN AREA OFFICE</b>  <b>DEP NORTHWEST REGION</b></p>
<p><b>FRANKLIN COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>  157 Lincoln Way East  Chambersburg, PA 17201-2211  Business Phone: 717-264-2813  24-Hour Phone: 717-264-2813  <b>PEMA CENTRAL AREA OFFICE</b>  <b>DEP SOUTHCENTRAL REGION</b></p>	<p><b>FULTON COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>  116 West Market Street  Suite 102  McConnellsburg, PA 17233-1199  Business Phone: 717-485-3201  24-Hour Phone: 717-262-6769  <b>PEMA CENTRAL AREA OFFICE</b>  <b>DEP SOUTHCENTRAL REGION</b></p>	<p><b>GREENE COUNTY</b>  <b>EMERGENCY SERVICES</b>  55 West Greene Street  Waynesburg, PA 15370-2033  Business Phone: 724-627-5387  24-Hour Phone: 724-852-2911  <b>PEMA WESTERN AREA OFFICE</b>  <b>DEP SOUTHWEST REGION</b></p>
<p><b>HUNTINGDON COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>  Court House  223 Penn Street  Huntingdon, PA 16652  Business Phone: 814-643-6613/6617  24-Hour Phone: 814-643-3960 or 4300  <b>PEMA CENTRAL AREA OFFICE</b>  <b>DEP SOUTHCENTRAL REGION</b></p>	<p><b>INDIANA COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>  85 Haven Drive  Indiana, PA 15701  Business Phone: 724-349-9300  24-Hour Phone: 724-349-9300  <b>PEMA WESTERN AREA OFFICE</b>  <b>DEP SOUTHWEST REGION</b></p>	<p><b>JEFFERSON COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>  Emergency Services Bldg.  560 Service Center Road  Brookville, PA 15825-9761  Business Phone: 814-849-1617  24-Hour Phone: 814-849-1617  <b>PEMA WESTERN AREA OFFICE</b>  <b>DEP NORTHWEST REGION</b></p>
<p><b>JUNIATA COUNTY</b>  <b>DEPARTMENT OF EMERGENCY SERVICES</b>  11 North 3<sup>rd</sup> Street  Mifflintown, PA 17059  Business Phone: 717-436-7730  24-Hour Phone: 717-436-8448  <b>PEMA CENTRAL AREA OFFICE</b>  <b>DEP SOUTHCENTRAL REGION</b></p>	<p><b>LACKAWANNA COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>  30 Valley View Business Park  Jessup, PA 18434  Business Phone: 570-307-7300  24-Hour Phone: 570-342-9111  <b>PEMA EASTERN AREA OFFICE</b>  <b>DEP NORTHEAST REGION</b></p>	<p><b>LANCASTER COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>  P.O. Box 219  Manheim, PA 17545-0219  Business Phone: 717-664-1200  24-Hour Phone: 800-808-5236  <b>PEMA CENTRAL AREA OFFICE</b>  <b>DEP SOUTHCENTRAL REGION</b></p>
<p><b>LAWRENCE COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>  110 East Lincoln Avenue, #2B  New Castle, PA 16101  Business Phone: 724-658-7485  24-Hour Phone: 724-656-9300  <b>PEMA WESTERN AREA OFFICE</b>  <b>DEP NORTHWEST REGION</b></p>	<p><b>LEBANON COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>  400 South Eighth Street  Municipal Building Room #12  Lebanon, PA 17042  Business Phone: 717-272-7621  24-Hour Phone: 717-272-7621  <b>PEMA CENTRAL AREA OFFICE</b>  <b>DEP SOUTHCENTRAL REGION</b></p>	<p><b>LEHIGH COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>  455 West Hamilton Street  Allentown, PA 18101-1614  Business Phone: 610-782-3073  24-Hour Phone: 610-437-5252  <b>PEMA EASTERN AREA OFFICE</b>  <b>DEP NORTHEAST REGION</b></p>

<b>LUZERNE COUNTY</b> <b>EMERGENCY MANAGEMENT AGENCY</b> 200 North River Street Wilkes-Barre, PA 18711-1001 Business Phone: 570-820 4400 24-Hour Phone: 570-820-4400/800-821-3715 <b>PEMA EASTERN AREA OFFICE</b> <b>DEP NORTHEAST REGION</b>	<b>LYCOMING COUNTY</b> <b>DEPARTMENT OF PUBLIC SAFETY</b> 542 County Farm Road, Suite 101 Montoursville, PA 17754 Business Phone: 570-433-4461 ext. 4732 24-Hour Phone: 570-433-4360 <b>PEMA CENTRAL AREA OFFICE</b> <b>DEP NORTHCENTRAL REGION</b>	<b>MCKEAN COUNTY</b> <b>EMERGENCY MANAGEMENT AGENCY</b> 17175 Route 6 Smethport, PA 16749-0305 Business Phone: 814-887-5070 ext. 13 24 -Hour Phone: 814-887-5070 <b>PEMA WESTERN AREA OFFICE</b> <b>DEP NORTHWEST REGION</b>
<b>MERCER COUNTY</b> <b>DEPARTMENT OF PUBLIC SAFETY</b> 205 South Erie Street Mercer, PA 16137-1501 Business Phone: 724-662-6100 ext. 2442 24-Hour Phone: 724-662-6110 <b>PEMA WESTERN AREA OFFICE</b> <b>DEP NORTHWEST REGION</b>	<b>MIFFLIN COUNTY</b> <b>EMERGENCY SERVICES</b> 20 North Wayne Street Lewistown, PA 17044 Business Phone: 717-248-9645/9607 24-Hour Phone: 717-248-9646/9607 <b>PEMA CENTRAL AREA OFFICE</b> <b>DEP SOUTHCENTRAL REGION</b>	<b>MONROE COUNTY</b> <b>OFFICE OF EMERGENCY SERVICES</b> 100 Gypsum Road Stroudsburg, PA 18360 Business Phone: 570-992-4113 24-Hour Phone: 570-992-9911 <b>PEMA EASTERN AREA OFFICE</b> <b>DEP NORTHEAST REGION</b>
<b>MONTGOMERY COUNTY</b> <b>OFFICE OF EMERGENCY PREPAREDNESS</b> 50 Eagleville Road Eagleville, PA 19403 Business Phone: 610-631-6530 24-Hour Phone: 610-631-6530 <b>PEMA EASTERN AREA OFFICE</b> <b>DEP SOUTHEAST REGION</b>	<b>MONTOUR COUNTY</b> <b>EMERGENCY MANAGEMENT AGENCY</b> 30 Woodbine Lane Danville, PA 17821 Business Phone: 570-271-3047 24-Hour Phone: 570-275-1911 <b>PEMA EASTREN AREA OFFICE</b> <b>DEP NORTHCENTRAL REGION</b>	<b>NORTHAMPTON COUNTY</b> <b>DIVISION OF EMERGENCY MANAGEMENT</b> Emergency Operations Center 100 Gracedale Avenue Nazareth, PA 18064-8430 Business Phone: 610-746-3194 ext. 226 24-Hour Phone: 610-759-2200 <b>PEMA EASTERN AREA OFFICE</b> <b>DEP NORTHEAST REGION</b>
<b>NORTHUMBERLAND COUNTY</b> <b>EMERGENCY MANAGEMENT AGENCY</b> 911 Greenough Street, Suite 2 Sunbury, PA 17801 Business Phone: 570-286-4807 24 -Hour Phone: 570-988 4539 <b>PEMA EASTERN AREA OFFICE</b> <b>DEP NORTHCENTRAL REGION</b>	<b>PERRY COUNTY</b> <b>EMERGENCY MANAGEMENT AGENCY</b> Court House, P.O. Box 37 New Bloomfield, PA 17068 Business Phone: 717-582-2131 ext. 2256 24-Hour Phone: 717-582 -4311 <b>PEMA CENTRAL AREA OFFICE</b> <b>DEP SOUTHCENTRAL REGION</b>	<b>PHILADELPHIA CITY/COUNTY</b> <b>OFFICE OF EMERGENCY MANAGEMENT</b> Fire Administration Building 240 Spring Garden Street Philadelphia, PA 19123-2991 Business Phone: 215-686-1100 24-Hour Phone: 215-686-4514 <b>PEMA EASTERN AREA OFFICE</b> <b>DEP SOUTHEAST REGION</b>
<b>PIKE COUNTY</b> <b>EMERGENCY MANAGEMENT AGENCY</b> Administration Building 506 Broad Street Milford, PA 18337 Business Phone: 570-296-6714 24 Hour Phone: 570-296-7700 <b>PEMA EASTERN AREA OFFICE</b> <b>DEP NORTHEAST REGION</b>	<b>POTTER COUNTY</b> <b>EMERGENCY MANAGEMENT AGENCY</b> 24 Maple View Lane Coudersport, PA 16915 Business Phone: 814-274-8900 24-Hour Phone: 570-724-9110 <b>PEMA CENTRAL AREA OFFICE</b> <b>DEP NORTHCENTRAL REGION</b>	<b>SCHUYLKILL COUNTY</b> <b>EMERGENCY MANAGEMENT AGENCY</b> Public Safety Building 435 North Center Street Pottsville, PA 17901-2528 Business Phone: 570-622-3739 24-Hour Phone: 570-628-3792 <b>PEMA EASTERN AREA OFFICE</b> <b>DEP NORTHEAST REGION</b>
<b>SNYDER COUNTY</b> <b>EMERGENCY MANAGEMENT AGENCY</b> 30 Universal Road Selinsgrove, PA 17870 Business Phone: 570-372-0535 24-Hour Phone: 570-837-0606 <b>PEMA CENTRAL AREA OFFICE</b> <b>DEP NORTHCENTRAL REGION</b>	<b>SOMERSET COUNTY</b> <b>DEPARTMENT OF EMERGENCY SERVICES</b> 100 East Union Street Somerset, PA 15501 Business Phone: 814-445-1515/1516 24-Hour Phone: 814-445-1525 <b>PEMA WESTERN AREA OFFICE</b> <b>DEP SOUTHWEST REGION</b>	<b>SULLIVAN COUNTY</b> <b>EMERGENCY MANAGEMENT AGENCY</b> Court House Annex, P.O. Box 157 Laporte, PA 18626 Business Phone: 570-946-5010 24-Hour Phone: 570-946-5151 <b>PEMA CENTRAL AREA OFFICE</b> <b>DEP NORTHCENTRAL REGION</b>
<b>SUSQUEHANNA COUNTY</b> <b>EMERGENCY MANAGEMENT AGENCY</b> County Office Building 31 Public Avenue Montrose, PA 18801 Business Phone: 570-278-4600 24-Hour Phone: 570-278-3841 <b>PEMA EASTERN AREA OFFICE</b> <b>DEP NORTHEAST REGION</b>	<b>TIOGA COUNTY</b> <b>DEPARTMENT OF EMERGENCY SERVICES</b> Court House 118 Main Street Wellsboro, PA 16901 Business Phone: 570-724-9110 24-Hour Phone: 570-724-9110/7911 <b>PEMA CENTRAL AREA OFFICE</b> <b>DEP NORTHCENTRAL</b>	<b>UNION COUNTY</b> <b>EMERGENCY SERVICES</b> 115 North 15 <sup>th</sup> Street Lewisburg, PA 17837 Business Phone: 570-523-3201 24-Hour Phone: 570-523-1113 <b>PEMA CENTRAL AREA OFFICE</b> <b>DEP NORTHCENTRAL REGION</b>

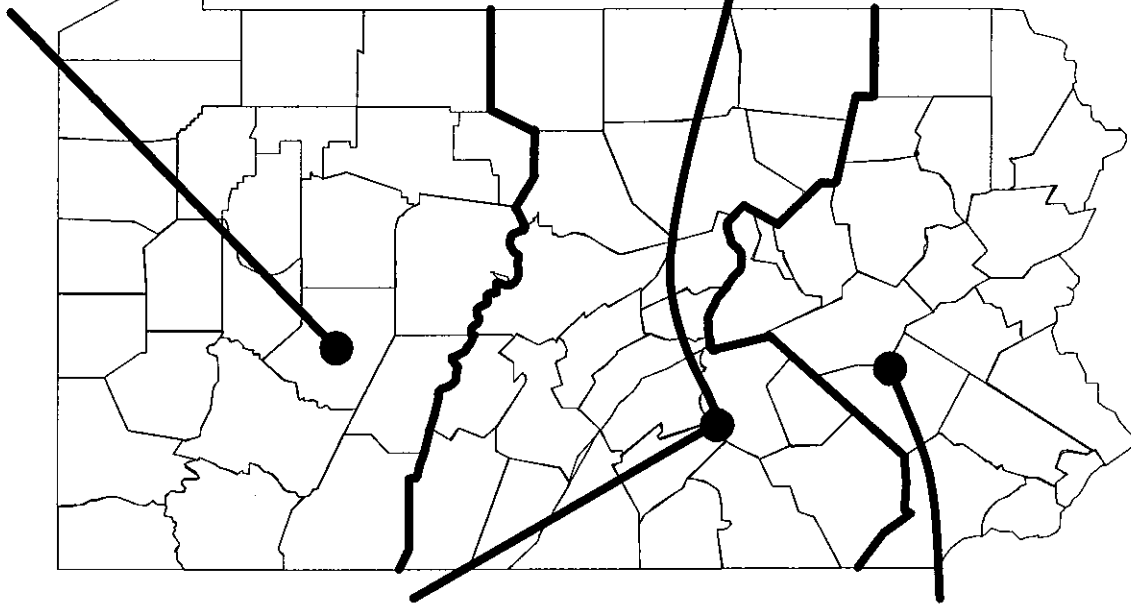
<p><b>VENANGO COUNTY</b>  <b>EMERGENCY SERVICES CENTER</b>  1052 Grandview Road  Oil City, PA 16301  Business Phone: 814-677-7356  24-Hour Phone: 814-676-4545  <b>PEMA WESTERN AREA OFFICE</b>  <b>DEP NORTHWEST REGION</b></p>	<p><b>WARREN COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>  100 Dillon Drive, Suite 203  Youngsville, PA 16371  Business Phone: 814-563-7081  24-Hour Phone: 814-563-3500  <b>PEMA WESTERN AREA OFFICE</b>  <b>DEP NORTHWEST REGION</b></p>	<p><b>WASHINGTON COUNTY</b>  <b>DEPARTMENT OF PUBLIC SAFETY</b>  100 W. Beau Street, C1  Washington, PA 15301  Business Phone: 724-228-6911  24-Hour Phone: 724-229-4607  <b>PEMA WESTERN AREA OFFICE</b>  <b>DEP SOUTHWEST REGION</b></p>
<p><b>WAYNE COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>  Wayne County Courthouse  925 Court Street  Honesdale, PA 18431-1996  Business Phone: 570-253-1622  24-Hour Phone: 570-253-9217  <b>PEMA EASTERN AREA OFFICE</b>  <b>DEP NORTHEAST REGION</b></p>	<p><b>WESTMORELAND COUNTY</b>  <b>DEPARTMENT OF PUBLIC SAFETY</b>  911 Public Safety Road  Greensburg, PA 15601  Business Phone: 724-600-7306  24 Hour Phone: 724-836-1551  <b>PEMA WESTERN AREA OFFICE</b>  <b>DEP SOUTHWEST REGION</b></p>	<p><b>WYOMING COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>  455 SR 6 East  Tunkhannock, PA 18657  Business Phone: 570-836-2828  24-Hour Phone: 570-836-6161/2137  <b>PEMA EASTERN AREA OFFICE</b>  <b>DEP NORTHEAST REGION</b></p>
<p><b>YORK COUNTY</b>  <b>EMERGENCY MANAGEMENT AGENCY</b>  120 Davies Drive  York, PA 17402  Business Phone: 717-840-2990  24-Hour Phone: 717-854-2971 or 800-427-8347  <b>PEMA CENTRAL AREA OFFICE</b>  <b>DEP SOUTHCENTRAL REGION</b></p>	<p>If any of this information is not correct, contact the PEMA Area Office - see Appendix III or refer to <a href="http://www.pema.state.pa.us">www.pema.state.pa.us</a></p>	

# APPENDIX III

## PENNSYLVANIA EMERGENCY MANAGEMENT AREA OFFICES

**Western Area Office**  
Pennsylvania Emergency Management Agency  
276 Stormer Road  
Indiana, PA 15701-8933  
Emergency Tel: 717-651-2001  
Non-Emergency Tel: 724-357-2990

**Central Area Office**  
Pennsylvania Emergency Management Agency  
2605 Interstate Drive  
Harrisburg, PA 17110-9364  
Emergency Tel: 717-651-2001  
Non-Emergency Tel: 717-651-7060



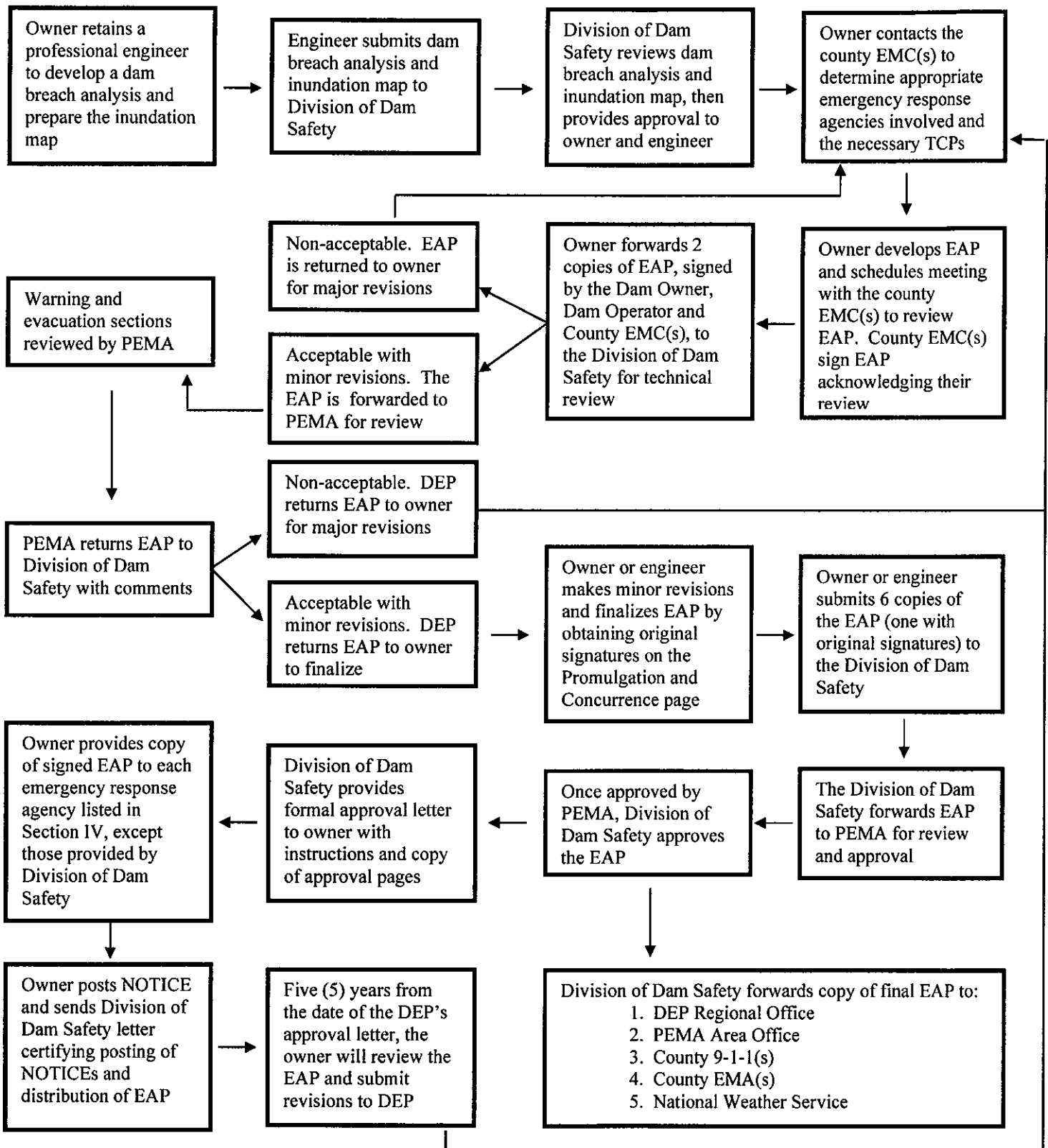
**PEMA - State Emergency Operations Center**  
2605 Interstate Drive  
Harrisburg, PA 17110-9364  
Tel: 717-651-2001  
800-424-7362

**Eastern Area Office**  
Pennsylvania Emergency Management Agency  
Hamburg Center  
Hamburg, PA 19526  
Emergency Tel: 717-651-2001  
Non-Emergency Tel: 610-562-3003



# APPENDIX IV

## EMERGENCY ACTION PLAN DEVELOPMENT FLOW CHART



**APPENDIX V**  
**Posting NOTICE Form**

# NOTICE

\_\_\_\_\_ DAM HAS BEEN CLASSIFIED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, DIVISION OF DAM SAFETY, AS A HIGH HAZARD DAM; THIS IS A DAM SO LOCATED AS TO ENDANGER POPULATED AREAS DOWNSTREAM BY ITS FAILURE.

AN EMERGENCY ACTION PLAN HAS BEEN DEVELOPED FOR

\_\_\_\_\_  
(NAME OF DAM)

A COPY OF THIS PLAN, INCLUDING AN INUNDATION MAP NOTING AREAS IN

\_\_\_\_\_  
(NAME OF MUNICIPALITY AND/OR MUNICIPALITIES)

SUBJECT TO FLOODING IN THE EVENT OF FAILURE, IS AVAILABLE FOR PUBLIC INSPECTION AT THE FOLLOWING LOCATIONS:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
(DAM OWNER & ADDRESS)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
(LOCAL EMA OFFICE & ADDRESS)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
(COUNTY EMA OFFICE & ADDRESS)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
(LOCAL EMA OFFICE & ADDRESS)

This NOTICE is posted per Department of Environmental Protection's Chapter 105 Dam Safety and Waterway Management §105.134(c).

# ATTACHMENT A

## SAMPLE

### EMERGENCY ACTION

### PLAN

### (EAP)

- |              |  |
|--------------|--|
| <b>NOTE:</b> | <b>1. Shaded blocks contain instructions and are not to be shown in your EAP</b> |
|              | <b>2. Text printed in RED needs to be revised to be dam/owner specific</b>       |

This Sample Emergency Action Plan is also available on CD.  
A copy may be obtained by writing or calling:

Division of Dam Safety  
P.O. Box 8554  
Harrisburg, PA 17105-8554  
717-787-8568

**EMERGENCY ACTION PLAN**

**SURVEILLANCE, WARNING AND EVACUATION PROCEDURES**

**SWIFTWATER DAM  
DEP NUMBER D68-001**

**LOCATED ACROSS SWIFTWATER CREEK  
IN LINCOLN TOWNSHIP, LIBERTY COUNTY**

**LATITUDE 39° 56' 21"    LONGITUDE -77° 15' 44"**

**SIZE CLASSIFICATION "B"  
HAZARD POTENTIAL CATEGORY "1"**

**OPERATED BY:            T.J. LEWIS  
                                  CENTRAL CITY, PA 17000**

**TELEPHONE:            BUSINESS: (717) 555-1234  
                                  HOME:       (717) 555-5678  
                                  CELL:  
                                  E-MAIL:**

**OWNED BY:             J.D. JONES, PRESIDENT  
                                  SWIFTWATER FARMS, INC.**

**ADDRESS:               RTE 234 NORTH, BOX 321  
                                  CENTRAL CITY, PA 17000**

**TELEPHONE:            BUSINESS: (717) 555-3421  
                                  HOME:       (717) 555-8675  
                                  CELL:  
                                  E-MAIL:  
                                  WEB PAGE:**

**DATE: JANUARY 31, 1991  
REVISED: FEBRUARY 1, 1993**

<p><b>DATE: DATE EAP SENT TO DEP</b></p> <p><b>REVISED DATE: AFTER INITIAL APPROVAL OF EAP, THIS DATE IS THE LATEST REVISION</b></p>
--

# TABLE OF CONTENTS

<b>PROMULGATION AND CONCURRENCE</b>	<b>21</b>
<b>PEMA AND DEP APPROVALS</b>	<b>22</b>
<b>I. PURPOSE AND SCOPE</b>	<b>23</b>
<b>II. SITUATION</b>	<b>23</b>
<b>III. CONCEPT OF OPERATIONS</b>	<b>23</b>
<b>IV. RESPONSIBILITIES AND DUTIES</b>	<b>26</b>
<b>V. ADMINISTRATION AND LOGISTICS</b>	<b>28</b>
<b>VI. AUTHORITY AND REFERENCES</b>	<b>29</b>
<b>VII. DEFINITIONS</b>	<b>30</b>
<b>VIII. EXERCISE AND TRAINING</b>	<b>32</b>
<b>IX. PLAN MAINTENANCE AND DISTRIBUTION</b>	<b>32</b>

## ATTACHMENTS

<b>ATTACHMENT A</b>	<b>INUNDATION MAP</b>	<b>34</b>
<b>ATTACHMENT B</b>	<b>TRAFFIC CONTROL POINTS</b>	<b>35</b>
<b>ATTACHMENT C</b>	<b>LOCATION MAP</b>	<b>36</b>
<b>ATTACHMENT D</b>	<b>TELEPHONE ROSTER</b>	<b>37</b>
<b>ATTACHMENT E</b>	<b>MEDIA ANNOUNCEMENT</b>	<b>39</b>
<b>ATTACHMENT F</b>	<b>NOTICE</b>	<b>40</b>

SECTION V AND ATTACHMENT F ARE NOT  
REQUIRED FOR NON-HIGH HAZARD DAMS.

PAGE NUMBERS IN EXAMPLE FOR DEMONSTRATION  
PURPOSES ONLY AND MAY NOT REFLECT THE ACTUAL  
PAGE NUMBERS IN YOUR EAP.

# PROMULGATION AND CONCURRENCE

**We, the undersigned, on date indicated, have reviewed the requested support activity in the Emergency Action Plan for the Swiftwater Dam. Our support action will be executed in accordance with existing recommended operating guidelines and existing municipal or county emergency operation plans.**

\_\_\_\_\_  
J.D. JONES, DAM OWNER

\_\_\_\_\_  
DATE

\_\_\_\_\_  
T.J. LEWIS, DAM OPERATOR

\_\_\_\_\_  
DATE

\_\_\_\_\_  
COORDINATOR, LIBERTY COUNTY EMA

\_\_\_\_\_  
DATE

\_\_\_\_\_  
COORDINATOR, DOWNSTREAM COUNTY EMA

\_\_\_\_\_  
DATE

## PROMULGATION AND CONCURRENCE

**IF OWNER AND OPERATOR ARE NOT THE SAME, AN ADDITIONAL ENTRY FOR THE DAM OPERATOR IS REQUIRED.**

**A LEGALLY DESIGNATED REPRESENTATIVE FOR THE DAM OWNER CAN SIGN FOR THE DAM OWNER. POWER OF ATTORNEY MAY BE REQUIRED. CONSULT WITH LEGAL PERSONNEL.**

**THE EAP IS TO BE SIGNED BY THE AFFECTED COUNTY EMERGENCY MANAGEMENT COORDINATOR(S), THE DAM OWNER AND THE DAM OPERATOR PRIOR TO EACH SUBMISSION. AN EAP NOT SIGNED WILL BE RETURNED WITHOUT REVIEW.**

**SIGNATURES MAY BE PROVIDED ON SEPARATE PAGES AND PROPERLY NUMBERED.**

**THE EAP IS FORMALLY APPROVED WHEN THE PROMULGATION AND CONCURRENCE PAGE AND THE PEMA AND DEP APPROVALS PAGE ARE FULLY SIGNED AND DATED.**

# PEMA AND DEP APPROVALS

**The Pennsylvania Emergency Management Agency approves the Emergency Action Plan for SWIFTWATER DAM (D68-001).**

\_\_\_\_\_  
**Director, PEMA Central\* Area Office**

\_\_\_\_\_  
**DATE**

**\* Insert appropriate Area Office - Eastern, Central or Western**

**The Department of Environmental Protection, Division of Dam Safety, approves the Emergency Action Plan for SWIFTWATER DAM (D68-001).**

\_\_\_\_\_  
**Chief, Division of Dam Safety**

\_\_\_\_\_  
**DATE**



**PURPOSE AND SCOPE - PROVIDE BRIEF STATEMENTS TO INFORM THE READER.**

**I. PURPOSE AND SCOPE**

- A. To safeguard the lives as well as to reduce property damage of the citizens living within the dam's potential downstream flood or inundation area.
- B. To provide for effective dam surveillance, prompt notification to local emergency management agencies, citizen warning and evacuation response, when required.
- C. To identify emergency actions to be taken by the dam owner/operator, public officials, emergency personnel, and to outline response actions in the event of a potential or imminent failure of the dam.

**SITUATION - THIS SECTION SHOULD CONTAIN A DESCRIPTION OF THE DAM, ITS LOCATION, THE POTENTIAL DOWNSTREAM FLOOD AREA (REFERRED TO AS THE "INUNDATION AREA") AND THE POPULATION WITHIN THE INUNDATION AREA.**

**II. SITUATION**

- A. The dam is a 17-foot high, 250- foot long earthen embankment recreation dam, maintaining a normal pool of 500 acre-feet of water with a maximum pool capacity of 800 acre-feet.

THE OWNER'S ENGINEER SHOULD ASSIST IN PREPARING THE DAM'S DESCRIPTION.  
1 ACRE-FOOT IS EQUIVALENT TO 1 ACRE OF WATER, 1 FOOT DEEP OR APPROXIMATELY 326,000 GALLONS OF WATER.

- B. The dam is located across Swiftwater Creek, 5 miles South of Central City and ¼ mile East of State Route 160. Refer to the Location Map at *Attachment C*.
- C. The inundation area resulting from a sudden dam failure is bordered on the West by State Route 160 and on the East by Bunker Hill Road and includes Central City and low lying portions of Lincoln Township South and North of Central City. Refer to the Inundation Map at *Attachment A*.
- D. Within the inundation area is a population of approximately 15,000 people. Refer to the Inundation Map at *Attachment A*.

ALL FIGURES IN THE SAMPLE PLAN ARE FOR DEMONSTRATION. PLEASE CONSULT WITH YOUR ENGINEER.  
DEP - DAM SAFETY RECORDS ARE AVAILABLE FOR YOUR USE.

**CONCEPT OF OPERATIONS – HOW THE EAP SHOULD WORK**

**III. CONCEPT OF OPERATIONS**

- A. SURVEILLANCE – NORMAL CONDITIONS - (DAM OWNER OR OPERATOR)

SURVEILLANCE - DESCRIBES THRESHOLDS AND SITUATIONS WHICH SHOULD ACTIVATE THE EAP.  
THE DAM OWNER SHOULD CONSULT WITH THEIR ENGINEER TO DETERMINE SPECIFIC CONDITIONS THAT MIGHT AFFECT THE DAM AND CONSULT WITH THE COUNTY EMC TO REVIEW THE HAZARD VULNERABILITY ANALYSIS DATA FOR THE COUNTY.

- 1. The dam owner, dam operator or a designated representative will conduct an on-site visual inspection of the dam, the dam's spillway(s), control systems, and the toe area below the dam at a minimum of once every three months. Any abnormal or questionable conditions will be immediately brought to the attention of the owner's engineer and the Division of Dam Safety of DEP.

- 1. IF THE DAM IS OWNED BY AN INDIVIDUAL(S), USE THE NAME OF THE RESPONSIBLE INDIVIDUAL(S).
- 2. IF THE DAM IS OWNED BY AN ASSOCIATION, COMPANY, ORGANIZATION OR GOVERNMENT AGENCY, USE THE POSITION TITLE OF THE RESPONSIBLE INDIVIDUAL.

## B. SURVEILLANCE – UNUSUAL EVENT CONDITIONS (DAM WATCH)

1. The dam owner, dam operator or a designated representative will commence surveillance of conditions at the dam site when:
  - a. Severe thunderstorms, heavy rains with local flood warnings, tropical storms and hurricanes, or heavy rains with frozen ground and/or snow cover are occurring.
  - b. The National Weather Service issues a flash flood watch or warning and conditions warrant.
  - c. Any abnormal or questionable conditions as identified in Section III.D.1.

## C. EARLY WARNING NOTIFICATION

**DAM EARLY WARNING NOTIFICATION - HOW THE INFORMATION OF A POTENTIAL DAM EMERGENCY IS COMMUNICATED. IDENTIFY WARNING POINT - COUNTY PUBLIC SAFETY ANSWERING POINT (PSAP), 911, AS APPROPRIATE AND WHO WILL NOTIFY THE NWS. OBTAIN THIS INFORMATION FROM THE COUNTY EMC(S) DURING THE SCHEDULED MEETING.**

1. The dam owner, dam operator or a designated representative is responsible for determining the dam's threat potential. The following conditions constitute a dam early warning notification to the Liberty County PSAP/911 and require 24-hour around-the-clock surveillance.
  - a. The water level in the impoundment area has reached the threshold level of 6 feet\* below the top of the dam and is rising, or

**\* THIS LEVEL MUST BE DETERMINED BY YOUR ENGINEER BASED ON THE DAM'S HYDROLOGIC AND HYDRAULIC CHARACTERISTICS. THIS VALUE WILL VARY WITH EACH DAM. EARLY WARNING NOTIFICATION AND 24-HOUR SURVEILLANCE SHOULD OCCUR AT A WATER ELEVATION BELOW THE ELEVATION USED TO CONSTITUTE A DAM WARNING AND EVACUATION IN SECTIONS III.D.1.a. AND b.**

- b. Following the occurrence of an earthquake in the general region of the dam.
2. Early warning notification will be relayed from the Liberty County PSAP/911 to the Liberty County EMC, the PEMA State EOC and all applicable emergency responders and designated government officials and agencies.

## D. WARNING AND EVACUATION NOTIFICATION

**DAM WARNING AND EVACUATION NOTIFICATION - HOW THE INFORMATION OF A DAM EMERGENCY IS COMMUNICATED TO THE PUBLIC AND EMERGENCY RESPONDERS. IDENTIFY WARNING POINT - COUNTY PUBLIC SAFETY ANSWERING POINT (PSAP), 911, AS APPROPRIATE. OBTAIN THIS INFORMATION FROM THE COUNTY EMC DURING THE SCHEDULED MEETING.**

1. The dam owner, dam operator or a designated representative is responsible for determining the dam's threat potential. The following conditions constitute a dam emergency requiring warning and evacuation notification to the Liberty County PSAP/911.
  - a. The depth of flow in the emergency spillway has reached a depth of 3 feet\*. (Staff gage on the spillway might be needed), and
  - b. The water level in the impoundment area has reached the threshold level of 4 feet\* below the top the dam, or

**\* LEVELS ARE ESTABLISHED BY THE OWNER'S ENGINEER BASED ON THE DAM'S HYDROLOGIC AND HYDRAULIC CHARACTERISTICS. THE DEPTH OF FLOW IN THE SPILLWAY AND WATER LEVEL BELOW TOP OF DAM SHOULD EQUAL THE DEPTH OF THE SPILLWAY. MARKINGS OR A STAFF GAUGE MUST BE PRE-INSTALLED AT THE DAM. DAM WARNING AND EVACUATION NOTIFICATION SHOULD OCCUR AT A WATER ELEVATION ABOVE THE ELEVATION USED TO CONSTITUTE EARLY WARNING NOTIFICATION IN SECTION III.C.1.a.**

- c. Imminent failure of this dam might be indicated by observance of one or more of the following conditions at the dam site:
  - i. The lake or pond level is at or near the top of the dam and water is flowing, or about to flow, over the top of the dam.
  - ii. The overflow pipe or spillway is damaged, or clogged with debris or ice, which is resulting in a rapid rise in the lake or pond level.
  - iii. The primary or emergency spillway is experiencing heavy flows which are causing severe erosion to the spillway or the dam embankment.
  - iv. Any structural movement or failure of the concrete (masonry) spillway or the spillway abutment walls.
  - v. Any sloughing or sliding of the embankment upstream or downstream slope. Also, earth slides in the spillway channel, either upstream or downstream of the dam's crest, which could impede the flow in the spillway.
  - vi. Subsidence, sinkholes or cracks found in any part of the dam's embankment or abutting slopes.
  - vii. Any new discharge of water is observed through the dam's embankment or abutting slopes, adjacent to any conduit outlets, or under the dam, which appears as a boil along the downstream toe. Should such a discharge occur and the water is cloudy or muddy in color, then a very serious problem exists.
  - viii. List any other conditions, which the owner's engineer knows are a concern for the dam's safety. (List other conditions as sub-paragraphs.)

OTHER CONDITIONS ARE ESTABLISHED BY THE OWNER'S ENGINEER BASED UPON ANNUAL DAM INSPECTION AND REVIEW OF THE DAM'S DESIGN AND OPERATIONS MANUALS

2. Warning and evacuation notification will be relayed from the Liberty County PSAP/911 to the Liberty County EMC, the PEMA State EOC and all applicable emergency responders and designated government officials and agencies.
3. Emergency management officials will accomplish the needed actions, which are explained in this EAP, in accordance with their existing recommended operating guidelines and existing municipal or county emergency operation plans.
4. Warning and evacuation of the public must commence upon notification by the dam owner, dam operator or a designated representative of a potential or imminent failure of the dam. Emergency responders should initiate action in accordance with the plan outline and any existing internal organizational recommended operating guidelines, and existing municipal or county operation plans.

#### E. TERMINATION OF SURVEILLANCE AND NOTIFICATIONS

1. The dam owner, dam operator or a designated representative may terminate 24 - hour surveillance of dam site conditions when:
  - a. All National Weather Service flash flood watches or warnings have expired, **and**
  - b. Heavy rains have ended and the water level in the lake has dropped 8 feet\* below the top of the dam and is receding.

THIS LEVEL MUST BE DETERMINED BY YOUR ENGINEER BASED ON THE DAM'S HYDROLOGIC AND HYDRAULIC CHARACTERISTICS. THIS VALUE WILL VARY WITH EACH DAM. TERMINATION OF SURVEILLANCE AND NOTIFICATIONS SHOULD OCCUR AT A WATER ELEVATION BELOW THE ELEVATION USED TO CONSTITUTE PRE-EVACUATION NOTIFICATION IN SECTION III.C.1.a.

- c. After a personal inspection of the dam site has been conducted by a knowledgeable professional engineer following an earthquake, overtopping of the dam, or an evacuation of the inundation area as a result of this EAP, or other serious problems resulting in a notification of a dam site emergency and the Department concurs with the results of the inspection.
- 2. Upon termination of 24 hour surveillance of dam site conditions, the dam owner shall notify the Liberty County PSAP/911.
- 3. Termination of notifications will be relayed from the Liberty County PSAP/911 to the Liberty County EMC, the PEMA State EOC and all applicable emergency responders and designated government officials and agencies.

**RESPONSIBILITIES AND DUTIES – LIST ALL PERSONS AND/OR ORGANIZATIONS WHO HAVE A SPECIFIC REPOSIBILITY DURING A DAM EMERGENCY**

**IV. RESPONSIBILITIES AND DUTIES - EMERGENCY RESPONSE**

**A. DAM OWNER OR DAM OPERATOR (DAM SITE EMERGENCY)**

- 1. The dam owner, dam operator or a designated representative will provide for 24-hour on-site dam surveillance and monitoring as required in Section III.C.1. and initiate pre-evacuation notification to the Liberty County PSAP/911.
- 2. When the situation meets the criteria under the warning and evacuation notification guidelines, presented in Section III.D.1, indicating a failure of the dam is possible or a significant threat condition is developing, the dam owner, dam operator or a designated representative will initiate warning and evacuation communication to the Liberty County PSAP/911.

**B. LIBERTY COUNTY PSAP/911**

- 1. The Liberty County PSAP/911 will notify:
  - a. Liberty County EMA
  - b. PEMA State EOC
  - c. Lincoln Township Police
  - d. Lincoln Township Volunteer Fire Department
  - e. Central City Fire Department
  - f. Central City Police
  - g. PA State Police – (Nearest Substation)
  - h. Central City Emergency Medical Services
  - i. Other Affected County PSAP/911 Center(s) (if within inundation area)

LIST OF APPROPRIATE OFFICIALS AND AGENCIES TO BE DETERMINED AT THE SCHEDULED MEETING WITH THE COUNTY EMC(S).

LIST AGENCIES IN ORDER IN WHICH THEY SHOULD BE NOTIFIED. THOSE AGENCIES CLOSEST TO THE DAM FIRST AND FURTHEST FROM THE DAM LAST.

PROCEDURES FOR NOTIFICATION OF MUNICIPALITIES IN AFFECTED COUNTIES SHOULD BE ESTABLISHED BY THE COUNTY EMC IN WHICH THE DAM IS LOCATED AND AFFECTED

**C. LIBERTY COUNTY EMA**

- 1. The Liberty County EMA will contact the following personnel and agencies:
  - a. National Weather Service
  - b. Lincoln Township EMA
  - c. Central City EMA
  - d. Media - Warning and/or Evacuation (Activate EAS). Refer to Attachment E
  - e. Liberty County EOC staff, as necessary

CONFER WITH COUNTY EMC. ORDER MAY DIFFER.

- f. American Red Cross - Swiftwater Valley Chapter (when mass care or family assistance is required). Coordinate sheltering per ESF 6 of County EOP.
- g. Liberty County elected officials
- h. Swiftwater Valley School District (regarding closure of school bus routes?)
- i. Pennsylvania Emergency Management Agency
- j. PennDOT - District 8
- k. List any public services (i.e. Valley Bus Service, Penn Railways, Central City Airport)

- 2. The Liberty County EMA will ascertain and report to PEMA any unmet needs requirements.
- 3. The Liberty County EMA will initiate Damage Assessment and Recovery procedures as the situation requires.

D. OTHER AFFECTED COUNTY 911(s)

E. OTHER AFFECTED COUNTY EMA(s)

SECTIONS IV.D. AND IV.E. (IF NEEDED) SHOULD BE DEVELOPED BY REFERRING TO SECTIONS IV.B. AND IV.C. OTHERWISE DELETE IN EAP.

F. LOCAL MUNICIPAL EMAs

- 1. LINCOLN TOWNSHIP EMA
- 2. CENTRAL CITY EMA
  - a. Advise facilities with special needs individuals as outlined in the Emergency Operations Plan (EOP) and identified by the Hazard Vulnerability Analysis (areas impacted due to a dam failure and indicated on the Inundation Map).
  - b. Notify municipal elected officials and municipal services (water, sewer, etc.).
  - c. Keep the County EMA apprised of the situation.
  - d. Coordinate the evacuation (where appropriate).
  - e. Provide damage reporting to the Liberty County EMC.

G. FIRE DEPARTMENTS

- 1. LINCOLN TOWNSHIP VOLUNTEER FIRE DEPARTMENT
- 2. CENTRAL CITY FIRE DEPARTMENT
  - a. Provide citizen notification and route alerting to advise residents living within their jurisdiction (See Inundation Map - Attachment A).
  - b. Assist in evacuation.
  - c. Assist police and EMS, as requested.
  - d. Provide communications support if feasible and requested.

H. POLICE SERVICES

- 1. LINCOLN TOWNSHIP POLICE DEPARTMENT
- 2. CENTRAL CITY POLICE DEPARTMENT
- 3. PENNSYLVANIA STATE POLICE

- a. Dispatch radio vehicle to dam site in order to provide alternate communications link to PSAP/911 - Lincoln Township Police Department.
- b. Assist evacuation traffic flow and establish traffic control points (TCP) at pre-designated locations (See Inundation Map – Attachment A and Traffic Control Points – Attachment B).
- c. Prevent unauthorized entry and provide security of evacuated areas.
- d. Provide assistance with route alerting, if requested.

I. EMERGENCY MEDICAL SERVICES (EMS)

1. CENTRAL CITY EMERGENCY MEDICAL SERVICES (EMS)

- a. Provide evacuation transportation assistance and coordinate with designated fire services agencies for transportation of persons with disabilities and any special needs.
- b. Assist fire and police departments as requested.
- c. Provide EMS support to any mass care center as requested.

J. AMERICAN RED CROSS or Volunteer Organization Active in Disasters (VOAD)

1. SWIFTWATER VALLEY CHAPTER (If requested by Liberty County EMA)

- a. Identify and activate an appropriate shelter, as necessary.
- b. Support and maintain operations of the reception center.
- c. Maintain communications with County EMC, local EMA and reception center.

K. PENNSYLVANIA DEPARTMENT OF TRANSPORTATION (PennDOT)

1. Provide services, signs, barricades and guidance on roads and bridges affecting the evacuation and recovery.

V. ADMINISTRATION AND LOGISTICS

A. The NOTICE (Attachment F) will be posted in the following public places located within the inundation area:

1. Lincoln Township Building
2. Central City Building
3. Central City Post Office
4. Central City Library
5. Johnson's Gas Station

<p><b>POSTING OF NOTICES REQUIRED FOR ORIGINAL EAP AND MAJOR EAP REVISIONS.</b></p> <p>THE DAM OWNER WILL POST NOTICES IN ANY AREA, WHICH MAY BE AFFECTED BY FAILURE OF THE DAM (DETERMINED BY THE INUNDATION MAP) AS REQUIRED BY 32 P.S. 693.13(b), MAY 16, 1985. IN ORDER TO COMPLY WITH THIS REQUIREMENT, NOTICES WILL BE POSTED IN THE FOLLOWING SUGGESTED PUBLIC PLACES WITHIN EACH POLITICAL SUBDIVISION SITUATED WITHIN THE INUNDATION AREA DOWNSTREAM OF THE DAM:</p> <p>1) CITY, BOROUGH, TOWNSHIP BUILDINGS 2) PUBLIC BUILDINGS SUCH AS POST OFFICES, LIBRARIES, GROCERY STORES, AND GAS STATIONS WITH THE MANAGEMENT'S PERMISSION</p>
--

B. The NOTICE (Attachment F) must state that copies of the Emergency Action Plan for this dam are available for inspection at the following locations (include physical address):

1. Liberty County Emergency Management Agency Office  
123 West Main Street  
Maintown, PA
2. Central City Emergency Management Office  
456 East Central Street  
Central City, PA
3. Lincoln Township Emergency Management Office  
789 Locust Street  
Longtown, PA
4. Swiftwater Farms - Dam Owner  
Route 234 North  
Box 321  
Central City, PA

THE NOTICE MUST STATE THAT A COPY OF THE EAP IS AVAILABALE FOR PUBLIC INSPECTION AT THE FOLLOWING LOCATIONS:  
1) COUNTY EMA OFFICE  
2) MUNICIPAL EMA OFFICE  
3) DAM OWNER'S OFFICE

C. A new NOTICE will be sent to those locations in paragraph "A" when the EAP is revised.

WHENEVER MAJOR REVISIONS OF THE EAP ARE REQUIRED, NEW NOTICES MUST BE POSTED.

D. The dam owner is responsible to verify posting of the NOTICE and documenting the status in the annual inspection report.

**AUTHORITY AND REFERENCES - THESE ARE THE MINIMUM BASIC AUTHORITIES. ADDITIONAL ONES MAY BE ADDED AS NECESSARY.**

## VI. AUTHORITY AND REFERENCES

### A. AUTHORITY

1. The Dam Safety and Encroachments Act (32 P.S. Sections 693.1-693.27), May 16, 1985.
2. The Pennsylvania Code - Title 25, Chapter 105 Dam Safety and Waterways Management, Section 105.63 and 105.134.
3. Emergency Management Services Code, 35 Pa C.S. Section 7101 et seq., as amended.

### B. REFERENCES

1. Guidelines for Developing an Emergency Action Plan for Hazard Category 1 & 2 Dams. Prepared by the Department of Environmental Protection, Water Management, Bureau of Waterways Engineering, Division of Dam Safety and the Pennsylvania Emergency Management Agency, January 2009.
2. Inspection, Maintenance and Operation of Dams in Pennsylvania. Prepared by the Department of Environmental Protection, Water Management, Bureau of Waterways Engineering, Division of Dam Safety, February 2009.
3. Liberty County Emergency Operations Plan.

THESE ARE SOME REFERENCES THAT MAY BE USED. EACH DAM OWNER SHOULD HAVE REFERENCE #1 AS A MINIMUM.

**DEFINITIONS - INCLUDE AS NEEDED. THE EXAMPLES LISTED CAN BE A STARTING POINT FOR YOUR PLAN.**

**VII. DEFINITIONS**

- A. **ABUTMENT** - The part of the valley's hillside against which the dam abuts. Right and left abutments are those on respective sides of the dam as an observer looks downstream.
- B. **AFFECTED COUNTIES/MUNICIPALITIES** - Those jurisdictions within Pennsylvania or adjoining states that, according to the inundation map, may experience flooding as a result of a failure of the dam.
- C. **BOIL** - A disturbance in the surface layer of soil caused by water escaping under pressure from behind a water-retaining structure such as a dam or a levee. The boil may be accompanied by deposition of soil particles (usually sand or silt) in the form of a ring (miniature volcano) around the area where the water escapes.
- D. **BREACH** - An opening or a breakthrough of a dam sometimes caused by rapid erosion of a section of earth embankment by water.
- E. **CONDUIT** - A pipe used to convey water through or around or under a dam.
- F. **CONTROL TOWER** - A structure in the dam or reservoir used to control withdraw of water from the reservoir through pipes or culverts.
- G. **CREST OF DAM** - The crown of an overflow section of the dam. In the United States, the term "crest of dam" is often used when "top of dam" is intended. To avoid confusion, the terms **crest of spillway** and **top of dam** should be used for referring to the overflow section and dam proper, respectively.
- H. **CULVERT** - (a) A drain or waterway structure built transversely under a road, railway, or embankment. A culvert usually comprises a pipe or a covered channel of box section. (b) A gallery or waterway constructed through any type of dam, which is normally dry but is used occasionally for discharging water; hence the terms scour culvert, drawoff culvert and spillway culvert.
- I. **DAM** - A barrier built across a watercourse for impounding or diverting the flow of water.
- J. **DAM FAILURE** - The uncontrolled release of a dam's impounded water. It is recognized that there are degrees of failure. Any malfunction or abnormality, outside the design assumptions and parameters, which adversely affect a dam's primary function of impounding water is properly considered a failure. Minor malfunctions or abnormalities can result in a sudden failure of a dam.
- K. **EARTH DAM (EARTHFILL DAM)** - An embankment dam in which more than 50% of the total volume is formed of compacted fine-grained earth.
- L. **EMBANKMENT** - Fill material, usually earth or rock, placed with sloping sides.
- M. **EMERGENCY** - A condition of serious nature which develops unexpectedly and endangers the structural integrity of a dam or endangers downstream property and human life. An emergency requires immediate action.
- N. **EAP** - Emergency Action Plan - A formal document that identifies potential emergency conditions at a dam and specifies preplanned actions to be followed to minimize property damage and loss of life. It contains procedures and information to assist the dam owner in issuing early warning and notification messages to responsible downstream emergency management authorities of the emergency situation. It also contains inundation maps to show the emergency management authorities of the critical areas for action in case of an emergency.
- O. **EOP** - Emergency Operations Plan - "The document ... which describes the hazards, vulnerabilities, emergency management situations and assumptions that affect the



municipality, the concept of operations during an emergency, and the various roles and assignments of the elected officials, emergency management coordinator and other emergency response personnel, whether paid or volunteer.” ( From PEMA Directive D2007-1). The EOP includes checklists for known critical facilities, special facilities, critical personnel, hearing impaired residents, non-English speaking residents, residents requiring ambulance assistance, etc., as identified by local emergency management officials.

- P. **FACE** - With reference to a structure, the external surface that limits the structure, e.g., the face of a wall or dam.
- Q. **FAILURE** - An incident resulting in the uncontrolled release of water from an operating dam. See “Dam Failure”.
- R. **FOUNDATION OF DAM** - The natural material on which the dam structure is placed.
- S. **GROIN** - That area along the contact (or intersection) of the face of a dam with the abutment.
- T. **HAZARD** - A situation which creates the potential for adverse consequences such as loss of life, property damage, and adverse social and environmental impacts. Impacts may be for a defined area downstream of a dam from flood-waters released through spillways and outlet works of the dam or waters released by partial or complete failure of the dam. This could include an area upstream of the dam from effects of backwater flooding or effects of landslides around the reservoir perimeter.
- U. **INUNDATION AREA** - The downstream area that would be flooded or otherwise affected by the failure of a dam or large flows. This area can be subject to a fast moving flood wave, 20 to 50 MPH is common, with a height of 1 foot to tens of feet.
- V. **INUNDATION MAP** - A map delineating the area that would probably be flooded in the event of a dam failure. This map must be prepared by a registered professional engineer.
- W. **NOTIFICATION** - To promptly inform appropriate individuals or emergency agency about an emergency condition so they can initiate appropriate actions.
- X. **NORMAL WATER LEVEL (NORMAL WATER POOL)** - For reservoir with a fixed overflow spillway crest, it is the lowest level of that crest.
- Y. **OPERATOR** - The person or position in a company or organization, who is responsible for a dam’s operation and surveillance.
- Z. **OUTLET** - A constructed opening through which water can be safely discharged for a particular purpose from a reservoir.
- AA. **OWNER** - Any person, authority or agency that manages a dam or reservoir.
- BB. **PSAP** - Public Safety Answering Point - an agency in the United States, typically county or city controlled, responsible for answering 9-1-1 calls for emergency assistance from police, fire, and ambulance services.
- CC. **SEEPAGE** - The movement of water that might occur through the dam, its foundation or its abutments. Small amounts of clear water seepage is normal. Increase in the amount of water flow or change in color is a concern for a dam’s safety.
- DD. **SLIDE** - The movement of a mass of earth down a slope. In embankments and abutments, this involves the separation of a portion of the slope from the surrounding materials.
- EE. **SPILLWAY** - A structure over or through which flows are discharged. If the flow is controlled by gates, it is considered a controlled spillway; if the elevation of the spillway crest is the only control, it is considered an uncontrolled spillway.
- FF. **SPILLWAY CHANNEL** - A channel conveying water from the spillway crest to the river downstream.

- GG. **TOE OF DAM** - The junction of the downstream face of a dam with the ground surface. Also referred to as downstream toe. For an embankment dam, the junction of the upstream face with ground surface is called the upstream toe.
- HH. **TOP OF DAM** - The elevation of the uppermost surface of a dam, usually a road or walkway, excluding any parapet wall, railings, etc.
- II. **TRAFFIC CONTROL POINT (TCP)** – Manned or unmanned posts established at critical road junctions for the purpose of controlling or limiting traffic. TCPs are used to control evacuation movement and also limit entry into the inundation area when an emergency situation requires it.
- JJ. **VOAD** - Voluntary Organizations Active in Disasters - collaboration of diverse organizations and citizens trained to meet community needs in the wake of a large-scale disaster.

**EXERCISE AND TRAINING - ANY PLAN IS ONLY EFFECTIVE WHEN PEOPLE KNOW WHAT TO DO. MEET WITH THE COUNTY EMERGENCY MANAGEMENT COORDINATOR TO EXERCISE YOUR PLAN.**

### VIII. EXERCISE AND TRAINING

The dam owner will advise and cooperate with the Liberty County EMA of any exercises scheduled, and coordinate with the Liberty County EMA to exercise all or portions of this EAP as part of the county's all-hazard exercise program schedule.

**PLAN MAINTENANCE AND DISTRIBUTION - THE OWNER'S ENGINEER WILL DETERMINE ANY SIGNIFICANT TOPOGRAPHIC CHANGES (I.E., NEW BRIDGES, ROADS, FILLS, ETC) WHICH WOULD ALTER PREVIOUS FLOOD WAVE ANALYSIS.**

### IX. PLAN MAINTENANCE AND DISTRIBUTION

- A. This EAP will be reviewed every five years by the owner or the owner's engineer. During the five year review:
  - 1. The owner or the owner's engineer will conduct an on-site review of the flood (inundation) area for any increase in downstream development and revise the Inundation Map, if needed.
  - 2. The owner's engineer will review and revise surveillance conditions as needed.
  - 3. The owner will coordinate with Liberty County EMA if population increase or development within the inundation area could affect the emergency response requirements. If so, a new or revised plan must be developed.
  - 4. The owner will meet with and obtain concurrence from the affected county PSAP/911 Center(s) and EMC(s).
  - 5. The owner will submit 6 copies at a minimum of the revised plan to DEP for review and approval.
- B. A copy of the approved EAP will be distributed by the dam owner to those emergency response agencies listed in Section IV. DEP, Division of Dam Safety will distribute a copy of the approved EAP to PEMA's Area Office, the affected county Emergency Management Agency(s) and PSAP/911 Center(s), the National Weather Service, and the DEP's Regional Office. Within 60 days, the dam owner will submit a letter certifying distribution of the approved EAP and posting of NOTICE(s) to the DEP, Division of Dam Safety.

<b>LIST ATTACHMENTS:</b>
--------------------------

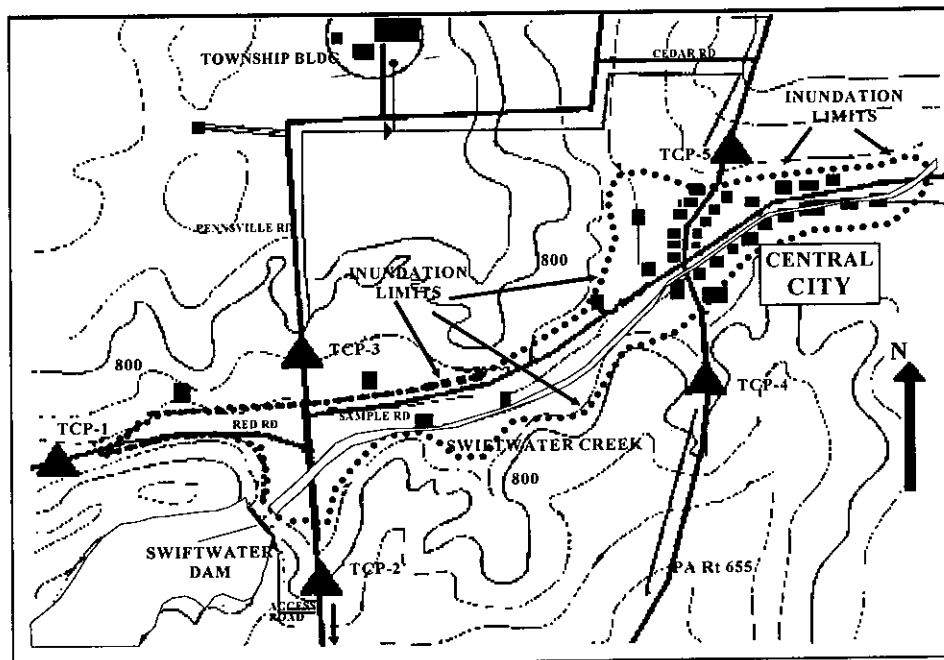
**ATTACHMENTS:**

**ATTACHMENT A** INUNDATION MAP  
**ATTACHMENT B** TRAFFIC CONTROL POINTS  
**ATTACHMENT C** LOCATION MAP  
**ATTACHMENT D** TELEPHONE ROSTER  
**ATTACHMENT E** MEDIA ANNOUNCEMENT  
**ATTACHMENT F** NOTICE

DEP REQUIRES INUNDATION MAPS BE PLOTTED ON AN ENLARGED STANDARD U.S.G.S QUAD MAP OR BETTER QUALITY MAP (PREFERABLY A 1"=1000' SCALE MINIMUM - A LARGER SCALE 1"=500' FOR CONGESTED AREAS SUCH AS TOWNS). IDENTIFY ON MAP: 1) THE DAM, 2) ACCESS ROAD(S) TO DAM SITE, 3) NAMES OR ROUTE NUMBERS OF ROADS, 4) TRAFFIC CONTROL POINTS (TCP) BY NUMBER, 5) IDENTIFY SCHOOLS, HOSPITALS, NURSING HOMES, RECREATION AREAS, CAMPSITES, ETC., 6) ANY OTHER SIGNIFICANT LOCATIONS THAT WOULD PROVE USEFUL DURING AN EMERGENCY OR EVACUATION.

**THE INUNDATION MAP MUST BE PREPARED, SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN PENNSYLVANIA**

## ATTACHMENT A INUNDATION MAP



SWIFTWATER (SAMPLE) DAM DOES NOT EXIST. THE DAM AND INUNDATION LIMITS WERE DEVELOPED FOR ILLUSTRATIVE PURPOSES.

D68-001 - SWIFTWATER DAM  
INUNDATION MAP (SAMPLE)  
Scale 1"=1,000  
Revised 12/23/08

# ATTACHMENT B

## TRAFFIC CONTROL POINTS

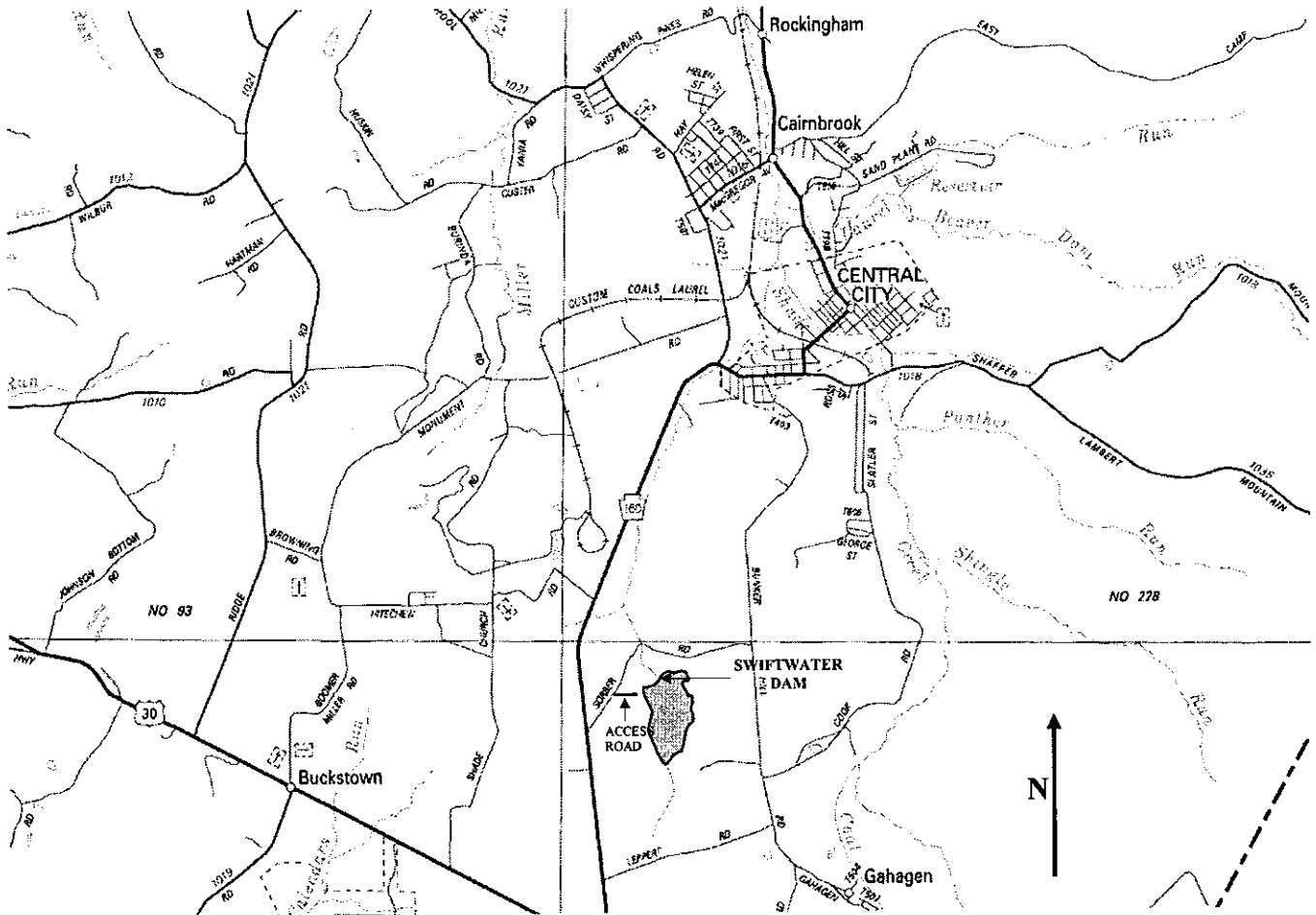
- TCP - 1 Central City Police  
On Red Road, 1 mile west of the intersection of Red Road and Pennsville Road.
- TCP - 2 Lincoln Township Police  
On Pennsville Road, ½ mile south of the intersection of Pennsville Road and Red Road.
- TCP - 3 Lincoln Township Police  
On Pennsville Road, ½ mile north of the intersection of Pennsville Road and Red Road.
- TCP - 4 Pennsylvania State Police  
On PA Route 655, ½ mile south of the intersection of PA Route 655 and Sample Road.
- TCP - 5 Pennsylvania State Police  
On PA Route 655, ¼ mile south of the intersection of PA Route 655 and Cedar Road.

PROVIDE A DESCRIPTION OF THE LOCATION OF THE TCPs AND THE AGENCIES RESPONSIBLE TO ESTABLISH THE TCPs. THIS INFORMATION SHOULD BE OBTAINED AT THE SCHEDULED MEETING WITH THE COUNTY EMC(s)

LOCATION MAPS ARE BASICALLY COUNTY MAPS WHICH IDENTIFY SOME MAJOR FEATURES (TOWNS, HIGHWAY ROUTES, RIVERS, ETC.) THAT CAN BE USED BY SOMEONE UNFAMILIAR WITH THE AREA TO LOCATE THE DAM. ALSO, PROVIDE DIRECTIONS TO THE DAM SITE FROM A MAJOR INTERSECTION OR LOCAL COMMUNITY.

THE SAMPLE LOCATION MAP WAS DEVELOPED UTILIZING PENNDOT TYPE 10 COUNTY MAP, WHICH CAN BE FOUND AT <http://www.dot.state.pa.us> SEARCH Type 10 County Maps.

## ATTACHMENT C LOCATION MAP



### DIRECTIONS:

Approximately 5 miles South of Central City on SR 160, Turn Left on to Sorber Road. Follow Sorber Road approximately  $\frac{1}{4}$  mile. Turn Right on Dirt Access Road. Follow Dirt Access Road approximately 300 feet to Dam.

SWIFTWATER (SAMPLE) DAM DOES NOT EXIST. THE DAM, ITS LOCATION AND DIRECTIONS WERE DEVELOPED FOR ILLUSTRATIVE PURPOSES.

# ATTACHMENT D TELEPHONE ROSTER

	NON-EMERGENCY	EMERGENCY
<b>DAM OWNER: J.D. JONES</b>	<b>717-555-8675</b>	<b>717-555-3421</b>
<b>DAM OPERATOR: T.J. LEWIS</b>	<b>717-555-5678</b>	<b>717-555-1234</b>
<b>LIBERTY COUNTY PSAP/911</b>	<b>717-555-0123</b>	<b>911</b>
<b>LIBERTY COUNTY EMA</b>	<b>717-555-0321</b>	<b>911</b>
<b>DEP - SOUTHCENTRAL REGION</b>	<b>717-705-4700</b>	<b>717-705-4741 877-333-1904</b>
<b>DEP - DIVISION OF DAM SAFETY</b>	<b>717-787-8568</b>	<b>717-787-4343 800-541-2050</b>
<b>PEMA</b>	<b>717-651-2001 800-424-7362</b>	<b>717-651-2001 800-424-7362</b>

# **ATTACHMENT E MEDIA ANNOUNCEMENT**

## **SPECIFIC MEDIA ANNOUNCEMENT TO BE DEVELOPED BY DAM OWNER IN COORDINATION WITH THE COUNTY EMERGENCY MANAGEMENT AGENCY AT SCHEDULED MEETING**

**THE MEDIA ANNOUNCEMENT WILL BE SPECIFIC FOR EACH DAM. AT A MINIMUM THE MEDIA ANNOUNCEMENT SHOULD CONTAIN: 1) THE DAM NAME, 2) THE AFFECTED MUNICIPALITIES, AND 3) A DESCRIPTION OF THE DOWNSTREAM INUNDATION AREA (SEE SECTION II.C).**

**THE MEDIA ANNOUNCEMENT MAY CONTAIN THREE SEPARATE MESSAGES: 1) A "EARLY WARNING MESSAGE", 2) A "WARNING AND EVACUATION MESSAGE" AND 3) AN "INCIDENT RESOLVED - SAFE TO RETURN" MESSAGE.**

**SEE NEXT PAGE FOR SAMPLE MESSAGE FORMAT.**



# ATTACHMENT E

## MEDIA ANNOUNCEMENT

### EARLY WARNING MESSAGE:

The \_\_\_\_\_ County Emergency Management Agency advises that due to conditions at the \_\_\_\_\_ Dam in \_\_\_\_\_ (municipality) \_\_\_\_\_, the public should avoid the area downstream of the dam \_\_\_\_\_ (insert description of inundation area – Refer to Section II.C.) \_\_\_\_\_. Stay tuned for further information.

\*\*\*REPEAT PERIODICALLY\*\*\*

### WARNING AND EVACUATION MESSAGE:

The \_\_\_\_\_ County Emergency Management Agency is advising all residents living downstream of the \_\_\_\_\_ Dam in \_\_\_\_\_ (municipality) \_\_\_\_\_ to evacuate the area immediately. Evacuate the area \_\_\_\_\_ (insert description of inundation area – Refer to Section II.C.) \_\_\_\_\_. If you require shelter during this emergency you should report to (location of reception/mass care center to be determined by county EMC, American Red Cross or other VOAD at time of emergency).

\*\*\*REPEAT PERIODICALLY\*\*\*

### INCIDENT RESOLVED - SAFE TO RETURN:

The \_\_\_\_\_ County Emergency Management Agency is advising residents of the area downstream of the \_\_\_\_\_ Dam in \_\_\_\_\_ (municipality) \_\_\_\_\_ that the problem at the dam has been resolved and that residents may return to their homes.

\*\*\*REPEAT PERIODICALLY\*\*\*

**NOTE:** The above messages should be modified as necessary to fit the situation.

## ATTACHMENT F

# NOTICE

**SWIFTWATER DAM HAS BEEN CLASSIFIED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION, DIVISION OF DAM SAFETY, AS A HIGH HAZARD DAM; THIS IS A DAM SO LOCATED AS TO ENDANGER POPULATED AREAS DOWNSTREAM BY ITS FAILURE.**

**AN EMERGENCY ACTION PLAN HAS BEEN DEVELOPED FOR**

### **SWIFTWATER DAM**

(NAME OF DAM)

**A COPY OF THIS PLAN, INCLUDING AN INUNDATION MAP NOTING AREAS IN**

### **LINCOLN TOWNSHIP AND CENTRAL CITY**

(NAME OF MUNICIPALITY AND/OR MUNICIPALITIES)

**SUBJECT TO FLOODING IN THE EVENT OF FAILURE, IS AVAILABLE FOR PUBLIC INSPECTION AT THE FOLLOWING LOCATIONS:**

**SWIFTWATER FARMS  
RTE 234 NORTH, BOX 321  
CENTRAL CITY, PA  
(DAM OWNER & ADDRESS)**

**CENTRAL CITY EMA  
323 EAST CENTRAL STREET  
CENTRAL CITY, PA  
(LOCAL EMA OFFICE & ADDRESS)**

**LIBERTY COUNTY EMA  
123 WEST MAIN STREET  
MAINTOWN, PA  
(COUNTY EMA OFFICE & ADDRESS)**

**LINCOLN TOWNSHIP EMA  
123 LOCUST STREET  
LONGTOWN, PA  
(LOCAL EMA OFFICE & ADDRESS)**

**This NOTICE is posted per Department of Environmental Protection's Chapter 105 Dam Safety and Waterway Management §105.134(c).**