

2005

The Use of Service-Learning in Emergency Management

Federal Emergency Management Agency

Follow this and additional works at: <https://digitalcommons.unomaha.edu/slcestgen>

 Part of the [Service Learning Commons](#)

Please take our feedback survey at: https://unomaha.az1.qualtrics.com/jfe/form/SV_8cchtFmpDyGfBLE

Recommended Citation

Federal Emergency Management Agency, "The Use of Service-Learning in Emergency Management" (2005). *Special Topics, General*. 10.
<https://digitalcommons.unomaha.edu/slcestgen/10>

This Report is brought to you for free and open access by the Special Topics in Service Learning at DigitalCommons@UNO. It has been accepted for inclusion in Special Topics, General by an authorized administrator of DigitalCommons@UNO. For more information, please contact unodigitalcommons@unomaha.edu.

THE USE OF SERVICE-LEARNING IN EMERGENCY MANAGEMENT

Service-learning is an educational approach that offers distinct advantages for emergency management higher education. Service-learning marries educational objectives with practice environments in such a way that the student, the university, and the community all benefit. "Real world" contexts and emphases on critical thinking, problem solving, reflection, application and interpersonal skills enrich learning about emergency management. Service-learning is much more than internships, community service, and volunteering:

- ✓ It is an approach to education that can help bridge the research/practitioner divide.
- ✓ It is an appropriate extension of a university or college mission statement.
- ✓ It provides newcomers to the profession with practical experience.
- ✓ It offers students insights into the nature of the profession.
- ✓ It creates professional networks for students soon to enter the profession.
- ✓ It links the latest research and theory to emergency management practice.

What is Service-Learning?

Definitions

Definitions of service-learning vary. Common threads among definitions include the notion of community partnership/collaboration, experiential learning, the importance of student reflection, and interdisciplinary inquiry.

- "Service-learning is a credit-bearing, educational experience in which students participate in an organized service activity that meets identified community needs and reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility." (Bingle and Hatcher, 1995)
- "Service-learning means a method under which students learn and develop through thoughtfully organized service that: is coordinated with an institution of higher education, and with the community; helps foster civic responsibility; is integrated into and enhances the academic curriculum of the students enrolled; and includes structured time for students to reflect on the service experience." (American Association for Higher Education)
- "Service-learning is a teaching method which combines community service with academic instruction as it focuses on critical, reflective thinking and civic responsibility. Service-learning programs involve students in organized community service that addresses local needs, while developing their academic skills, sense of civic responsibility, and commitment to the community." (Campus Compact National Center for Community Colleges)

- "Service-learning is the various pedagogies that link community service and academic study so that each strengthens the other. The basic theory of service-learning is Dewey's: the interaction of knowledge and skills with experience is key to learning. Students learn best not by reading the Great Books in a closed room but by opening the doors and windows of experience. Learning starts with a problem and continues with the application of increasingly complex ideas and increasingly sophisticated skills to increasingly complicated problems" (Ehrlich, 1996).

Benefits

Students participating in service-learning develop:

- A reduction of negative stereotypes and an increase in tolerance for diversity.
- Greater self knowledge
- Greater spiritual growth
- Increased ability to work with others
- Increased leadership skills
- Increased feelings of being connected to a community
- Increased connection to the college experience through closer ties to students and faculty
- Increased reported learning and motivation to learn
- Deeper understanding of subject matter
- Deeper understanding of the complexity of social issues
- Increased ability to apply material learned in class to real problems (Eyler and Giles, 1999).

Others have found that service-learning can help to increase retention and relevancy of classroom material, and help to provide job skills for careers after college. Service-learning can also challenge faculty to become innovative and creative in their teaching, and contribute to a university's outreach efforts (See <http://csf.colorado.edu/sl/benefits.html> for more).

Historical Perspectives

Campus Compact

Campus Compact (<http://www.compact.org>) is a national coalition committed to the civic purposes of higher education. Membership includes more than 800 college and university presidents. Campus Compact promotes community service that:

- develops students' citizenship skills and values
- encourages partnerships between campuses and communities
- assists faculty who seek to integrate public and community engagement into their teaching and research.

Campus Compact has been providing leadership to the academic community for more than fifteen years.

To learn more about Campus Compact, simply click on their web address (above in blue).

On the front page of their web site, see the left side bar and click on [Resources](#). You will find useful information on the "Service-Learning Syllabi Project" (over 200 Syllabi), Reflection Resources (for educators), Recommended Reading & Resources and more.

Legislation and Presidential Initiatives

Presidents Bush, Clinton, and Bush enacted legislation to involve young people and college students in their communities. Currently these programs are housed in the Corporation for National Service and The Points of Light Foundation. Most recently, President George W. Bush promoted the Citizen Corps as a community-based network of volunteer efforts, specifically targeting terrorism, crime and disasters. For example, the Community Emergency Response Team (CERT) program helps "train people to be better prepared to respond to emergency situations in their communities" (<http://www.citizencorps.gov/cert.html>). CERT originates through a team certified by FEMA's Emergency Management Institute (EMI) to train volunteers for "disaster preparedness, disaster fire suppression, basic disaster medical operations and light search and rescue operations." CERT requires 18 hours of training and the ultimate goal is to prepare 400,000 volunteers.

AmeriCorps, started by President Clinton, provides service opportunities for young people and senior citizens. Volunteers have assisted with flood mitigation work, flooding response (sandbagging), shelter management and debris removal. Students might combine their voluntary service with academic credit for internship. As one example, an emergency management student could request service to the American Red Cross.

President Bush has challenged all Americans to donate 4000 hours of volunteer service (or the equivalent of two years) over their lifetime. A web site provides support information as well as a way to establish a Record of Service:
<http://www.usafreedomcorps.gov/arecordofservice.html>

Higher Education Changes

Service-learning is compatible with other changes in higher education. Eugene Rice (1996) has observed that higher education has been in a period of transition from teaching to learning, from independent discipline-based work to interdisciplinary team-oriented work, and from isolation to engagement. Boyer's (1994) vision of "The New American College" redefines the work and structure of the academy by engaging colleges and universities in addressing society's problems. Service-learning complements notions of collaborative learning, the role of professional service in the academy, student outcomes, engaging students in active learning that enhances persistence and achievement, institutional accountability, general education, and building partnerships with communities (Bringle, 1997)

Service-Learning Examples

A diversity of approaches exists for service-learning. No one model fits all situations: the approach used will depend on the quality of community collaborations, the nature and degree of institutional support, and the interests of faculty and students. Below are examples of how service-learning can be applied to emergency management curriculum.

Community-based learning courses

Community-based learning courses connect academic content with an assignment or project that meets a specific community need. Students therefore participate in community activities that provide service as well as illuminate course content. Examples include exercise design and execution for an Emergency Preparedness class, vulnerability analysis for a nursing home in a Special Populations class, and plan preparation for a Disaster Recovery class.

Another strategy might be to include individual service projects as part of the class requirements. While many students will leap at the chance to do something innovative, traditional research paper options should still be provided for those unable to participate. Students seem to enjoy participating in an activity that benefits their community. For example, in a recent course at Jacksonville State University, one student pulled together multiple counties and agencies to fund weather alert radios for deaf residents.

Internships and practica

Students are placed in various settings in order to have opportunities to practice professional skills learned in their curriculum and to prepare them for professional roles. Internships and practica require supervision and mentoring from both agency personnel and faculty. Practice settings include government agencies, voluntary organizations, and private sector companies.

Participants in FEMA's Higher Education Project Conferences have lauded the benefits of internships and practica as critical for such an applied field. Interns can participate in a variety of settings, which should be complementary to the students' knowledge, skills and career goals. In addition, the internship setting should be professionally appropriate, with personnel willing to work with students that are learning the field. Internships and practica should, ideally, be reserved for more advanced students so that both students and agencies benefit.

Senior capstones

A capstone course is designed to provide opportunities for students to apply the expertise of their major program of study as well as to demonstrate the broad outcomes of general

education. Typically, teams of seniors address a significant community problem, issue, or need as a requirement for graduation. Capstones provide experiences in team planning, decision making, and evaluation. Faculty and community practitioners provide support and mentoring to capstones. Examples include design and implementation of specific projects (e.g., Project Impact, mitigation grant preparation) or limited research studies.

Consultations

Faculty and students are often asked to serve as consultants for a variety of community requests. Often consultations are requested for services where the expertise and skills needed are not readily available in the community. Consultations may be uncompensated service to the community, or may be supported by grants or contracts. Including students can benefit the student and provide labor to the faculty member and agency. Typically, the process would be to move the student from a dependent to an independent status, such as having the student observe and learn, then practice, and then solo on a project.

Alternative breaks

An alternative break program organizes teams of college students to engage in community service and experiential learning during their summer, fall, winter or spring breaks. Students participate in short-term projects for community agencies and in the process learn about a variety of social issues and problems. The intensity of the experience increases the likelihood that students will transfer the lessons learned on-site back to their own communities even after the alternative break ends. Examples include mitigation projects in low-income neighborhoods, Habitat for Humanity house-building experiences, or service on American Red Cross disaster relief operations.

Alternative breaks could be focused locally or, ideally, involve trips to other cultures. Such a trip could occur within the United States such as when spring break students helped build Habitat for Humanity houses in the aftermath of Hurricane Andrew. Or, alternative breaks could range as far as a foreign culture. Consider the example of students who helped construct Nicaraguan housing after Hurricane Mitch (<http://www.guidancechannel.com>). Students raised \$30,000, of which \$10,000 went to a community that bought land to build homes, “since that time, April 2001, the land has been bought, and fifty-four families have signed up to move onto the student-purchased lands...each family can receive \$200 worth of cement, lumber and zinc sheet roofing.”

Cross-Cultural Solutions (<http://www.crossculturalsolutions.org>) offers volunteer programs as well, and emphasizes the importance of understanding service within a cultural context. Cross-Cultural Solutions volunteers “work to empower people with the skills and knowledge they need to become self-sufficient.”

Special Events

Because students' lives do not always neatly conform to semesters, time spent away from family, or because family-school-jobs conflicts arise, it is useful to offer limited-time events for service learning. Such events can be facilitated through a student organization and/or for a specific day. Such events might include:

- ✓ Participation in the International Day for Disaster Reduction (October), World Meteorological Day (March), Fire Prevention Week (October), and so forth. Events might include bringing in guest speakers, sponsoring elementary school poster contests, hosting an educational booth in the student union, and a town meeting.
- ✓ Working cooperatively with local meteorologists to promote Tornado Awareness or Hurricane Awareness. A number of television stations promote community forums, including ones that are storm-related.

Project Design Considerations

Planning service-learning projects requires attention to program design and sound pedagogy. The following are suggested principles to consider:

Design Principles

Program Considerations

An effective and sustained program:

1. Engages people in responsible and challenging actions for the common good
2. Provides structured opportunities for people to reflect critically on their service experience
3. Articulates clear service and learning goals for everyone involved
4. Allows for those with needs to define those needs
5. Clarifies the responsibilities of each person and organization involved
6. Matches service providers and service needs through a process that recognizes changing circumstances
7. Expects genuine, active, and sustained organizational commitment
8. Includes training, supervision, monitoring, support, recognition, and evaluation to meet service and learning goals
9. Insures that the time commitment for service and learning is flexible, appropriate, and in the best interest of all involved.
10. Is committed to program participation by and with diverse populations. (Honnet and Poulson, 1989)

Pedagogical Considerations

1. Academic credit is for learning, not for service

2. Do not compromise academic rigor
3. Set learning goals for students
4. Establish criteria for the selection of community service placements
5. Provide educationally sound mechanisms to harvest the community learning experience
6. Provide support for students to learn how to harvest the community learning experience
7. Minimize the distinction between the student's community learning role and the classroom learning role
8. Re-think the faculty instruction role.
9. Be prepared for uncertainty and variation in student learning outcomes
10. Maximize the community responsibility orientation of the course
(Howard, 1993)

Specification of learning objectives

Service-learning is one form of experiential education. Its pedagogy rests on principles established by Dewey and other experiential learning theorists in the last century (Furco, 1996). Learning takes place through a cycle of action and reflection, not simply through the ability to recall what has been learned through lecture and associated reading. Experience enhances understanding and leads to more effective action (Eyler and Giles, 1999).

Many types of learning can occur with service-learning. The most frequently expressed goals of service-learning programs include: personal and interpersonal development, understanding and application of subject matter learning, critical thinking and perspective transformation, and citizenship and values (Giles, Honnet, and Migliore, 1991). The overall goals for the course will help dictate the selection of specific learning objectives.

The necessary link between service and learning is the practice of *reflection*. Systematic reflection and integration of service experiences with academic learning is the necessary ingredient to successful service-learning courses. A number of good resources exist for the practice of reflection. A good one to review is in the Colorado State University Service-Learning Faculty Manual at <http://www.colostate.edu/Depts/SLVP/sipman.htm>.

Developing Community Partnerships

The success of service-learning initiatives is dependent upon the quality of relationships established between the college or university and the community. The community provides the specific context for learning, and they have their own goals for participation. Community goals and priorities must be considered in the design of service-learning ventures. The relationship to develop is one of reciprocity and partnership, not one of dependency or hierarchy. It is often a significant role reversal for faculty to assume the position of learner, with the community partner as expert and teacher. Community

partners should be invited to participate in reflections, presentations, and other related service-learning activities.

Best Practices

Models of best practices can be found through the AAHE, Campus Compact and the National Society for Experiential Education, which surveyed 27 institutions for their guidelines. Links to these surveys can be found at <http://www.aahe.org/service/models.htm>. Overall, the most commonly identified characteristics of these model institutions included:

- ✓ Provide a continuum of service learning opportunities
- ✓ Reciprocal learning.
- ✓ Teach sensitivity to other cultures.
- ✓ Teach leadership skills as part of a service learning program.
- ✓ Knowledge development with the community as the knowledge base/source.
- ✓ Link to the Institutional Mission.
- ✓ Promote and view the service as a partnership with the community.
- ✓ Solicit high-level administrative support.
- ✓ Solicit budgetary support. Stanford has a three-story building dedicated to service learning. Brown University has a \$1 million budget, with half from an endowment and half from fund-raising.
- ✓ Link scholarship and research to service learning.
- ✓ Offer stipends to faculty including travel to conferences along with participating in campus workshops.
- ✓ Convene a Service Learning Advisory Committee.
- ✓ Conduct annual faculty/student/agency surveys to determine needs and issues.
- ✓ Educational needs drive service learning rather than community needs driving service learning.
- ✓ Seek external funding (Kellogg Foundation for example; Faculty Development Funds; Campus Compact).
- ✓ Prepare a Guidebook for all involved parties.
- ✓ Recognize by the administration of those involved, especially those that administer such programs or efforts.

Implementation

Recruitment and retention

Consider offering a fair or an in-class session to educate potential participants about service learning. Gonzaga University's student participant profile indicates a range of characteristics including little or extensive volunteer experience. In addition, Gonzaga students are described as energetic and eager to learn as well as being interested in learning about possible careers through service learning. Actively seeking these types of students may lead to more effective outcomes for students and agencies.

Typical concerns

Are students, agencies and programs ready for a service learning commitment? Realizing that students and agencies come to service learning with a range of expectations, it's important to establish some basic parameters. California State University-Fresno, for example, outlines student rights and responsibilities (<http://www.csufresno.edu/scs/rr.html>). Among those they list include student rights to be adequately prepared and oriented, to have a safe working environment that is also challenging, and to receive an evaluation. Student responsibilities include meeting deadlines, behaving appropriately, and meeting commitments.

A second concern is management of large-scale and/or wide-spread service learning efforts across the university. Some institutions task a single faculty member within a program to manage service learning (such as internships and practica) while others appoint committees. Consider Gonzaga University's Service Learning Committee (http://www.gonzaga.edu/service/gvs/service_learning/) which has as its mission, promoting service learning across the university, assisting service-learning faculty, developing and maintaining courses, and supporting students in service.

Administrative requirements: insurance, safety, and liability

In the AAHE et al. survey referenced above, most universities reported that few if any legal issues, including liability, surfaced. Most institutions handled liability issues similarly to other courses. Any guidelines created should be done with the assistance of the Legal Counsel for the college or university.

Indiana University-Purdue University offers this caveat: "IUPUI and any office or program thereof, is not responsible for prequalifying or training students for any service activity that may take place within or beyond the boundaries of the University, and makes no representation as to the abilities or qualifications of IUPUI students. Screening as to suitability for service work and training for that work is the sole responsibility of the organization with whom students volunteer. Since IUPUI does not exercise any supervision or control over student volunteers, liability for their actions at the agency is not imputable to IUPUI, but rather is a matter between the agency and individual students. IUPUI only provides liability insurance to protect students from claims arising out of activities undertaken for course credit, practicum or degree requirements, such as nursing students or social work interns. Note that students who undertake community service activities on their own or in connection with service learning courses are not covered under the University policy."

Brown University accepts limited liability for their programs but report no legal issues have surfaced.

Strategies for success

A number of institutions offer orientations, fairs, and class sessions to promote the idea of service learning, to educate students on how to participate, and to reduce the amount of one-on-one counseling initially required. Gonzaga University requires students to develop a Course Learning Objectives Contract (<http://www.gonzaga.edu/service/gvs/service/learning/start.htm>).

It is also a good idea to prepare students, perhaps with readings and/or workshop sessions, for the types of placements they will experience. Gonzaga University requires students to read about vulnerable populations and emphasizes basic ethical values, strategies for building rapport and maintain confidentiality, and the importance of respecting others' points of views and ways of life.

For students in emergency management, the International Association of Emergency Managers provides a set of ethical guidelines that could be incorporated into service learning projects. These ethical values are respect, commitment and professionalism (link to <http://www.iaem.com/ethics.html>).

Evaluation and Assessment

Performance measurement

If a grade is assigned (including pass/fail options), the parameters and expectations for student performance must be specified in advance. These might include a minimal set of hours, participation in reflection sessions, logging service hours, maintaining a journal, writing a reflection paper, or producing a document/project. The typical standards of excellence that are used for classroom work will suffice here, though it is advisable to consider both the content produced as well as the experiential process. For example, if a student produces a quality product but has not reflected on service as a learning experience, should the student receive all available points?

Outcome assessment

The purpose of outcome assessment is to measure effects of the program against the program's stated goals. Outcome assessment in service-learning has two purposes:

1. Assessment of the value of services performed from the community perspective, and
2. Assessment of the effectiveness of the educational experience in relation to student learning and development.

A variety of quantitative and qualitative constructs for measuring program outcomes are available for use. Potential sources for outcome data include the agency or service setting, beneficiaries of service, faculty, students, and so forth.

Because universities and colleges must meet accreditation requirements, it is appropriate that service-learning be treated the same as other courses for credit. Thus, specifying

student learning outcomes is required. To initiate such learning outcomes, begin with the phrase, “as a result of this experience, students will...” Consider tying the student outcomes to the program and institutional mission statements, but verify that the outcomes are measurable and attainable.

Program Assessment

Universities in the AAHE et al. survey indicated that annual assessment is critical to continued success.

Agencies where students may be placed should be prepared, performance in the setting should be monitored, and outcomes should be assessed. Gonzaga University offers guidelines for agencies at their web site, http://www.gonzaga.edu/service/gvs/service_learning/most.htm. Among those guidelines, agencies should determine the student’s level of interest and commitment to service, review the students’ learning objectives, should orient the student to a typical day, ask for feedback, and be realistic. In addition, the agency should orient the student to the agency’s goals and objectives, clients, history, and to their expectations of the student.

References

- Ehrlich, T. (1996) "Foreword" in Barbara Jacoby and Associates, *Service-Learning in Higher Education: Concepts and Practices*. San Francisco, CA: Jossey-Bass, p. xi-xii.
- Eyler, J., Dwight E. Giles, J., & Schmiede, A. (1996). *A Practitioner's Guide to Reflection in Service-Learning: Student Voices and Reflection*. Nashville, TN: Vanderbilt University.
- Eyler, J., & Dwight E. Giles, J. (1999). *Where's the Learning in Service-Learning?* San Francisco: Jossey-Bass.
- Furco, A. (1996) "Service-Learning: A Balanced Approach to Experiential Education." In B. Taylor (ed.), *Expanding Boundaries: Serving and Learning*. Washington, D.C.: Corporation for National Service.
- Giles, D.E., Jr., Honnet, E.P., and Migliore, S (eds.). (1991). *Research Agenda for Combining Service and Learning in the 1990s*. Raleigh, N.C.: National Society for Experiential Education.
- Jacoby, B., & Associates. (1996). *Service-Learning in Higher Education*. San Francisco: Jossey-Bass.
- Rhoads, R. A. (1997). *Community Service and Higher Learning: Explorations of the Caring Self*. Albany: State University of New York Press.
- Stanton, T. K., Dwight E. Giles, J., & Cruz, N. I. (1999). *Service-Learning: A Movement's Pioneers Reflect on its Origins, Practice, and Future*. San Francisco: Jossey-Bass.
- Sykes, G. (1990). Learning to Teach with Cases. *Journal of Policy Analysis and Management*, 9(2), 297-302.
- Waterman, A. S. (Ed.). (1997). *Service Learning: Applications from the Research*. Mahwah, NJ: Lawrence Erlbaum Associates.

Journals

- Michigan Journal of Community Service Learning*, OCSL Press, University of Michigan, 1024 Hill Street, Ann Arbor, MI 48109-3310
<http://www.umich.edu/~mjcs/>
- Journal of College Student Development*, Student Development Office, Appalachian State University, Boone, NC 28608
<http://www.jcsd.appstate.edu/>

Links

American Association of Higher Education, Service Learning Project
<http://www.aahe.org/service>

Break Away: The Alternative Break Connection
<http://www.alternativebreaks.org/>

Campus Compact
<http://www.compact.org>

Campus Outreach Opportunity League – COOL!
<http://www.COOL2SERVE.org>

Corporation for National and Community Service
<http://www.cns.gov>

Institute on Philanthropy and Voluntary Service (Summer Institute)
<http://www.ipvs.org>

National Service Learning Clearinghouse
<http://www.servicelearning.org/>

National Service Learning Exchange
<http://www.nslexchange.org/>

Robin's Guide To: College and University Service-Learning Programs Including Links to Online Course Lists and Syllabi. This link includes 368 program listings, and 31 online syllabi, as well as lists for Graduate Service-Learning Programs.
<http://csf.colorado.edu/sl/academic.html>

Service-Learning, The Home of Service-Learning on the World Wide Web
<http://csf.colorado.edu/sl/>

Stories of service learning
<http://www.guidancechannel.com>

The Big Dummy's Guide to Service-Learning
<http://www.fiu.edu/~time4chg/Library/bigdummy.html>

Appendix A: Examples of Service Learning Projects

Jim Davis, B.S. in Emergency Management Student at Jacksonville State University, Project for EM 331 Populations at Risk

Pittsylvania County is not unlike any other counties or cities in the US. We have populations that are at risk and as Emergency Managers it is our job to seek these people out and assist them with ways to reduce their vulnerabilities. One concern that I had as the Emergency Manager was the Deaf Community. How do they receive alerts to severe weather watches, or actual warnings as they are activated? My information revealed that unless they are able to watch the television and either read the EAS message, they generally do not know of the alert. That was not good enough for me. I contacted my neighboring jurisdiction (City of Danville, VA), and we decided to come up with a joint project called "First Alert". We contacted the local Speech and Hearing Center and they directed to us the local Community College whereby we met Dr. Carl Amos. Dr. Amos is the educational coordinator for Deaf Students who are wishing to take college courses and assisting them with interpreters. Through his efforts, Dr. Amos was able to promote our project to the State level and received authorization for funding for the Deaf Community for Pittsylvania County and the City of Danville. The funding will purchase at 100% weather alert radios with specialized kits to include a pillow vibrator and a flashing strobe light. This unit has a LCD read out that notifies the recipient of the type of alert and we are instructing them to turn on their Televisions and watch for the EAS alert.

By doing this, the Deaf Community can receive warnings and alerts and implement their emergency action plans. This quick action could possibly save their own life. Maybe the importance of this project can be visualized with other agencies, civic groups, or bringing the message of the system to the front will reduce someone else's vulnerability. Even hard of hearing individuals can benefit from this.

-Jim Davis, Pittsylvania County EMA, Virginia

Kay McKinney, a data entry mapper for Calhoun County EMA in Alabama, created a web site addition for pets and disaster (<http://www.kays.homestead.com/pets~ns4.html>).

Jason Milhollin, a deputy sheriff in Douglas County, Georgia, visited local schools and delivered disaster preparedness presentations using FEMA for Kids web site material (<http://www.fema.gov/kids>).

Emergency management graduate students at Jacksonville State University revised the local Red Cross disaster plan. In doing so, they learned Red Cross policies, worked with state and local Red Cross personnel, responded to local house fires, trained in Red Cross procedures, and interviewed local emergency management agency personnel. As part of the revision, they practiced hazards analysis and risk assessment skills and produced a revised document that will be used locally.