

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

Coordination and Communication for Emergencies

Final
June 29, 2006

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

TABLE OF CONTENTS

Coordination and Communication for Emergencies 1

1. EMERGENCY MANAGEMENT AGENCY COORDINATION..... 1

 1a. Identifying Emergency Management Agency (EMA) Personnel 1

 1b. Ensuring all EMA Organizations are Identified and Contact Information
Remains Current..... 2

 1c. Identifying Additional Organizations that May Assist the Response 2

 1d. Identifying all Potentially Affected Businesses and Properties from a Dam
Emergency 3

 1e. Establishing a Working Relationship with EMAs and Other Organizations 4

 1f. Training Internal and External Personnel for a Response..... 5

2. LAW ENFORCEMENT AGENCY COORDINATION 6

 2a. Identifying Law Enforcement Agency (LEA) Personnel and Determining
When They Should be Called..... 7

 2b. Establishing Trust with LEA Personnel 7

 2c. Receiving Intelligence and Threat Information from LEA 8

 2d. Training Internal and External Personnel for a Security Response 8

 2e. Assisting LEA Identify What You Consider to be Critical or Vulnerable
Assets 9

 2f. Becoming Aware of What to Expect from the LEA Response (How they
Operate) 10

 2g. Miscellaneous Suggestions for Working with LEA..... 10

3. CONDUCTING EMPLOYEE BACKGROUND CHECKS 11

 3a. ORGANIZATION A 11

 3b. ORGANIZATION B 11

 3c. ORGANIZATION C 12

 3d. ORGANIZATION D..... 13

 3e. ORGANIZATION E 13

 3f. ORGANIZATION F 14

 3g. ORGANIZATION G..... 14

 3h. ORGANIZATION H..... 16

4. COORDINATING (INTEGRATING) EAP AND SECURITY PROCEDURES
..... 20

 4a. What to Remove from External Versions of EAPs due to Operational
Security Concerns..... 20

 4b. How Best to Handle Sensitive Materials Retained in External EAP Copies
..... 21

 4c. Responding to Requests from EAP Holders Requesting Retention of
Specific Sensitive Information 22

 4d. Security Information in the EAP 22

 4e. Security, Criminal Investigation, Anti-Terrorist Responses Conflicting with
EAP Procedures..... 23

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

4f. Effects of Radiological, Biological, or Chemical Attacks on Emergency Response Procedures	23
4g. Separate Departments Preparing EAP and Security Procedures.....	23
5. COORDINATING RIVER SYSTEM ACTIVITIES.....	24
5a. Identifying Dam Owners on the Same River System Affected by Dam Failures	24
5b. Coordinating River System Operations during Potential or Existing Dam Emergencies.....	25
5c. Sharing Threat and Intelligence Information between Neighboring Dams.	25
5d. Multiple Dam Exercises by Differing Agencies on the Same River System	25
5e. Determining Which Dam Owner Controls a Multiple Dam Emergency Response	25
5f. Sharing Resources among Different Dam Owners in a Multiple Dam Emergency	26
APPENDIX A - LIST OF CONTRIBUTORS	27

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

Coordination and Communication for Emergencies

Proper, and pre-planned, coordination and communication between a dam owner, and emergency and law enforcement personnel is essential in making a response to an emergency as efficient as possible. Many dam owners already have made tremendous advancements in these efforts, yet as in everything there is always room for innovation and improvements.

This document provides guidance and suggestions for improving coordination, communication, and response for emergencies at dams in the United States. This paper was prepared by a volunteer group of FERC licensees and FERC staff formed during the February 2005 FERC Workshop, “Unifying Dams Safety and Security” in Fort Worth, Texas. The list of participants for this workgroup is listed in Appendix A. This paper is formatted to present the views and common practices used by major FERC licensees for coordinating emergency and security procedures. Under each heading is a list of responses from dam owner respondents showing different methods for enhancing emergency and security procedures. Once again, these are suggestions and opinions from dam owners and may not necessarily be required under current FERC guidelines or be universally applicable. Results from this document may assist FERC in revising the EAP chapter of the FERC Engineering Guidelines.

1. EMERGENCY MANAGEMENT AGENCY COORDINATION

Section 1 Summary: To identify who should be included in an emergency response at your dam, contact all the emergency agencies along your river system and ask them if your contact list is complete. Periodically ensure that all your EAP contacts are current. Exercises should identify if any organizations are missing. Review roles to determine if additional resources are needed. Utilize the strengths and communication systems of the agencies you work with. Monitor development within the inundation boundaries to identify potentially affected businesses and residences. Hand-deliver EAP updates to plan holders to strengthen relationships. Hold annual in-house training and consider certification programs for employees. Offer site tours to response agency personnel and solicit their ideas.

1a. Identifying Emergency Management Agency (EMA) Personnel

Contact the State Office of Emergency Services, county or other local Office of Emergency Services, state and local law enforcement agencies, State Highway Patrol, U.S. Forest Service, National Weather Service, and other state, county, or local agencies having jurisdiction for public safety in each community potentially affected by the projects. Affected counties can be identified by the river system associated with your dam and included in the inundation boundaries shown on your inundation maps.

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

Experience with local authorities over a period of years can identify the key agencies and responsible personnel that will respond to emergencies at the projects. Frequently talking to the key personnel and checking for other responsible responders who need to be informed of your plans is essential. Keep abreast of political and organizational changes and initiate new contacts if there are changes. Make a request from each EMA organization that they identify all their EAP contact(s).

1b. Ensuring all EMA Organizations are Identified and Contact Information Remains Current

Communication with one or more EMAs will usually identify other EMAs that need to be included. The best way to verify that all applicable EMA organizations are identified is during exercises (tabletop or functional) or onsite orientation sessions where a face-to-face meeting takes place. Identify all the applicable agencies that you are aware of prior to the meetings; if additional agencies are identified during an exercise contact those agencies as soon as possible and begin coordination with them.

The Notification Call Charts are verified annually (quarterly is also used by some organizations), and updated as needed. At a minimum, hold annual orientation meetings with all applicable EMA organizations and schedule a training session (tabletop format) with all agencies to cover the Emergency Action Plan (EAP) revisions and talk through a dam failure scenario. During these meetings, be sure to review roles and responsibilities to ensure that all have a good understanding and to identify and reduce duplication and overlap. Ask the authorities having jurisdiction for public safety to discuss their policies, procedures, local response plans, and inter-governmental coordination upon notification of an actual or impending emergency. Contacts are reviewed at the meeting for accuracy and all are requested to inform the dam owner of any changes which may occur before the next meeting. Also, throughout the year, it is a good idea to have the EMA contact the dam owner if they become aware of any changes in their jurisdiction.

Usually, EMA organizations have been well identified over the years and there have been very few changes. For “key players,” meet at least once a year. Contact them by phone and email when there are items of interest for them. Occasionally, some even contact the dam owner on their own initiative. For “non key players,” verify names and addresses through online sources and return acknowledgements from the EAP distribution. Meet with these individuals on an irregular basis but try to contact everyone at least once every five years.

1c. Identifying Additional Organizations that May Assist the Response

Because of the requirement for multiple uses of waterway resources, a dam owner should

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

be in constant operational contact with other organizations using the waterway. These relationships should be established for both operational matters as well as for emergency action planning. The National Weather Service (NWS) and State Police Information Networks can be included in the EAP through findings at annual coordination meetings and informal tabletop exercises that are done on a periodic basis.

Every effort should be made to tap into existing functioning notification systems to get warnings out in a timely manner. In many states there is an effective emergency management system for all types of events. Where such a system exists, it will facilitate rapid notification of an emergency which should facilitate the deployment of mutual aid resources. Once the “911” dispatcher is alerted, local and state political declarations of emergency can be obtained quickly. The emergency response resources of the state are then automatically made available.

State and local emergency management agencies may request the inclusion of additional organizations as they deem necessary. If so, these requests should be seriously considered and accepted unless all organizations determine otherwise.

1d. Identifying all Potentially Affected Businesses and Properties from a Dam Emergency

Use of the flood inundation maps from the EAP allows identification of potentially affected businesses and properties. An annual review can be made to determine if new developments would be potentially impacted and if changes are required in the plan. The Dam owner’s local real estate office and public affairs group are often active in the community and are another potential resource to identify changed conditions in the potential inundation areas. Also, periodic aerial flyovers can be performed along the inundation zone in an effort to detect changed conditions. *(Editor’s note: Because many dam operators are treating low-flying aircraft as potential security risks, it would be good practice to notify neighboring dams and other infrastructure owners when your organization plans to conduct aerial surveys.)*

Nearly all Central Dispatch Departments now have the mapping capability to overlay the inundation maps onto local maps (GIS mapping), and thus can provide property ownership data. Based on hydrologic and hydraulic computations for potential flow releases, up to a dam break with PMF, a dam owner can determine the potential impact areas below a river reach. From that, several means can be utilized to identify potentially affected developments downstream:

- USGS Quad Sheets
- Aerial Reconnaissance Survey and/or Topographic Survey

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

- County Assessor's Property Maps

Many dam owners do not identify all the businesses affected and rely on the EMA's to deal with the general public and facilities during a dam emergency. The dam owner will point out specific businesses, homes and recreation locations that would be impacted by a dam emergency to the EMA's.

1e. Establishing a Working Relationship with EMAs and Other Organizations

Working relationships are established through a point of contact system. At each project there is an appointed site emergency action plan coordinator. Included in his/her responsibility is a requirement to establish personal contact with designated key personnel in the primary and secondary agencies having jurisdiction for public safety and emergency response. The site EAP Coordinator has the primary responsibility of keeping the plan current and workable. The site EAP Coordinator receives support from an appointed Headquarters EAP Coordinator who provides overall coordination of multiple plans throughout the state, regulatory criteria and guidance, and technical assistance as required to conduct training, tabletop and functional exercise design. Each site also has a person designated as responsible for security. This may also be the Site EAP Coordinator. Most large companies also maintain a corporate security or Inspector General's office which establishes lines of communications with local law enforcement, state police, national guard, state office of homeland security, FBI, US Department of Homeland Security, and other resources which are used to keep site EAP Coordinators informed. Those dam owners who do not have a professional security staff should designate someone to carry out that liaison function.

Most dam owners conduct orientation meetings (sometimes using a lunch format) with groups of EMAs to familiarize the EMAs with project facilities as well as to improve coordination and communication. Many dam owners hand-deliver EAP updates to plan holders as a way to ensure all information is getting into the appropriate places in the EAP binder. This also provides an easier, more informal forum to discuss procedures than in a large-group format. Aside from annual testing of the Notification Flow Charts and functional exercises, dam owners can participate in other county emergency tests and participate in State Emergency Management Association activities.

Dam owners train and orient any new personnel on the EAP and dam specifics. If EMAs have sufficient time, dam owners can provide project tours to familiarize them with the dams.

As with all companies or agencies, personnel may routinely change. It is a real challenge to continually re-orient new EMA personnel to understand your facilities and

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

communication links. A dam owner needs to maintain frequent communication with EMAs to stay updated to potential changes in personnel. EMAs have many people competing for their time. Because most dam owners have done an excellent job of dam safety engineering, failure of your dams may not necessarily be taken as seriously as it should be. While most agencies will participate in annual meetings or occasional exercise, they have other priorities so such meetings should be clearly focused and meaningful.

A dam owner needs to keep in mind that it is the responsibility of the dam owner to recognize an impending or actual dam emergency and to make prompt, efficient notification to the authorities having jurisdiction for public safety. It is our experience that the professional agencies are very experienced and highly trained in emergency response protocols. The focus of the dam owner is to concentrate on mitigation procedures to secure the threat and ideally to prevent failure. It has been demonstrated through the functional exercises that once notification is made, the agencies are very prepared to act to protect the public. All parties, including the plant operators, have protocols in place for call-backs and regular updates as a potential problem develops and plays out. For major events, technical staff from the dam owner's organization should be posted directly to the local emergency operations center (EOC) to maximize information exchange.

1f. Training Internal and External Personnel for a Response

Internal Training:

Dam Safety and EAP internal training of operators, general maintenance personnel, and security personnel is coordinated by the site EAP coordinator with assistance from the Headquarters EAP Coordinator. Joint internal and external training is accomplished with annual coordination meetings, tabletop and functional exercises, plus "toolbox meetings" throughout the year to discuss roles and responsibilities for facility operations.

For internal personnel, some licensees have an Operator Certification Program (which includes EAP responses), and all hydro operators would be required to be certified for the dam(s) they operate. An annual training session is also held with all personnel that would respond to a dam emergency to ensure they are aware of their responsibility and actions required during an emergency event.

Back-up communication radio checks are often performed by plant operators on a daily basis.

External Training:

The understanding of what information is needed in the plan and on the inundation maps

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

can be developed over the years through coordination and discussion with the responding agencies. In many cases, the agencies have developed detailed local plans to address emergencies and rely on the EAP for general understanding of the nature and type of emergency being reported. They have developed detailed plans for access and control of access to potential flooded areas. Some communities have reverse “911” systems whereby they can notify individual homes and businesses in an impending emergency. The local law enforcement and fire services have a very good understanding of the potential threat and who and what is potentially affected. This is because the dam owner provides that information and reviews it with them at the annual coordination meetings. Special training programs can be offered for key law enforcement dispatchers on a periodic and as requested basis. This usually takes place at the respective agency so the maximum number of agency personnel can be involved. Acknowledgement forms of EAP’s for external personnel are also helpful.

External people need not be trained every year unless there are significant personnel changes. Give orientation and EAP familiarization training when you conduct tabletop and functional exercises. At each Annual Meeting, inundation maps are reviewed and training given on how to read and understand the information contained on the maps as well as reviewing each EMA’s responsibility. Additional meetings are also held for training at the request of any EMA. It is also possible to offer tours of facilities to give EMAs an opportunity to see a plant in operation. The information that EMAs want from the inundation maps is when the water will reach critical areas, how high will it get and how long will it take to recede. Dam owners can meet directly with EMAs and question them on what information is felt to be needed for an effective EAP response. The majority of EMAs request inundation maps and communication with the dam owner in an emergency event.

2. LAW ENFORCEMENT AGENCY COORDINATION

Section 2 Summary: Routinely interact with the local, state and federal law enforcement agencies with jurisdiction over your project. Offer site tours and EAP exercise invitations to those agencies and offer assistance to any of their special programs. Educate them of the importance of why a dam operator needs to receive threat information and never breach their trust when they supply information to you. Obtain a security clearance (secret level) for an internal point of contact. Establish an employee and public awareness program to identify security concerns and establish rapid means of communication to the jurisdictional law enforcement agencies. Conduct closed meetings with law enforcement personnel after EAP exercises. Identify to them what is important and vulnerable at your projects. Understand how they operate and plan accordingly.

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

2a. Identifying Law Enforcement Agency (LEA) Personnel and Determining When They Should be Called

Many dam owners depend on local jurisdictions, state, and federal agencies to provide law enforcement and incident response for their dams. The dam owner should meet with representatives of local, state, and federal law enforcement and discuss responses to emergency situations. Establish plans for the notification and mobilization of emergency personnel for different threat levels and occurrences. These plans are in written form and are provided to each agency involved. It is understood that these plans are only a guide. Conditions or events may require that actions be adjusted, adapted, and improvised as events unfold and no written plan can cover all emergency response contingencies. Routinely interact with the local law enforcement agencies with jurisdiction for the facility. This is generally done through the local Sheriff's Office but could also include state and federal enforcement agencies. The Corporate Security Department can also work directly with the FBI offices with jurisdiction over their facilities if they spend time establishing a close relationship with them. Many locations are covered by a local FBI Joint Terrorism Task Force and InfraGard program.

Many dam owners have a corporate security department who works with local law enforcement and even may provide internal investigative services such as for metal theft in a dam owner's system.

2b. Establishing Trust with LEA Personnel

The best method in establishing trust is to have face to face meetings with the personnel you will be dealing with in emergency situations. A dam owner can host periodic working lunch meetings for those LEAs expected to be dealt with during a developing emergency. Include personnel from corporate security and site security. This encourages networking and familiarity. You can also invite LEA to the annual EAP meeting and have LEA participate in EAP drills and exercises. Participating in LEA sponsored conferences and training, such as attending the Michigan State Police's 3 day conference, "Working Together for a Safer Community" can also build trust.

Having personnel with prior law enforcement experience on staff is a plus in that they are able to establish trust based on their common training and experiences. This enhances acceptance by the law enforcement community and aids communication.

Encourage visits to sites by all emergency services agencies that would be responding. These visits are valuable in that emergency personnel can familiarize themselves with site conditions. They are able to identify any dangerous conditions or other concerns of first responders. Offering them an opportunity to exercise a law enforcement response at your dam project will also acquaint them to specific concerns at your site, such as security

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

systems and procedures. Show them what you are trying to protect and why it is important.

2c. Receiving Intelligence and Threat Information from LEA

Once a level of trust is built between LEA and company security personnel, continued communication is required. Much valuable information is gained in informal settings and communications. Any breach of trust will result in LEAs no longer sharing information. The LEA needs to have confidence in the dam owner's security contact that the information will be treated as confidential. Your ability to reach out to known LEA contacts can be an asset in determining the validity of rumors and media announcements about possible threats.

Some dam organizations have obtained security clearances from the Department of Homeland Security for key employees. Many have done so expecting that this would enable them to obtain important timely information of potential credible threats, but many have found this has not been the case. Up to this point, there has been no actionable federal guidance regarding site specific threats based on national intelligence analysis nor has there been any guidance on recommended security design basis for power generation and transmission facilities.

Get on e-mail notification lists (such as from the FBI, NERC's ES-ISAC and FERC). Report any suspicious incidents to LEA, DHS, NERC and FERC so that your information can help define the national threat situation specific to dams.

The newly-emerging Department of Homeland Security Information Network (HSIN) for Dams may provide an avenue for U.S. dam owners to share security information among themselves in the near future.

2d. Training Internal and External Personnel for a Security Response

Internal Training:

Internal personnel receive in-service training on a regular basis. This may be incorporated into your EAP training. Also develop an employee awareness program with emphasis on reporting suspicious activity in and around project facilities. These training programs are conducted by senior security personnel. If the operator has no professional security personnel, assistance can sometimes be obtained from large companies that have that capability or from private consultants. Develop a procedure for security incident reporting which all hydro personnel are instructed to follow. Company personnel should be instructed not to take on law enforcement roles or confront suspects in a situation related to security. All security matters should be reported to their supervisor or directly

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

to law enforcement personnel.

If your organization has an emergency operations and procedures manual, or similar document, review it to determine if additions are necessary. Suggestions include new chapters that deal with disaster response that go beyond standard outage procedures. Consider suggestions provided in this guideline document in the redrafting of the procedures. Once your manual is completed, train all manual holders and other key staff on the procedures in the manual.

A similar public awareness out-reach program can be established to solicit input from the general public to report suspicious activity in and around facilities. As one example, several employee and public reports have resulted in LEA action to check out particular situations. While none of the incidents were found to have serious merit, it indicates a degree of success in internal and external training efforts. Dam owners can quietly acknowledge and thank those reporting suspicious activity. Some dam owners offer token monetary awards to public respondents.

External Training:

LEAs and first responders can be invited to the project for site tours. At that time, discuss pre-planned responses to emergency situations. During these tours project operations, security, and safety personnel are made available to answer questions. This provides opportunities to learn from each other about respective capabilities and resources.

Security responses for external personnel can be discussed after the annual EAP meeting. LEA and Central Dispatch can stay for a private meeting regarding security reporting and response. Dam owners do not train external law enforcement personnel but rather they are trained according to their own regulations. However, your corporate security department can work with the local LEA's regarding security responses. You may also establish contracts in place for private security officers if needed at any of your projects.

2e. Assisting LEA Identify What You Consider to be Critical or Vulnerable Assets

Universally, dam owners believe it is essential that each company assess their own infrastructure to determine criticality and vulnerabilities. These assessments should be used to determine physical security improvements needed to protect critical infrastructure including powerhouses, substations, communication sites, key service centers, control center, cyber systems, and other key assets. The LEAs are briefed on that information and site tours reinforce the message. LEAs also need to know what could be dangerous to first responders, such as high voltage equipment, chemicals, special access requirements, etc. Also explain how you operate the hydro system, the number of

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

employees at each location, who to contact, phone numbers, etc. Consider reviewing your Security Assessment with them. The most knowledgeable site personnel should be made available to emergency responders to answer any questions they may have. When meeting with those agencies with jurisdiction over critical facilities, ensure that they understand that you consider them to be important.

If you are located in rural communities you may have only a limited road police patrol. Assuming your facilities are manned, you may have more knowledge than the LEA as to any unusual activity in the area. Knowing this, LEA depends on you to contact them if assistance is required.

2f. Becoming Aware of What to Expect from the LEA Response (How they Operate)

Joint training exercises (coordination meeting, tabletop, functional) are held so that site personnel are familiar with how LEAs will respond and react to an emergency situation. Provide plant tours to ensure LEA are familiar with the structures. By meeting and discussing emergency plans and responses, you can avoid surprises and conflicts in a real emergency.

When developing plans, LEA should explain to you how they will operate under different scenarios. When determining response time, do not necessarily assume the response time is calculated on first arrival of the LEA. Ask LEA how long it will take for them to set up operations prior to responding to a hostile situation and plan accordingly.

2g. Miscellaneous Suggestions for Working with LEA

A clear exchange of information about credible threats is important for success in protecting critical infrastructure. Advance warning on threats allows owners to take positive actions for protection of the asset. The probability of site specific advance warnings appears to be low. Once an intrusion by a determined adversary is detected, there is very little to be done except to initiate emergency response plans, mitigation, and restoration strategies. The present practice of working closely with LEA's and keeping employees and the general public aware and alert seems to be the most effective defense strategy at this time.

As with all organizations, dam owners are constrained by the availability of resources. The most important message to FERC is that it is important for FERC to coordinate its regulations with NERC and Homeland Security and other Federal agencies to develop consistent policies to minimize conflicts and impacts upon its licensees.

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

3. CONDUCTING EMPLOYEE BACKGROUND CHECKS

Section 3 Summary: Conducting employee background checks can become a complex legal issue and can only be resolved internally by each affected organization. The contributors to this document do not endorse any specific course of action on this topic; however, there have been several inquiries made by dam owners as to how to conduct employee background checks. It is strongly recommended that you obtain legal council prior to initiating any employee background checks. The following represents a sampling of responses, and may or may not be appropriate to your specific needs.

3a. ORGANIZATION A:

Background:

1. We do criminal checks
2. Prior employment interviews
3. Social Security verification
4. Education verification
5. Driving record

We are still waiting for the final version of the new NERC Standards (CIP-002-1 through -002-9). Unless their drafts change, we will probably be told that we will have to conduct new background checks on any employees who work with or touch critical cyber assets. It appears this will include control rooms at plants and substations as well as the System Control Center. We are still waiting for additional interpretation of the draft orders and final order.

Initial understandings are that we would have to complete new criminal history checks only. They would be done on employees who again work with, touch or have access to critical cyber assets. We would have to self disclose those people and refresh the criminal check every 5 years or any transfer or promotion of significance. This is basically it as we wait for the new NERC Standards. A lot of utilities have concerns about being told they have to run these new checks. HR will need to inform us on this one and I am sure we will need to work with the bargaining unit. We do items 1-4 for all new hires. The criminal checks are done by a local contract firm and go back 7 years (statutory limit). The NERC Standards issue is the one that is probably giving utilities the most concern because it means running checks on long term employees.

3b. ORGANIZATION B:

There are serious legal limitations on conducting backgrounds and the costs will range depending on the scope of the investigation and the volume as more checks generally results in lower costs. The benchmark is probably about \$75 to \$100 depending on the vendor and other factors. The general norm is criminal and driving history, social

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

security number checks as well as verification of prior employment and education. Reference checks are also a good practice. Credit is a good indicator but should only be used for a position where that is relevant. It is also advisable to have a review process and some general standards for rejection.

3c. ORGANIZATION C:

We conduct background checks on anyone requesting unescorted access to our sites. We use a private company. We require anyone requesting unescorted access to fill out a form listing their company name, their name, address, telephone number, SSN, date of birth, driver license number/state, and country of citizenship. They are required to sign and date the form which also gives permission to do the background check. If they do not agree to a background check, they do not get access to the site. We have different packages on US citizens, contractors, potential employees, Canadian citizens and other foreign nationals. The packages are as follows:

US citizen requesting employment package:

Verification of last 7 years of employment
Education (highest degree attained)
Criminal history record search (felonies and misdemeanors based on provided and developed name(s) and provided and developed residential addresses for past 7 years)
Federal criminal history (same criteria as above)
Interscan (includes Interpol, U.S. Dept of Commerce, Treasury searches)
Professional credentials (licenses, if applicable)
Credit reports (include SSN verification, credit and litigation history, ID verification, address verification)
Motor vehicle report from state of issuance
Cost- approximately \$150.00

Contractor requesting unescorted access package:

US citizen-
SSN trace
Felony and misdemeanor criminal history for last three years
Federal criminal history for last three years
Felony and misdemeanor
Cost- approximately \$85.00

Canadian citizen-

US package plus
Canadian criminal records search based on current address provided
Canadian Social Insurance Number check
Interscan (Interpol, U.S. Dept. of Commerce and Treasury searches)
Cost-approximately \$140.00

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

Other foreign nationals-

US package plus

Interscan

Multi-state criminal records check

Cost-approximately \$300.00

A criminal record background check is conducted again if the contractor is off-site for more than six months. In addition to using a contractor we occasionally use our resources in Law Enforcement to run record checks if additional information is needed or the information provided does not check out. We do refuse access to requestors under certain conditions.

3d. ORGANIZATION D:

We have our HR Department handle this matter. We conduct all background checks as if the individual was an “employee”. The criteria are based on the Fair Credit Reporting Act which limits information to a seven year time period. Record checks, including local, state, federal and international information, are referenced. Driver’s license information, educational history and reference checks are reviewed.

Serious felonies, some misdemeanors and falsifying the information on the document are reasons we deny employment.

3e. ORGANIZATION E:

The company we use is LexisNexis PeopleWise. It was recommended by our employment attorney. We do criminal background checks on all regular employees. We also verify their Social Security Number matches their name because the Social Security Number is what they use to run the investigation. The reason we do it on all employees is because even though some employees may not be working with the public, in safety sensitive areas, or around cash, they can get promoted into these areas.

We do a federal criminal check and also by county in which they said they lived. Unfortunately, you have to do it county by county in the state because there is no central database. It is \$7.00 for the social security check and \$16.50 for the federal and each county we check.

I also understand there is a new system that uses fingerprints to do the checking. I do not know much about it, but I know we did some investigation into this recently.

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

3f. ORGANIZATION F:

The corporation established a set process, screening/denial criteria and a denial appeals process which was reviewed by the Legal Department and approved by the CEO and the Board. All employees, contractors and vendors with unescorted access to our facilities must successfully complete the screening process before they are permitted to start work. The forms are completed and sent to our in-house screening team for initial review (completeness, signature, permission/release of information to us). If the form is complete, we then send it to a contract agency that does the background research/check (city to city, county to county, state). If the contractor or vendor already has a screening program that meets the same standard as ours, the Security Services Department Director may choose to accept/approve their screening process in lieu of us doing it. The provision is that the records/results must be available for our review and we conduct a quarterly audit of their records to ensure the screening is being done (and properly).

Turnaround time for about 85% of the applicants is 5 days. The ones over 5 days are usually because of missing information and delays in taking the drug screen.

There may be State Statutes, State Regulations and Union Contract issues that may have an impact but those have to be researched. Union Contracts may have to be renegotiated or negotiated when the current contract expires. When the NERC CIP goes into effect for the Electric Sector, background screening will have to be completed every 5 years. It will no longer be a one time item.

The cost is generally \$165.00 to \$175.00 per individual not including the Drug Screening. A lot depends on the volume and what you negotiate with the background screening agency.

We don't differentiate. All individuals (employees, contractors, vendors) are screened at the same level because once they have unescorted access, they have access to our physical assets as well as our cyber assets. Finding an escort for non-cleared individuals (particularly if they need continuous or frequent access) is difficult and time consuming (loss of productivity) for the employees. Our program uses the same time limit as the Fair Credit and Reporting Act (FCRA) of 7 years.

3g. ORGANIZATION G:

The best reference information on the market is the publication in the FAQ's for the NERC Cyber Security Standards (reproduced below). It gives the overall framework for administering a background screening program, for those not familiar with the process. The costs vary, based upon how detailed someone wants to go above the basic criminal checks (e.g.; driving records, worker's comp., developed references, etc.) and also varies

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

based upon the number of locales the applicant has lived in during the time of review, but an average with most large volume screening companies is probably \$50 - \$75 per applicant. Smaller companies are advised to outsource this work if they're not familiar with the process, as there are a number of paperwork and legal requirements under the Fair Credit Reporting Act that they likely aren't familiar with, but the provider should be able to set them up properly for compliance.

(From NERC Cyber Security Standards FAQ):

CIP-004: Personnel and Training

Question: What are the Background Screening requirements for this section?

Answer: As indicated, the screen should be conducted in accordance with all applicable laws and agreements, and leaves the specific components of the screening process to those entities subject to the Standard. As a minimum, identity verification and a seven-year criminal check are required. However, it is recommended that additional checks such as employment history, education verification, professional certifications, etc., be reviewed where warranted and where applicable to the position. Further guidance on the administration of background screening programs can be found in reference documents such as "LPA Background Check Protocol" published by the Labor Policy Association (ISBN 0-9667568-8-6), and the Fair Credit Reporting Act, where applicable.

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

3h. ORGANIZATION H:

Background Screening Criteria	
Type of Check	Verification Requirements
Social Security Number Trace /Verification of Identity	<ul style="list-style-type: none"> -Verify Social Security Number (SSN) is a valid number issued by SSA -Verify SSN is assigned to the candidate -Verify state of issuance and date range of SSN -Verify SSN was not issued before the candidate was born -Verify SSN is not a number listed the Social Security Administration’s deceased database -Verify SSN has not been used by others or candidate has not been using other SSN #'s -Verify addresses associated with SSN match application and the locations for criminal history records -Identify any discrepancies
Criminal History Check (Review 7 Year History for Federal, State and Local Criminal History)	<ul style="list-style-type: none"> -Verify correct date of birth -Verify criminal history checks are performed to include state and counties of residence, employment and education during the past 7 years (or 10–year search where permitted) in addition to the federal criminal history check -Verify no felony or misdemeanor convictions -Verify no pending disposition for criminal activity -Verify no falsification of information or omissions regarding criminal history information requested on the application -Identify any discrepancies
Terrorist Watch Database Search	<ul style="list-style-type: none"> -Verify that candidate is not on the Department of the Treasury’s Office of Foreign Assets Control (OFAC) designated terrorist list -Verify that candidate is not on the FBI Most Wanted List -Verify that candidate is not on the Interpol Most Wanted List -Verify that candidate is not a Politically Exposed Person as reported by the Department of Treasury, Federal Reserve, OCC, FDIC, OTS, and Department of State -Verify that candidate is not on the FBI Hijackers and Terrorists Lists -Verify that candidate is not on the United Nations Consolidated List -Verify that candidate is not on the EU Terrorist List -Verify that candidate is not on any other terrorist list

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

Background Screening Criteria	
Type of Check	Verification Requirements
Employment Verification	<ul style="list-style-type: none"> -Verify no unexplained gaps in employment or periods of unaccountability -Verify that candidate was employed by employer -Verify dates of employment, salary and job responsibilities -Verify no negative employment references regarding job performance -Verify no employment terminations or forced resignations -Verify eligibility for rehire -Identify any discrepancies
Education Verification	<ul style="list-style-type: none"> -Verify no falsification of information regarding institutions and dates of attendance -Verify major area of study -Verify graduation status or expected graduation date -Verify degree earned, if graduated -Verify GPA -Verify institution is accredited -Verify no falsification of grades or academic record -Identify any discrepancies
References (Developed or As Provided)	<ul style="list-style-type: none"> -Verify no negative references concerning character or illegal activity -Verify no employment terminations or forced resignations -Verify no falsification of information regarding dates and places or employment -Verify no falsification of information regarding “reason for leaving” or salary
Professional Licenses Or Certifications	<ul style="list-style-type: none"> -Verify current status of the claimed license or certification -Verify that that credential is in “good standing” -Verify that there have been no grievances, sanctions, suspensions or other derogatory actions taken against candidate

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

Background Screening Criteria	
Type of Check	Verification Requirements
Motor Vehicle License and Driving Record	<ul style="list-style-type: none"> -Verify that the information on the driver’s license matches the information provided by the candidate (driver’s license number, address, date of birth). Obtain a copy of the driver’s license for record. -Verify that the driver’s license was issued to the candidate and the photograph matches -Verify type of license(s) held -Verify that the candidate does not have an operator’s license currently under suspension or revocation (driver-sensitive position only) -Verify that there have not been two or more convictions within the last seven years of any combination of DUI/DWI, Hit & Run, Reckless Driving, or driving while license revoked or suspended -Verify that there is not a pattern of disregard for traffic rules & regulations, including multiple violations of motor vehicle laws, such as 3 or more speeding convictions within the past 24 months
Credit Report Review (Executives & Credit-Sensitive Positions Only)	<ul style="list-style-type: none"> -Verify that there are no unpaid collectable/bad debts with your company -Verify no unpaid tax liens -Verify no frequent and/or high dollar outstanding suits and judgments -Verify that a high percentage of stated accounts are in good standing, to include: no collection accounts, no accounts charged off to profit and loss, no significant past due accounts, no bad debt accounts, and no current or previous negative accounts <p><i>NOTE: All credit reporting will be evaluated carefully based upon the position, and considered with other information developed during the background investigation</i></p>
Civil Litigation Verification (Executives)	<ul style="list-style-type: none"> -Verify no indication of frequent and/or high dollar outstanding suits and judgments -Verify no unpaid liens or bankruptcies

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

Background Screening Criteria	
Type of Check	Verification Requirements
Media Check (Executives)	<ul style="list-style-type: none"> -Locate any periodicals or other publications where candidate is named or quoted -Verify there are no incidents involving theft, misconduct, workplace violence, or other behavior that might reflect negatively on the character or indicate a lack of trustworthiness -Verify there are no news reports where the candidate had a negative impact to company brand
Drug Screen	<ul style="list-style-type: none"> -Verify that there are no positives for the presence of drugs -Verify drug screen is a 5 Panel (NIDA-5) minimum or 10 Panel, as applicable -Verify urine samples are collected in accordance with Federal Register 49 CFR Part 40, Subpart E- Urine Specimen Collections -Verify that the laboratory performs a screening test and confirmation of positive results by gas chromatography/mass spectrometry -Verify laboratory is certified by the Department of Health and Human Services (HHS) under the National Laboratory Certification Program (NLCP) -Verify laboratory test results are reviewed by a medical review officer (MRO) as described in Federal Register 49 CFR Part 40, Subpart G- Medical Review Officers and the Verification Process.

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

4. COORDINATING (INTEGRATING) EAP AND SECURITY PROCEDURES

Section 4 Summary: Since the dam owner may lose control of information provided in external copies of the EAP, the dam owner must decide what information constitutes a security concern, yet balance this concern with the external agency's need (and desire) to know. The dam owner should coordinate closely with each participating agency to decide exactly what is important to them, and what extraneous information could be deleted from their copies of the EAP. Managing what information is where is also a consideration the dam owner must determine. Above all other concerns, be sure the participating agencies have all the information they need to accomplish their tasks. Nothing describing the security force posture, surveillance capability, access control, delay devices, detection systems, and intrusion response capability used in the facility should be included in the EAP. Be sure that emergency response activities do not interfere with security activities, and visa versa.

4a. What to Remove from External Versions of EAPs due to Operational Security Concerns

(Editor's note: the following suggestions have been made by licensees about what should be removed from external versions of the EAP, and may not necessarily be fully endorsed by the FERC. These suggestions can be used as a discussion point with plan holders. Any changes from the required EAP format must be agreed upon by all parties involved in the response. Any suggested changes must be submitted to FERC and be on file with the licensee.)

Section III, "Project Description" with physical data.

Section IV, "Emergency Detection, Evaluation, and Classification" (with Security Plans). The procedures for detection of an existing or potential emergency should be withheld. Specific actions the dam owner would take during an emergency event should also be withheld.

Section VI, "Preparedness" should be eliminated in its entirety. The discussions contained in this section should be in terms of confidential communications between the regulator and dam owner and the responding agencies. It is felt that the information contained in this section could be used to maximize potential negative impacts in a planned terrorist attack on a dam.

Appendix VIII.A, "Investigation and Analyses of Dam Break Floods" should be eliminated from the EAP. This information is highly technical. It is used by the plant operator in making assessments of actual conditions at the time of the incident based on hypothetical conditions. Plant operators and engineering staff use this information to advise responding agencies about the development, progress, and status of the event based on real time data streams and visual observation of the river system. EMA's indicate that they rely on verbal input, updates, and projections from project operators

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

and their own patrol feedback to determine response priorities. They will not have time or the capability to use these engineering data and analyses in a real time manner. Most dam owners provide an incident command center technical liaison to assist the emergency response team. For training purposes, the development and methodologies of the engineering analyses can be presented to all plan holders as background data for information only. Plant operations and engineering will have this information as an appendix in their registered plans. It is felt that the information contained in this section could be used to maximize potential negative impacts in a planned terrorist attack.

Any specific detailed drawings and any specifics regarding security equipment and procedures should be withheld from external copies of the EAP.

Some licensees suggest that all Appendices should be removed from external copies of the EAP. *(Editor's note: that will need to be considered very carefully prior to acceptance).*

One licensee organization stated that the inundation maps should be removed from external copies of the EAP. *(Editor's note: Although many organizations recognize the sensitivity of the inundation maps, this recommendation is not feasible because the EMAs rely on the maps to plan their emergency operations and evacuations. Inundation maps, and other data described above in this section, may be restricted from access to the general population, but should be provided to emergency managers who "need-to-know" that information).*

4b. How Best to Handle Sensitive Materials Retained in External EAP Copies

Sensitive portions of the EAP should be redacted from the public document. Such matters should be handled as confidential communications between the regulator and dam owner and responding agencies. Unquestionably, do not include site security plans in the EAP.

If external EAP plan holders demonstrate a need to retain certain data, it would be easier to track those sections if it is included as an appendix or separate volume. One licensee presently uses an "A" and "B" copy approach. The "A" copy contains all the information required by the FERC guidelines to be in the EAP. The "B" copy has the sensitive project information including sections III, VI, VIII removed.

All copies of the EAP are numbered. Numbered copies are issued to registered plan holders only and should be signed for.

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

4c. Responding to Requests from EAP Holders Requesting Retention of Specific Sensitive Information

Information determined to be sensitive should only be included in an external copy of the EAP if a reasonable “need-to-know” is established. Those official agencies having responsibility for public safety generally have a reasonable need to know certain background or technical information about the plan. The situations where more detailed information is requested can be handled through confidential briefings. Details of the briefings can be geared to the plan holder’s area of responsibility. Provide the sensitive information (as Appendices) only on an as-needed basis. Determine who is requesting the information, why they think they need it, what they are going to do with the information and determine if they really need to have it. Reinforce to those plan holders retaining sensitive information that that information should not be distributed outside their organization.

Develop a Log Sheet for each EAP identifying which agency should receive the additional sensitive information in their copy of the EAP. A good database program such as Access can track this information.

One licensee stated that all plans should contain the same information.

4d. Security Information in the EAP

Specific security information for a project should not be included in the EAP. The dam owner should maintain that information confidentially. Nothing describing the security force posture, surveillance capability, access control, delay devices, detection systems, and intrusion response capability used in the facility should be included in the EAP. Internally, this information is already located in other procedures and does not need to be repeated in the EAP and externally this information should not be made available to the public agencies.

The local County Sheriff’s phone number (for example) is already included in many EAPs. LEA’s have not requested that their phone numbers be stricken, so it should be fine to leave them in. LEA telephone numbers are generally in the public domain.

Capabilities for backup or alternate communications can be mentioned but not detailed in the plan because a potential adversary may be able to use the detailed information to compromise those alternate methods.

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

4e. Security, Criminal Investigation, Anti-Terrorist Responses Conflicting with EAP Procedures

The EAP is a notification tool for early warning to mitigate potential downstream impacts from a dam break or un-planned major release of water. Security, criminal investigation, and anti-terrorist responses are independent of the EAP and therefore should have no conflicts. However, conflict is possible if their presence/operations restrict access to project features that need to be accessed to mitigate or respond to an emergency. At the present time there does not seem to be any real conflicts. Because of the ability to remotely monitor and operate all facilities, the likelihood of law enforcement responses impacting the ability to respond to emergency conditions is considered to be low. If the dam owner only has access to manual operations (or the remote operational capabilities are compromised) then additional coordination for on-site operations with LEAs may likely be necessary.

The EAP conditions can be implemented whether they are caused by nature or terrorists. Keep the two subjects separate and deal with them as they happen, but use the same basic emergency management processes.

4f. Effects of Radiological, Biological, or Chemical Attacks on Emergency Response Procedures

The agencies having responsibility for public safety have detailed response plans for each of these types of scenarios. They would be trained and have procedures in place for a response to such attacks. Dam owners should not be tasked with scenarios outside their area of expertise and responsibilities. Only procedures to secure the area for the professionals should be included.

Internally, there should be provisions to inform and train your employees, but those should not be a part of the EAP. This should be company-wide training and handled like other emergency procedures.

4g. Separate Departments Preparing EAP and Security Procedures

Many dam owners have multiple work organizations that separately develop the EAP and security procedures. These organizations should work together on the security issues and should regularly communicate with each other. The security department should review all security measures and inform dam safety engineers of their response plans and vice versa. Both organizations should work together on security upgrades and modifications at the hydro projects. Peer review and coordination meetings should be performed at least annually.

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

There should be single point responsibilities for EAP and security functions. Recognize the value of integrating security with dam safety and emergency planning. Security personnel should train with operators and other site staff. Security procedures should be periodically updated to ensure coordination with all plant emergency situations.

5. COORDINATING RIVER SYSTEM ACTIVITIES

Section 5 Summary: Due to normal river system operations, dam owners should have a good handle on identifying which neighboring dam owners could be affected by each other. Develop specific procedures and guidance to deal with the failure of any dam along the river system and how it could impact your operations. Conduct multi-dam emergency exercises to determine how the actual emergency coordination will work. Develop means of sharing resources when possible.

5a. Identifying Dam Owners on the Same River System Affected by Dam Failures

Upstream and downstream dam operators are already known to each other because the electric grid and river system control must to be coordinated under usual conditions. Power generation facility operations can be governed by the local ISO, river flow conditions, and operational rule curves. Day-to-day coordination of inflow and outflows from upstream and downstream interests is generally by direct communication from operator to operator. The immediate downstream dam is directly notified by control room operators upon initiation of an emergency event.

Retain a listing of all dams and projects for each of your river basins. If pertinent, the failure of each dam owned by other organizations should be included in your project EAP with the required actions to be taken. The inundation maps identify downstream and upstream facilities which could impact each project. Distribute copies of respective EAPs and include them in annual update training sessions.

Based on results of dam break analyses and flood routing, peak discharges can be estimated as inflow into other downstream dams. Comparison of flood inflow with spill capability of a downstream dam can determine potential impacts on the downstream dam facility. Evaluate the effects of large upstream dam failures on your project dams. Have specific procedures and guidance provided in your EAP to deal with the failure of each of those upstream dams. For other situations, the upstream dams may either not have any impact on your dams or there are no corrective actions that can be taken to mitigate the flood conditions.

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

5b. Coordinating River System Operations during Potential or Existing Dam Emergencies

Coordination meetings, tabletop, or functional exercises often identify when river system interests have been satisfied with notification and information exchange using the procedures in the existing EAP. A “Hydro Central” often coordinates river system operations. This covers not only your dams, but upstream and downstream dams as well. With monitoring of forecasts, lakes are drawn down with unit operation (or gates, if necessary) to prepare for inflows. Should something happen downstream, unit operation could be curtailed to mitigate flows into an affected reservoir as part of normal operating procedures.

5c. Sharing Threat and Intelligence Information between Neighboring Dams

There are two methods commonly employed at this time. First is operator to operator communication. The second is communications between respective security departments and through industry associations such as NERC. Both methods appear to result in prompt notification and timely operational coordination. This can be done by phone call or e-mail.

The present FERC email notification appears to be adequate for FERC licensees and exemptees. Some sort of regional clearinghouse for information on threats and other intelligence would be helpful.

5d. Multiple Dam Exercises by Differing Agencies on the Same River System

On those river systems where adverse downstream dam impacts are anticipated from analysis of dam breaks, those dam operators should be part of the existing EAP notification system. They are plan holders. Representatives for those dam owners should attend all coordination meetings and training exercises. Work with the other dam owners to coordinate exercises to meet all your requirements. A joint exercise by multiple agencies affected by a single scenario: 1) provides opportunities for dam owners to share the costs of hosting the exercise, 2) credits each dam owners with the requirement of accomplishing an exercise, 3) lessens the workload of the EMA by involving the EMAs in one exercise versus separate ones, 4) fully tests the coordination of the multiple dam owners, and 5) results in a more realistic exercise.

5e. Determining Which Dam Owner Controls a Multiple Dam Emergency Response

The dam with the initial emergency will initiate the EAP. That EAP should have included the potential impacts on other downstream dams. Depending on the developing

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

situation at the dam with the initial emergency, downstream dam owners can respond accordingly at their own facility. Each owner is responsible for notification for their emergency management agencies. Owners should pass on information to the EMAs if the upstream dam is experiencing a minor or major problem.

If any sudden large change in inflow is reported, anticipated, or observed, your operator is authorized to immediately begin notification to provide the maximum time for agencies to react to potential out of bank river flows. If analysis indicates that an upstream dam failure would potentially overtop, damage a dam, or require a large or unusual spillway discharge, the operator on duty is authorized to automatically initiate their EAP.

Each dam operator is responsible for initiating their own EAP upon becoming aware of a potentially developing or impending dam failure at the dam. However, bear in mind that for one emergency mobilization, even though multiple EAPs may become activated, single points of contact should still be designated as being in charge of the situation, both at the dam technical coordinator and the emergency response coordinator levels (e.g., Incident Command System). This decision-making process should be rehearsed before an emergency occurs and agreed-to by all participating agencies. Participating in a multi-dam (river basin) exercise scenario should provide a good mechanism for testing this process.

5f. Sharing Resources among Different Dam Owners in a Multiple Dam Emergency

Each dam owner should be responsible for their own dam emergency situation. They should have their own resources identified ahead of time as required in the EAP, such as equipment, personnel and material sources. However, if multiple dams are affected by a single event, then the possibility exists for increased sharing of resources to assist you through the emergency process, both at the dam and emergency response levels.

The best technique for sharing resources is through direct communications. Operating utilities have a long history of coordinated responses to operational emergencies and natural disasters. The dam owners will inform the emergency management agencies and let them allocate their resources to deal with the emergency situation and evacuations. Combined basin functional exercises with all the dam owners and the EMA's will help to sort out how best to use the available resources. The emphasis should be on having all the dam owners and EMA's participate in the basin functional exercise and facilitate the means for them to communicate with one another.

Use interagency support agreements. Utilities have had these types of agreements for years for transmission systems. They possibly can be used as a template.

FEDERAL ENERGY REGULATORY COMMISSION
OFFICE OF ENERGY PROJECTS
DIVISION OF DAM SAFETY AND INSPECTIONS

APPENDIX A - LIST OF CONTRIBUTORS

Name	Company
Ted Almay	American Electric Power
A.J. Mick Adams	Reliant Energy
Randy Baysinger	Turlock Irrigation District
Don Baldwin	Exelon
Ernie Brockman	Duke Power
William Broderick	New York Power Authority
Frank Calcagno	FERC-WO (Document Editor)
Heather Campbell	FERC-WO
Robert Canada	Southern Company
Walt Davis	Seattle City Light
Kenneth Fearon	FERC-WO
Jerry Freese	American Electric Power
Joel Galt	Southern Company
Ron Goebel	South Carolina Electric & Gas
Chuck Goggins	FERC-NYRO
Joe Goodale	Portland General Electric Co.
Mike Hagee	Duke Power
Alfred Hancock	Xcel Energy
John Hawk	FERC-CRO
Tom Lehman	PPL Montana
Duane Lewis	Santee Cooper
Sue Mar	Seattle City Light
Bruce Martin	Progress Energy
James Miller	NiSource Corporation
John Moyle	NJ Dept. of Env. Protection
Joe Mullenschlader	Ameren
Susan Pate	Consumers Energy
Bernie Rasmussen	American Electric Power
Patrick Regan	FERC-PRO
Richard Sanchez	CA Dept. of Water Resources
Peter Scalici	New York Power Authority
John Scott	FERC-SFRO
Jack Seibel	Portland General Electric Co.
Lyman Shaffer	Pacific Gas and Electric Co.
Paul Shannon	FERC-WO
Justin Smith	FERC-WO
Bob Sypult	Southern California Edison
June Sutherland	Southern California Edison
Gus Tjoumas	FERC-WO
Charles Wagner	FERC-ARO
Darryl Zdanavage	PPL Services Corp.