

## V. NONSTRUCTURAL FIRES

Millions of fires occur annually in the United States. Most of these fires involve single and multifamily dwellings and commercial buildings. There are many fires, however, which are nonstructural, and cause significant loss to property, wildlife, and natural resources. Some of these fires may pose life safety problems. The major types of non-structural fires include wildlands, forests, mass transit systems, ships, and bulk petroleum storage facilities.

Wildland and forest fires are generally seasonal in nature. They may be caused by arson, negligence, or weather conditions. The major causes of mass transit, shipboard, and bulk petroleum storage fires are human error and negligence.

Regardless of the causes of nonstructural fires, communities must develop prefire plans. These plans should consider the many public and private resources available.

Training of personnel is an essential preplanning activity. Many communities have developed wildland fire training programs. The San Jose, California Fire Department, which has 78.13 square miles of wildlands in an expanded service area of 210 square miles and a population of 730,000, has developed an annual in-service wildland exercise. This exercise is conducted for all station personnel prior to the May-October wildland fire season. The training includes response, firefighter roles and responsibilities, types of fires, and new procedures. An additional eight-hour course is provided for those personnel assigned wildland emergency first response. This supplemental training course focuses on new tools and techniques. The course emphasizes the importance of teamwork among responding fire companies.

Due to the number of wildland calls experienced, the San Jose Fire Department has developed a multi-alarm, "tier-system" response. The system involves a progression of applications of available resources depending on the severity of the incident. The first-in unit makes the determination that additional units are needed. Basic equipment includes four-wheel drive vehicles, patrol tankers, and pumpers. Supplemental resources are provided by local organizations and the California Division of Forestry. Air surveillance is provided by the California Highway Patrol.

The San Jose Fire Department relies on a commercial wildland fire training manual. Both the Los Angeles and Los Angeles County Fire Departments have developed manuals for wildland fire training.

A second type of nonstructural fire involves mass transit systems. These systems can pose difficult firefighting and life safety problems. To improve their response to and management of mass transit systems, many communities have developed extensive preplanning efforts. Local communities in the San Francisco Bay area have preplanned fire operations since the opening of the Bay Area Rapid Transit (BART) Transbay Tube in 1972. The BART extends 3.6 miles under the San Francisco Bay between the cities of San Francisco and Oakland.

The San Francisco Fire Department, which has a response area of 49 square miles and a day population of one million, conducts monthly simulated exercises. These exercises involve a full first alarm assignment including three engine companies, two truck companies, one heavy rescue squad, and one attack hose tender. A communications vehicle (mobile command post) and an assistant and battalion chief also respond.

Training exercises on the BART are reviewed and evaluated. Additional preplanning is provided through weekly "walk-throughs" of the system by assistant and battalion chiefs. Semiannual mass casualty BART exercises are also conducted.

The response plan developed for the BART includes several components. These components are rescue, fire operations, logistics, and communications.

Many individuals and organizations are available to provide other resources to local communities. State fire marshals can assist in prevention and investigation while state training directors can provide instruction.

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### A. Training Programs

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Alabama	Hoover Fire Department 1581 Patton Chapel Road Hoover, AL 35226 (205) 823-4060	T. E. Bradley Fire Chief	50	23,000
	Tuscaloosa Fire Department 2527 Sixth Street Tuscaloosa, AL 35401 (205) 349-2380	J. L. Watts Fire Chief	35	73,228
Arizona	Tucson Fire Department P.O. Box 27210 Tucson, AZ 85720 (602) 791-4511	Donald P. Canterbury Inspector	112	400,000
California	Los Angeles Fire Department 200 North Main Street Los Angeles, CA 90012 (213) 485-6100	Jack Bennett Assistant Chief	467.63	3,000,000
	Los Angeles County Fire Department 1320 North Eastern Avenue Los Angeles, CA 90063 (213) 267-2485	Stephen Sherrill Chief of Operations	2,190	2,200,000
	San Francisco Fire Department 260 Golden Gate Avenue San Francisco, CA 94102 (415) 861-8000	Frank Dunn Lieutenant	49	690,000* 1,000,000**
	San Jose Fire Department 476 Park Avenue San Jose, CA 95112 (408) 277-4251	Mike Jonasson Captain	210 <sup>+</sup>	730,000 <sup>+</sup>

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\*Night

\*\*Day

<sup>+</sup>Expanded service area

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### A. Training Programs

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Colorado	Barcroft Fire Protection District 3301 South Field Street Lakewood, CO 80227 (303) 989-4307	Bob Porter Assistant Chief	80	155,000
	Boulder Fire Department P.O. Box 791 Boulder, CO 80306 (303) 441-3351	Larry Stern Assistant Chief	20	80,000
	Castlewood Fire Protection District 7281 East Dry Creek Road Englewood, CO 80112 (303) 770-3720	Bob May Training Officer	40	40,000* 100,000**
	Lakewood Fire Department 1545 Robb Street Lakewood, CO 80215 (303) 237-9588	Francis Brehm Assistant Chief	30	110,000
Connecticut	Branford Fire Department 45 North Main Street Branford, CT 06405 (203) 488-7266	Peter Mullen Deputy Chief	27.9	29,000
	Westport Fire Department 6 Wilton Road Westport, CT 06880 (203) 227-1511	David Sanford Deputy Chief	22.7	31,000
	Willimantic Fire Department 13 Bank Street Willimantic, CT 06226 (203) 423-2642	Charles J. Monzillo Fire Chief	4.5	15,000
Florida	Hollywood Fire Department 3401 Hollywood Boulevard Hollywood, FL 33022 (305) 921-3448	George Geiser Division Chief	33	130,000

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Florida (continued)	Metro-Dade County Fire Department 6000 S.W. 87th Avenue Miami, FL 33173 (305) 596-8600	Charles E. Sowers Division Chief, EMS	895	1,000,000
Illinois	Libertyville Fire Department 118 West Cook Avenue Libertyville, IL 60048 (312) 362-5664	John Reitman Fire Chief	34	30,050
Iowa	Webster City Fire Department 812 Des Moines Street Webster City, IA 50595 (515) 832-2431	Terry Johnston Fire Chief	77	9,000
Kansas	Wichita Fire Department City Hall, Twelfth Floor 455 North Main Street Wichita, KS 67202 (316) 268-4451	Stuart Ciccone Captain, Training Division	110	285,000
Massachusetts	Pembroke Fire Department Fire Headquarters Center Street Pembroke, MA, 02359 (617) 293-2300	Robert Silva Fire Investigator	23	13,000
	Plymouth Fire Department 114 Sandwich Street Plymouth, MA 02360 (617) 746-2212	Arthur H. Lamb Fire Chief	109	38,000
	Princeton Fire Department 180 Beman Road East Princeton, MA 01541 (617) 464-2707	Leo Hurme Fire Chief	35.5	4,000
	Sandwich Fire Department P.O. Box 303 Sandwich, MA 02563 (617) 888-0525	Fred Alvesi Fire Chief	42	9,500

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<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Missouri	Carthage Fire Department 401 West Chestnut Street P.O. Box 611 Carthage, MO 64836 (417) 358-2232	Don Simmons Fire Chief	100	11,000
	Fort Osage Fire Protection District 319 South Central Buckner, MO 64016 (816) 249-3636	Richard Lehmann Fire Chief	110	9,800
	Springfield Fire Department 235 North Kimbrough Avenue Springfield, MO 65804 (417) 864-1046	Gene Nichols Chief, Fire Operations and Training	78	170,000
Nebraska	David City Volunteer Fire Department P.O. Box 254 David City, NE 68632 (402) 367-3530	Bill Ortmeir Fire Chief	55	5,100
	Gering Volunteer Fire Department 1625 Twelfth Street Gering, NE 69341 (308) 436-2441	Bob Larsen Fire Chief	126	9,000
Nevada	Carson City Fire Department 111 North Curry Street Carson City, NV 89701 (702) 887-2200	Bernie Sease Fire Chief	146	33,000
North Carolina	Raleigh Fire Department 220 South Dawson Street Raleigh, NC 27601 (919) 755-6360	R. E. Keith Fire Chief	50	160,000
Ohio	Cincinnati Fire Department 430 Central Avenue Cincinnati, OH 45202 (513) 352-2315	Robert G. Rathman Assistant Chief	78	385,000

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<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Ohio (continued)	Columbus Fire Division 200 Greenlawn Avenue Columbus, OH 43223 (614) 222-7384	H. J. Dutko Battalion Chief, EMS	171	670,000
Oklahoma	Oklahoma City Fire Department 820 N.W. Fifth Street Oklahoma City, OK 73107 (405) 235-3314	Bob Mowles Chief Training Officer	640	410,000
Oregon	Jackson County Fire District 3 8333 Agate Road Central Point, OR 97503 (503) 826-7100	William Anson Fire Chief	156	20,000
	Multnomah County Fire District 10 P.O. Box 16368 Portland, OR 97216 (503) 761-7120	Len Malmquist Fire Inspector	75.2	380,000
	Ontario Fire Department and Rural Fire District 7-302 444 S.W. Fourth Street Ontario, OR 97914 (503) 889-7687	Larry Roberts Fire Chief	59	18,000
	Tualatin Rural Fire Protection District P.O. Box 127 Tualatin, OR 97062 (503) 682-2601	Douglas Krebs Executive Assistant Chief	104	100,000
Pennsylvania	Philadelphia Fire Department Third and Spring Garden Streets Philadelphia, PA 19123 (215) 686-4700	Joseph R. Rizzo Fire Commissioner	129	1,688,210
Rhode Island	Providence Fire Department 209 Fountain Street Providence, RI 02902 (401) 421-1293	Michael F. Moise Fire Chief	18.91	170,000

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### A. Training Programs

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Virginia	Chesterfield County Fire Department P.O. Box 40 Chesterfield, VA 23832 (804) 748-1360	Roy Patrick Chief of Administra- tive Services	446	141,000
Washington	Spokane Fire Department West 44 Riverside Avenue Spokane, WA 99201 (509) 456-2694	Richard Sweetland Deputy Chief	57	180,000
Wisconsin	Green Bay Fire Department 501 South Washington Street Green Bay, WI 54301 (414) 497-3777	Gerald Selissen Fire Chief	45	88,000



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### B. Response Teams

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Arkansas	El Dorado Fire Department 200 North West Avenue El Dorado, AR 71730 (501) 863-8129	Jesse S. Cheek Fire Chief	16	26,350
California	Los Angeles County Fire Department 1320 North Eastern Avenue Los Angeles, CA 90063 (213) 267-2485	Stephen Sherrill Chief of Operations	2,190	2,200,000
	San Jose Fire Department 476 Park Avenue San Jose, CA 95112 (408) 277-4251	Mike Jonasson Captain	210*	730,000*
Florida	Miami Fire Department P.O. Box 330708 Miami, FL 33133 (305) 579-6230	Ron Coleman Chief, Training Division	34	365,000
Iowa	Mason City Fire Department 350 Fifth Street, S.W. Mason City, IA 50158 (515) 423-2145	Ronald C. Van Horn Fire Chief	65	31,000
Missouri	Prarie Township Fire Protection District 706 Walnut Street P.O. Box 205 Greenwood, MO 64034 (816) 537-7000	Robert L. Rice Fire Chief	65	10,000
Nevada	Carson City Fire Department 111 North Curry Street Carson City, NV 89701 (402) 887-2200	Bernie Sease Fire Chief	146	33,000
Ohio	Columbus Fire Division 200 Greenlawn Avenue Columbus, OH 43223 (614) 222-7384	H. J. Dutko Battalion Chief, EMS	171	670,000

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Oregon	Klamath Falls Fire Department 143 North Broad Street Klamath Falls, OR 97601 (503) 883-5349	Bruce Caldwell Fire Chief	14	20,000
	Multnomah County Fire District 10 P.O. Box 16368 Portland, OR 97216 (503) 761-7120	Len Malmquist Fire Inspector	75.2	380,000
	Portland Fire Bureau 55 S.W. Ash Street Portland, OR 97204 (503) 248-4375	Bill Hebbert Chief Training Officer	108	380,000
	Tualatin Rural Fire Protection District P.O. Box 127 Tualatin, OR 97062 (503) 682-2601	Douglas Krebs Executive Assistant Chief	104	100,000
Rhode Island	Providence Fire Department 209 Fountain Street Providence, RI 02902 (401) 421-1293	Michael F. Moise Fire Chief	18.91	170,000
Texas	Dallas/Fort Worth Regional Airport Department of Public Safety P.O. Drawer DFW Dallas/Fort Worth Airport, TX 75621 (214) 574-5560	James W. Woods Associate Director/ Fire Chief	26.5	25,000

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### C. Response Plans

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Alabama	Birmingham Fire and Rescue Service 1808 Seventh Avenue, North Birmingham, AL 35235 (205) 323-8404	O. N. Gallant Fire Chief	100	275,000
California	Los Angeles Fire Department 200 North Main Street Los Angeles, CA 90012 (213) 485-6100	Jack Bennett Assistant Chief	467.63	3,000,000
	Los Angeles County Fire Department 1320 North Eastern Avenue Los Angeles, CA 90063 (213) 267-2485	Stephen Sherrill Chief of Operations	2,190	2,200,000
	San Clemente Fire Department 100 Avenida Presidio San Clemente, CA 92672 (714) 492-5105	Ronny Coleman Fire Chief	15	27,000
	San Francisco Fire Department 260 Golden Gate Avenue San Francisco, CA 94102 (415) 861-8000	Frank Dunn Lieutenant	49	690,000* 1,000,000**
	San Jose Fire Department 476 Park Avenue San Jose, CA 95112 (408) 277-4251	Mike Jonasson Captain	210 <sup>+</sup>	730,000 <sup>+</sup>
Florida	Hollywood Fire Department 3401 Hollywood Boulevard Hollywood, FL 33022 (305) 921-3448	George Geiser Division Chief	33	130,000

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<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Massachusetts	Pembroke Fire Department Fire Headquarters Center Street Pembroke, MA 02359 (617) 293-2300	Robert Silva Fire Investigator	23	13,000
	Plymouth Fire Department 114 Sandwich Street Plymouth, MA 02360 (617) 746-2212	Arthur H. Lamb Fire Chief	109	38,000
Missouri	Fort Osage Fire Protection District 319 South Central Buckner, MO 64016 (816) 249-3636	Richard Lehmann Fire Chief	110	9,800
	Prarie Township Fire Protection District 706 Walnut Street P.O. Box 205 Greenwood, MO 64034 (816) 537-7000	Robert L. Rice Fire Chief	65	10,000
North Carolina	Raleigh Fire Department 220 South Dawson Street Raleigh, NC 27601 (919) 755-6360	R. E. Keith Fire Chief	50	160,000
Ohio	Columbus Fire Division 200 Greenlawn Avenue Columbus, OH 43223 (614) 222-7384	H. J. Dutko Battalion Chief, EMS	171	670,000
Oregon	Jackson County Fire District 3 8333 Agate Road Central Point, OR 97503 (503) 826-7100	William Anson Fire Chief	156	20,000
	Portland Fire Bureau 55 S.W. Ash Street Portland, OR 97204 (503) 248-4375	Bill Hebbert Chief Training Officer	108	380,000

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### C. Response Plans

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Oregon (continued)	Tualatin Rural Fire Protection District P.O. Box 127 Tualatin, OR 97062 (503) 682-2601	Douglas Krebs Executive Assistant Chief	104	100,000
Pennsylvania	Philadelphia Fire Department Third & Spring Garden Streets Philadelphia, PA 19123 (215) 686-4700	Joseph R. Rizzo Fire Commissioner	129	1,688,210
Rhode Island	North Kingston Fire Department 8150 Post Road North Kingston, RI 02852 (401) 294-3344	Thomas L. Aylward Fire Chief	44	29,000
Texas	Dallas/Ft. Worth Regional Airport Department of Public Safety P.O. Drawer DFW Dallas/Ft. Worth Airport, TX 75621 (214) 574-5560	James W. Woods Associate Director/ Fire Chief	26.5	25,000
Virginia	Alexandria Fire Department 900 Second Street Alexandria, VA 22314 (703) 838-4600	William Brown Chief of Operations	15	110,000

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### D. Training Manuals

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Arkansas	El Dorado Fire Department 200 North West Avenue El Dorado, AR 71730 (501) 863-8129	Jesse S. Cheek Fire Chief	16	26,350
California	Los Angeles Fire Department 200 North Main Street Los Angeles, CA 90012 (213) 485-6100	Jack Bennett Assistant Chief	467.63	3,000,000
	Los Angeles County Fire Department 1320 North Eastern Avenue Los Angeles, CA 90063 (213) 267-2485	Stephen Sherrill Chief of Operations	2,190	2,200,000
Colorado	Boulder Fire Department P.O. Box 791 Boulder, CO 80306 (303) 441-3351	Larry Stern Assistant Chief	20	80,000
Massachusetts	Seekonk Fire Department Town Hall 100 Peck Street Seekonk, MA 02771 (617) 336-8510	John E. Shaw Fire Chief	13	12,000
Ohio	Columbus Fire Division 200 Greenlawn Avenue Columbus, OH 43223 (614) 222-7384	H. J. Dutko Battalion Chief, EMS	171	670,000
Wisconsin	Green Bay Fire Department 501 South Washington Street Green Bay, WI 54301 (414) 497-3777	Gerald Selissen Fire Chief	45	88,000

## V. NONSTRUCTURAL FIRES

### E. Experienced Persons and Organizations

<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
Alabama	Smith, W. W. Chief of Training	Alabama State Fire College 2015 McFarland Boulevard Tuscaloosa, AL 35401 (205) 348-5241	Training
	Thornell, Roy State Fire Marshal	Fire Marshal's Office 445 South McDonough Street Montgomery, AL 36130 (205) 832-5844	Prevention Investigation
Alaska	Hagevig, William A. Supervisor of Fire Service Training	Alaska Department of Education Office of Adult and Continuing Education Pouch F, State Office Building Juneau, AK 99811 (904) 465-4685	Training
	Hendrie, Ronald State Fire Marshal	Suite 11 5333 Fairbanks Street Anchorage, AK 99502 (907) 272-2406	Prevention Investigation
Arizona	Hoey, Herb Deputy State Fire Marshal/State Training Director	Office of State Fire Marshal P.O. Box 19070 1601 West Jefferson Street Phoenix, AZ 85005 (602) 255-5062	Training
	Saunders, B. Paul State Fire Marshal	Office of State Fire Marshal P.O. Box 19070 Phoenix, AZ 85005 (602) 255-5062	Prevention Investigation
Arkansas	Benton, Paul S. Director	Arkansas Fire Academy P.O. Box 3048 East Camden, AR 71701 (501) 574-1521	Training
	Carnahan, Ray E. State Fire Marshal	3 Natural Research Drive P.O. Box 5901 Little Rock, AR 72215 (501) 224-3103	Prevention Investigation

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### **E. Experienced Persons and Organizations**

<u><b>State</b></u>	<u><b>Contact</b></u>	<u><b>Agency</b></u>	<u><b>Areas of Expertise</b></u>
California	Bent, Edward W. Supervisor	Fire Service Training and Education Programs Office of State Fire Marshal Suite 800 7171 Bowling Drive Sacramento, CA 95823 (916) 322-2370	Training
	Favro, Philip C. State Fire Marshal	Office of State Fire Marshal Suite 800 7171 Bowling Drive Sacramento, CA 95823 (916) 322-2370	Prevention Investigation
Colorado	Leward, Joe Manager	Fire Service Training State of Colorado 12600 West Sixth Avenue Golden, CO 80401 (303) 988-6160, Ext. 320	Training
Connecticut	Forst, Lester State Fire Marshal	Bureau of State Fire Marshal 294 Colony Street Meriden, CT 06450 (203) 238-6623	Prevention Investigation
	Luther, George State Director of Fire Training	294 Colony Street Meriden, CT 06450 (203) 238-6587	Training
Delaware	Amabili, Louis J. Director	Delaware State Fire School Rural Delivery 2, Box 166 Dover, DE 19901 (302) 736-4773	Training
	Roy, J. Benjamin, Jr. State Fire Marshal	Fire Marshal's Office P.O. Box 109 Dover, DE 19901 (302) 736-4393	Prevention Investigation



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### E. Experienced Persons and Organizations

<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
District of Columbia	Young, Miland R. Assistant Chief, Training	Andrews Air Force Base 1776 CES-DEF Washington, DC 20331 (301) 981-4985	Aircraft Firefighting
Florida	DeWar, D. R. Bureau Chief	Bureau of Fire Standards and Training 1501 S.W. Broadway Ocala, FL 32670 (904) 732-0526	Training
	Gunter, Bill State Fire Marshal	Gaines Street Room 447 Laines Building Tallahassee, FL 32301 (904) 488-8368	Prevention Investigation
Georgia	Gore, John R., Jr. State Fire Marshal	State Fire Marshal's Office Martin Luther King, Jr. Drive, S.W. Atlanta, GA 30334 (404) 656-2064	Prevention Investigation
	Hobgood, Emmett State Training Director	Georgia Fire Academy 1112 Clay Street Marietta, GA 30060 (404) 424-7315	Training
Idaho	Nettinga, Sam State Fire Marshal	317 Main Street Boise, ID 83720 (208) 384-2327	Prevention Investigation
	Tyree, Tom Coordinator	Fire Service Training 1910 College Boulevard Boise, ID 83725 (208) 385-3303	Training

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<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
Illinois	Carter, Jack Henry State Fire Marshal	Office of the State Fire Marshal 3150 Executive Park Drive Springfield, IL 62706 (217) 785-4143	Prevention Investigation
	Monigold, Gerald E. Director	Illinois Fire Service Institute 301 South Wright Champaign, IL 61820 (217) 333-3800	Training
Indiana	Goodwin, William State Fire Marshal/ State Training Director	502 State Office Building 100 North Senate Avenue Indianapolis, IN 46204 (317) 232-2222	Prevention Investigation Training
Iowa	Johnson, Wilbur R. State Fire Marshal	Wallace State Office Building 523 East Ninth and Grand Des Moines, IA 50319 (515) 281-5821	Prevention Investigation
	Patterson, Robert A. Instructor	Fire Service Extension Iowa State University Fire Service Building Ames, IA 50011 (515) 294-6817	Training
Kansas	Redmon, Edward C. State Fire Marshal	Mills Building Suite 203 109 West Ninth Street Topeka, KS 66612 (913) 296-3401	Prevention Investigation
	Thomas, Max M. Director, Fire Service Training	Division of Continuing Education University of Kansas 645 New Hampshire Lawrence, KS 66044 (913) 864-4467	Training

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<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
Kentucky	Brown, Robert L. State Training Director/ Supervisor	Public Service Occupations Unit Twenty-First Floor Capital Plaza Tower Mero Street Frankfurt, KY 40601 (502) 564-2326	Training
	Horn, G. F. State Fire Marshal	Department of Housing, Buildings, & Construction The 127 Building Highway 127, South Frankfurt, KY 40601 (502) 564-3626	Prevention Investigation
Louisiana	Herring, Carrol L. Director, Firemen Training Program	Louisiana State University Pleasant Hall Baton Rouge, LA 70803 (504) 766-0600	Training
	Kelly, Daniel L. State Fire Marshal	325 Loyola Avenue New Orleans, LA 70112 (504) 568-5500	Prevention Investigation
Maine	Bisset, Don State Fire Marshal	Department of Public Safety 99 Western Avenue Augusta, ME 04333 (207) 289-2481	Prevention Investigation
	Roderick, Francis E. Consultant	Fire Service Training Education Building, Station 23 Augusta, ME 04333 (207) 289-3367	Training
Maryland	Hoglund, John W. Director	Maryland Fire and Rescue Institute University of Maryland College Park, MD 20472 (301) 454-2416	Training
	Robertson, James C. State Fire Marshal	301 West Preston Street Room 1010 Baltimore, MD 21201 (301) 383-2520	Prevention Investigation

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<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
Massachusetts	Donovan, Joseph L. Chief of Fire Training	Massachusetts Firefighting Academy 59 Horsepond Road Sudbury, MA 01776 (617) 443-8926	Training
	O'Keefe, Joseph A. State Fire Marshal	Department of Public Safety 1010 Commonwealth Avenue Boston, MA 02215 (617) 566-4500	Prevention Investigation
Michigan	Alber, Philip K. Executive Secretary	Michigan Firefighters Training Council 7150 Harris Drive Lansing, MI 48913 (517) 322-1922	Training
	Rucinski, William R. State Fire Marshal	Department of State Police 7150 Harris Drive Lansing, MI 48913 (517) 322-1924	Prevention Investigation
Minnesota	Keiper, Cleo L. Lead Instructor	Minnesota Fire/Rescue Service Training Minnesota Department of Education Capitol Square Building Room 533 550 Cedar Street St. Paul, MN 55101 (612) 296-6516	Training
	Werner, Wes State Fire Marshal	1246 University Avenue St. Paul, MN 55104 (612) 296-7641	Prevention Investigation
Mississippi	Dale, George State Fire Marshal	P.O. Box 79 Walter Sillers Building Jackson, MS 39205 (601) 354-7711	Prevention Investigation
	Hart, James S., Jr. Director	State Fire Academy Route 10, Box 295 Jackson, MS 39208 (601) 932-2444	Training

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<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
Missouri	Helbig, James J. State Fire Marshal	Missouri State Fire Marshal's Office 621 East Capitol P.O. Box 844 Jefferson City, MO 65102 (314) 751-2930	Prevention Investigation
	Westhoff, Bill, Jr. Coordinator, Fire Service Training	1001 Ashland Gravel Road Columbia, MO 65211 (314) 882-4735	Training
Montana	Bolstad, Jens Training Coordinator	Montana Fire Service Training School 2100 16th Avenue, South Great Falls, MT 59405 (406) 761-7885	Training
	Kelly, Robert Chief	Fire Marshal Bureau 1409 Helena Avenue Helena, MT 59601 (406) 449-2050	Prevention Investigation
Nebraska	Barnett, Wally, Jr. State Fire Marshal	301 Centennial Mall, South Lincoln, NE 68509 (402) 471-2027	Prevention Investigation
	McLaughlin, Wayne Director	Nebraska Fire Service 3721 West Cumming Lincoln, NE 68524 (402) 471-2803	Training
	Wiles, Larry L. Fire Resource Manager	Nebraska Forest Service 1318 Central Avenue Nebraska City, NE 68410 (402) 472-6632 (O) (402) 873-9200 (H)	Wildland Fires
Nevada	Huddleston, T. J. State Fire Marshal	1923 North Carson Street Suite 236 Carson City, NV 98701 (702) 885-4290	Prevention Investigation
	Stephan, Dave Coordinator, State Fire Service Training Program	University of Nevada-Reno Building 3700-STEAD Reno, NV 89507 (702) 972-0785	Training

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### **E. Experienced Persons and Organizations**

<b><u>State</u></b>	<b><u>Contact</u></b>	<b><u>Agency</u></b>	<b><u>Areas of Expertise</u></b>
New Hampshire	Bush, Barry Chief	New Hampshire Fire Service Training, Education, and Research 105 Loudoun Road, Building 3 Concord, NH 03301 (603) 271-2661	Training
	Dewhurst, Raymond State Fire Marshal	New Hampshire Department of Public Safety Hazen Drive Concord, NH 03301 (603) 271-3336	Prevention Investigation
New Jersey	Brummer, August G. Director	New Jersey State Safety Council New Jersey State College Suite 820 50 Park Place Newark, NJ 07102 (201) 642-3123	Training
	McQuade, John State Fire Marshal	Department of Law and Public Safety Division of State Police State House, First Floor Trenton, NJ 08625 (609) 292-3730	Prevention Investigation
New Mexico	Baca, Bob Deputy State Fire Marshal/State Training Director	P.E.R.A. Building P.O. Drawer 1269 Santa Fe, NM 87501 (505) 827-2238	Training
	Garcia, Manuel A. State Fire Marshal	P.E.R.A. Building P.O. Drawer 1269 Santa Fe, NM 87501 (505) 827-2357	Prevention Investigation
New York	Dymes, Donald R. Supervisor	Academy of Fire Science State of New York Office of Prevention & Control P.O. Box K Montour Falls, NY 14865 (607) 535-7136	Training

## V. NONSTRUCTURAL FIRES

### E. Experienced Persons and Organizations

<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
New York (continued)	McGarry, Francis A. State Fire Administrator	Office of Fire Prevention and Control 162 Washington Avenue Albany, NY 12231 (518) 474-6746	Prevention Investigation
North Carolina	Phillippe, D. Keith Director, Fire Training Service	North Carolina Department of Community Colleges Education Building Room 176 Raleigh, NC 27611 (919) 733-3345	Training
North Dakota	Arneson, Vance State Fire Marshal	Lock Box 1292 Bismarck, ND 58502 (701) 224-2434	Prevention Investigation
	Gilman, Donald E. Executive Secretary	North Dakota Firemen's Association 176 First Avenue, NE Beach, ND 58621 (701) 872-4392	Training
Ohio	Sanders, William State Fire Marshal	Ohio Fire Academy Division of State Fire Marshal 8894 East Main Street Reynoldsburg, OH 43068 (614) 864-5510	Prevention Investigation
	Taylor, Robert D. Operations Supervisor	Ohio Fire Academy Division of State Fire Marshal 8895 East Main Street Reynoldsburg, OH 43068 (614) 864-5510	Training
Oklahoma	Mace, Harold, R. Supervisor, Fire Service Training	Oklahoma State University Q-2, Room 1 Stillwater, OK 74074 (405) 624-5727	Training
	Mowles, Bob Chief Training Officer	Oklahoma City Fire Department 820 N.W. Fifth Street Oklahoma City, OK 73107 (405) 235-3314	Training

## V. NONSTRUCTURAL FIRES

### E. Experienced Persons and Organizations

<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
Oklahoma (continued)	Sanders, Jack S. State Fire Marshal	400 North Lincoln Boulevard Suite 100 Oklahoma City, OK 73105 (405) 424-4371	Prevention Investigation
Oregon	Buss, Vernon R. Battalion Chief	Portland Fire Bureau 55 S.W. Ash Street Portland, OR 97204 (503) 248-4375	Shipboard Fires
	Centers, Clyde W. State Fire Marshal	103 Labor and Industries Building Salem, OR 97301 (503) 378-4917	Prevention Investigation
	Horn, Harlyn Battalion Chief	Portland Fire Bureau 55 S.W. Ash Street Portland, OR 97204 (503) 248-4375	Wildlife Fire Control
	Small, Dick Director	Fire Standards & Accreditation Board Suite 258 3000 Market Street, N.E. Salem, OR 97310 (503) 378-5210	Training
Pennsylvania	Grening, Robert C. State Fire Training Services Coordinator	Pennsylvania State Firemen's Training School P.O. Box 631 Lewistown, PA 17044 (717) 248-1115	Training
	Henry, Charles A. State Fire Commissioner	1547 Labor and Industry Building Harrisburg, PA 17120 (717) 787-1324	Prevention Investigation
	Robyak, Joseph A. Lieutenant/State Police Fire Marshal	Pennsylvania State Police 1800 Elmerton Avenue Harrisburg, PA 17109 (717) 783-5529	Training



## V. NONSTRUCTURAL FIRES

### E. Experienced Persons and Organizations

<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
Rhode Island	Jones, Ronald S. Coordinator, Fire Service and EMT Training	Rhode Island Junior College 25 Althea Drive Cranston, RI 02920 (401) 781-6147	Training
	Shannon, Earl F. State Fire Marshal	Executive Department 12 Humbert Street North Providence, RI 02911 (401) 277-2335	Prevention Investigation
South Carolina	Campbell, R. S. State Fire Marshal	Budget and Control Board 1109 Belleview Street Columbia, SC 29201 (803) 758-2941	Prevention Investigation
	McDonagh, Joseph M. Director	South Carolina Fire Academy West Columbia, SC 29169 (803) 758-8411	Training
South Dakota	Flippin, Jim Coordinator, Fire Service Training	118 West Capitol Pierre, SD 57501 (605) 773-3876	Training
	Uthe, Gene State Fire Marshal	118 Capitol Building Pierre, SD 57501 (605) 773-3562	Prevention Investigation
Tennessee	McPherson, H. B. State Fire Marshal	40 Tennessee Building Sixth and Church Streets Nashville, TN 37219 (615) 741-3030	Prevention Investigation
	Thompson, Jimmy Superintendent	Area Technical School 1223 S.W. Memorial Boulevard Murfreesboro, TN 37130 (615) 893-4095	Training
Texas	Emerson, Ernest A. State Fire Marshal	1110 San Jacinto Austin, TX 78786 (512) 475-4203	Prevention Investigation
	Fulbright, Garland W. Executive Director	Texas Commission on Fire Protection Personnel, Standards, and Education Suite 406 510 South Congress Austin, TX 78704 (512) 474-8066	Training

## V. NONSTRUCTURAL FIRES

### E. Experienced Persons and Organizations

<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
Texas (continued)	Smith, Henry D. Division Head	Fire Protection Training Division Texas Engineering Extension Service Texas A&M University System F.E. Drawer K College Station, TX 77843 (713) 845-7641	Training
	Woods, James W. Associate Director/ Fire Chief	Department of Public Safety Dallas/Fort Worth Airport P.O. Drawer DFW Dallas/Ft. Worth Airport, TX 75261 (214) 574-6720	Planning Training Response
Utah	Evans, Gordon D. Director of Fire Training	Utah Technical College at Provo/Orem P.O. Box 1609 1395 North 150 East Provo, UT 84601 (801) 226-5000, Ext. 352	Training
	Kennedy, Steve M. State Fire Marshal	101 State Capitol Building Salt Lake City, UT 84114 (801) 533-5318	Prevention Investigation
Vermont	Philbrook, Paul State Fire Marshal	Department of Public Safety Montpelier, VT 05602 (802) 828-2140	Prevention Investigation
	Read, Walter B., Sr. Supervisor of Training	Vermont Fire Service Training Division of Vermont State Firefighters Association P.O. Box 53 Pittsford, VT 05763 (802) 483-9407	Training
Virginia	Summers, Howard H. State Fire Marshal	Fourth Street Office Building 205 North Fourth Street Richmond, VA 23219 (804) 786-4751	Prevention Training
	Williams, Robert A. Fire Prevention Training Coordinator	Office of Fire Services Training P.O. Box 706 Ashland, VA 23005 (804) 798-1311	Training

## V. NONSTRUCTURAL FIRES

### E. Experienced Persons and Organizations

<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
Washington	Brace, Thomas R. Director, Division of State Fire Marshal	Washington State Fire Marshal Insurance Building Mail Stop, AQ-21 Olympia, WA 98504 (206) 753-3605	Prevention Investigation
	Prendergast, Edward Director, State Fire Service Training	Commission for Vocational Training Education Building 17 Airindustrial Park Olympia, WA 98504 (206) 753-5679	Training
West Virginia	Perkins, Everett Program Leader	West Virginia University 313 Kwapp Hall Morgantown, WV 26906 (304) 293-2106	Training
	Smittle, Walter III State Fire Marshal	1800 Washington Street, East Charlestown, WV 25305 (304) 348-2191	Prevention Investigation
Wisconsin	Meyers, Frank A. State Fire Marshal	123 West Washington Avenue Madison, WI 53702 (608) 266-1671	Prevention Investigation
	Pribyl, Paul F. Consultant, Fire Service Education and Training Program	Wisconsin Board of Vocational and Adult Education Room 701 4802 Sheboygan Avenue Madison, WI 53702 (608) 266-7994	Training
Wyoming	Titus, Robert C. State Fire Training Coordinator	Department of Fire Prevention and Electrical Safety State Fire Marshal's Office Hathaway Building, Room 117 Cheyenne, WY 82002 (307) 777-7288	Training
	Weckwirth, Billy M. State Fire Marshal	Department of Fire Prevention and Electrical Safety State Fire Marshal's Office Hathaway Building, Room 117 Cheyenne, WY 82002 (307) 777-7288	Prevention Investigation

## **V. NONSTRUCTURAL FIRES**

### **E. Experienced Persons and Organizations**

<b><u>United States</u></b>	<b><u>Contact</u></b>	<b><u>Agency</u></b>	<b><u>Areas of Expertise</u></b>
Military	Domme, Gerald P. Fire Chief	Norfolk Naval Shipyard Code 870 Portsmouth, VA 23709 (804) 393-3335	Military Shipboard Fires Training

## **V. NONSTRUCTURAL FIRES**

### **F. Reference Materials**

#### **Books and Reports**

Cowardin, David H. The On Scene Emergency Management System. Orange, CA: Emergency Service Products and Productions, 1981.

Gaylor, Harry P. Wildfires Prevention and Control. Bowie, MD: Robert J. Brady Company, 1974.

## **V. NONSTRUCTURAL FIRES**

### **F. Reference Materials**

#### **Articles in Journals**

Best, Richard. "Rapid Transit Train Fire." Fire Command 46 (August 1979): 28-32.

King, James B. "Coping with a Transit Tunnel Fire." The International Fire Chief 47 (April 1981): 10-13.

Nailen, R. L. "New Plan Adopted in San Jose, Calif., For Better Attack on Wildland Fires." Fire Engineering 134 (August 1981): 118-120.

Noll, Gregory G. "Pre-Fire Plan, Training Essential for Handling Bulk Oil Storage Fires." Fire Emergency 134 (August 1981): 58-62.

## **VI. NATURAL DISASTERS**

Emergencies and disasters precipitated by natural causes can seriously stress the emergency services of any community. Natural hazards such as floods or tornadoes usually involve large land areas and cause significant damage to life and property. In most instances, the successful management of these incidents requires a multi-agency response. Thus, preplanning efforts for natural disasters necessitate a coordinated multi- or interagency approach.

Many communities, recognizing their risks for certain natural hazards, such as earthquakes or hurricanes, have developed specific preplanning efforts. The Los Angeles, California Fire Department, for example, which protects 467.63 square miles and a population of three million, provides training programs in earthquake preparedness for all officers and firefighters. Personnel are familiarized with the city's earthquake emergency mode through ongoing in-service training.

Another type of training effort exists in the City of Hampton, Virginia. The city, which has a history of major flooding problems due to its geographic location, has developed preplanning efforts for hurricanes including the conduct of an annual tabletop exercise. The exercise involves all city departments and requires department heads to simulate their roles and responsibilities. Participating departments include fire (with emergency medical service), police, civil preparedness, public health, public works, social services, and finance. Also included are the city manager, public information officer, and a representative from the American Red Cross. Specialized expertise in hurricane behavior is provided by a regional representative from the National Weather Service. The Virginia Office of Emergency and Energy Services provides staff support to evaluate the exercise.

Individual agency departments in the City of Hampton are expected to provide ongoing training efforts for hurricane preparedness. The Hampton Fire Department, protecting 55 square miles and a population of 125,000, continues its preplanning efforts through regular administrative meetings with station officers. On a monthly basis, station captains review their hurricane operating procedures and inform their personnel of any modifications.

In most communities surveyed, regular response units are used to manage incidents involving natural hazards. For incidents involving water, several fire departments maintain underwater recovery and water rescue teams.

Local and regional response plans exist in many communities. Individual agencies may have their own response plan as well as a plan annexed to the city/county plan. Several communities in the western United States have specialized plans for managing the effects of earthquakes. The Los Angeles, California Fire Department has recently prepared an "Earthquake Prediction Response Plan." The plan identifies the roles and responsibilities of fire department personnel when in a designated earthquake emergency mode.

The Aurora, Colorado Fire Department, with a response area of 65 square miles and a population of 175,000, has developed a response plan for flooding. The plan was prepared in recognition of the community's susceptibility to flash flooding from seasonal thunderstorms. The plan details the roles and responsibilities of fire personnel and

provides evacuation and reporting procedures. A call list is also provided. The plan is tested periodically through the use of simulated exercises.

None of the agencies surveyed indicated that they had a training manual for natural disasters. Other resources identified by the respondents included training efforts provided by federal and state emergency preparedness agencies. In addition, representatives from federal agencies such as the National Weather Service or National Hurricane Center are available to provide specialized expertise.

Relevant resource materials may be obtained from information clearinghouses operated by the University of Colorado's Natural Hazards Research and Applications Information Center and the Academy for Contemporary Problem's Natural Disaster Recovery and Mitigation Referral Service. The Ohio State University's Disaster Research Center can provide other relevant material.



## VI. NATURAL DISASTERS

### A. Training Programs

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Alabama	Birmingham Fire and Rescue Service 1801 Seventh Avenue, North Birmingham, AL 35235 (205) 323-8304	O. N. Gallant Fire Chief	100	275,000
	Mobile Fire Department 701 St. Francis Street Mobile, AL 36602 (205) 438-7351	Frank J. Seelhorst Acting Fire Chief	209	200,000
Arkansas	Pine Bluff Fire Department Civic Center 200 East Eighth Street Pine Bluff, AR 71601 (501) 534-0011	Ray Jacks Fire Chief	17	57,380
California	Arden Fire District 200 Park Towne Circle Sacramento, CA 95825 (916) 485-1700	John Dell Assistant Chief	35	180,000
	Los Angeles Fire Department 200 North Main Street Los Angeles, CA 90012 (213) 347-3878	Jack Bennett Assistant Chief	467.63	3,000,000
	Merced Fire Department P.O. Box 2068 Merced, CA 95344 (209) 722-8331	Joe Ortiz Fire Chief	12	34,700
	Sacramento Fire Department Room 3 915 I Street Sacramento, CA 95814 (916) 449-5266	Robert Schultz Deputy Chief, Emergency Operations	94	285,000
	San Francisco Fire Department 260 Golden Gate Avenue San Francisco, CA 94102 (415) 861-8000	Frank Dunn Lieutenant	49	690,000* 1,000,000**

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\*Night

\*\*Day

## VI. NATURAL DISASTERS

### A. Training Programs

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Colorado	Barcroft Fire Protection District 3301 S.W. Field Street Lakewood, CO 80227 (303) 989-4307	Bob Porter Assistant Chief	80	155,000
	Boulder Fire Department P.O. Box 791 Boulder, CO 80306 (303) 441-3351	Larry Stein Assistant Chief	20	80,000
	Littleton Fire Department 2255 West Berry Avenue Littleton, CO 80165 (303) 795-3800	Phillip Kessler Training Officer	45	107,000
Connecticut	Westport Fire Department 6 Wilton Road Westport, CT 06880 (203) 227-1511	David Sanford Deputy Chief	22.7	31,000* 50,000**
Florida	Coral Gables Fire Department 2815 Salzedo Street Coral Gables, FL 33134 (305) 442-1887	Robert T. Boutelle Deputy Chief	12	45,000
	Miami Beach Fire Department 2300 Pinetree Drive Miami Beach, FL 33140 (305) 673-7120	John D. Shelton Chief, Rescue Division	7.1	93,000
Illinois	Lisle-Woodbridge Fire District 1005 School Street P.O. Box 610 Lisle, IL 60532 (312) 964-2233	Paul H. Boecker Fire Chief	38	74,000
	Waukegan Fire Department 105 North West Street Waukegan, IL 60085 (312) 689-7503	William Peterson Fire Chief	26	70,000

\*Permanent

\*\*Summer

## VI. NATURAL DISASTERS

### A. Training Programs

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Iowa	Keokuk Fire Department 111 South Thirteenth Street Keokuk, IA 52632 (319) 524-5225	Lannie E. Hatton Fire Chief	46	15,000
Louisiana	New Orleans Fire Department 317 Decatur Street New Orleans, LA 70130 (504) 581-6200	Richard Blackman Captain	199	565,000
Massachusetts	Falmouth Fire Department 399 Main Street Falmouth, MA 02540 (617) 548-2324	Clifford Amaral Deputy Chief	44	23,500* 60,000**
	Plymouth Fire Department 114 Sandwich Street Plymouth, MA 02360 (617) 746-2212	Arthur H. Lamb Fire Chief	109	38,000
Missouri	Fort Osage Fire Protection District 319 South Central Buckner, MO 64016 (816) 249-3636	Richard Lehmann Fire Chief	110	9,800
	Independence Fire Department 950 North Spring Street Independence, MO 64065 (816) 836-8300	Cal Morgan Assistant Chief	84	125,000
	Prarie Township Fire Protec- tion District 706 Walnut Street P.O. Box 205 Greenwood, MO 64034 (816) 537-7000	Robert L. Rice Fire Chief	65	10,000
Nebraska	Omaha Fire Division 1516 Jackson Street Omaha, NE 68102 (402) 444-5700	Vernon Vanscoy, Jr. Fire Chief	92	350,000

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\*Permanent  
\*\*Summer

## VL. NATURAL DISASTERS

### A. Training Programs

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Nevada	Carson City Fire Department 111 North Curry Street Carson City, NV 89701 (702) 887-2200	Bernie Sease Fire Chief	146	33,000
New Jersey	Hoboken Fire Department 201 Jefferson Street Hoboken, NJ 07030 (201) 420-2259	Ed McDonald Deputy Chief	1	45,000
Oklahoma	Oklahoma City Fire Department 820 N.W. Fifth Street Oklahoma City, OK 73107 (405) 235-3314	Bob Mowles Chief Training Officer	640	410,000
Oregon	Winston-Dillard Rural Fire Protection District 5 P.O. Box 765 Winston, OR 97496 (503) 679-8721	Jerry Hall Fire Chief	50	10,000
Virginia	Hampton Fire Department 22 East Lincoln Street Hampton, VA 23669 (804) 727-6580	Kenneth R. Lavoie Fire Chief	55	125,000
	Virginia Beach Fire Department Public Safety Building Virginia Beach, VA 23456 (804) 425-6272	Frank Bennett District Chief	310	272,000
Wisconsin	Green Bay Fire Department 501 South Washington Street Green Bay, WI 54301 (414) 497-3777	Gerald Selissen Fire Chief	45	88,000

## VI. NATURAL DISASTERS

### B. Response Teams

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Florida	Hialeah Fire Department 501 Palm Avenue Hialeah, FL 33011 (305) 883-5840	William Ackerly District Chief—Rescue Coordinator	22	180,000
	Miami Fire Department P.O. Box 330708 Miami, FL 33133 (305) 579-6230	Ron Coleman Chief, Training Division	34	365,000
	Miami Beach Fire Department 2300 Pinetree Drive Miami Beach, FL 33140 (305) 673-7120	John D. Shelton Chief, Rescue Division	7.1	93,000
Oregon	Winston-Dillard Rural Fire Protection District 5 P.O. Box 765 Winston, OR 97496 (503) 679-8721	Jerry Hall Fire Chief	50	10,000

## VI. NATURAL DISASTERS

### C. Response Plans

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Alabama	Birmingham Fire and Rescue Service 1808 Seventh Avenue, North Birmingham, AL 35235 (205) 323-8304	O. N. Gallant Fire Chief	100	275,000
	Hoover Fire Department 1581 Patton Chapel Road Hoover, AL 35226 (205) 823-4060	T. E. Bradley Fire Chief	50	23,000
Arizona	Flagstaff Fire Department 120 North Beaver Flagstaff, AZ 86001 (602) 774-5281, Ext. 265	Leon H. Weidner Assistant Chief	68	37,000
	Phoenix Fire Department Room 465 620 West Washington Street Phoenix, AZ 85003 (602) 262-6297	Gary P. Morris Captain	350	800,000
	Tucson Fire Department P.O. Box 27210 Tucson, AZ 85720 (602) 791-4511	Donald H. Canterbury Inspector	112	400,000
Arkansas	Benton Fire Department 220 South Main Street Benton, AR 72015 (501) 778-0941	Dewell Anderson Fire Chief	15	18,000
	Camden Fire Department 140 Van Buren Street Camden, AR 71701 (501) 836-2413	Buddy Vaughan Fire Chief	45	16,000
	Little Rock Fire Department 1000 West Seventh Street Little Rock, AR 72201 (501) 371-4796	Jim Henson Captain	101	168,000
	Pine Bluff Fire Department Civic Center 200 East Eighth Street Pine Bluff, AR 71601 (501) 534-0011	Ray Jacks Fire Chief	17	57,380

## VI. NATURAL DISASTERS

### C. Response Plans

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
California	Los Angeles Fire Department 200 North Main Street Los Angeles, CA 90012 (213) 485-6100	Jack Bennett Assistant Chief	467.63	3,000,000
	Sacramento Fire Department Room 3 915 I Street Sacramento, CA 95814 (916) 449-5266	Robert Schultz Deputy Chief, Emergency Operations	94	285,000
	San Clemente Fire Department 100 Avenida Presidio San Clemente, CA 92672 (714) 492-5105	Ronny Coleman Fire Chief	15 786*	27,000 1,900,000*
	San Francisco Fire Department 260 Golden Gate Avenue San Francisco, CA 94102 (415) 861-8000	Frank Dunn Lieutenant	49	690,000** 1,000,000 <sup>+</sup>
	Santa Rosa Fire Department 955 Sonoma Avenue Santa Rosa, CA 95404 (707) 528-5311	Gordon Stedman Training Director	27	82,000
Colorado	Barcroft Fire Protection District 3301 South Field Street Lakewood, CO 80227 (303) 989-4307	Bob Porter Assistant Chief	80	155,000
	Boulder Fire Department P.O. Box 791 Boulder, CO 80306 (303) 441-3351	Larry Stein Assistant Chief	20	80,000
	Littleton Fire Department 2255 West Berry Avenue Littleton, CO 80165 (303) 795-3800	Phillip Kessler Training Officer	45	107,000

\*Multijurisdictional

\*\*Night

<sup>+</sup>Day

## VL. NATURAL DISASTERS

### C. Response Plans

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Connecticut	Thompsonville Fire Department Pearl Street Station Enfield, CT 06082 (203) 745-3365	Paul E. Censki Fire Marshal	12	12,000
	Tolland Fire Department 3 Rhodes Road Tolland, CT 06084 (203) 871-0002	Ronald Littell Fire Chief	41	11,000
Delaware	Wilmington Fire Bureau 112 East Twelfth Street Wilmington, DE 19801 (302) 571-4410	Jerome Donohue Fire Chief	15.77	95,000
Florida	Coral Gables Fire Department 2815 Salzedo Street Coral Gables, FL 33134 (305) 442-1887	Robert T. Boutelle Deputy Chief	12	45,000* 20,000**
	Hollywood Fire Department 3401 Hollywood Boulevard Hollywood, FL 33022 (305) 921-3448	George Geiser Division Chief	33	130,000
	Jacksonville Fire Division 107 Market Street Jacksonville, FL 32202 (904) 633-5433	E. P. Lowstuter Division Chief of Services	844	600,000
	Metro-Dade County Fire Department 6000 S.W. 87th Avenue Miami, FL 33173 (305) 576-8600	Charles E. Sowers Division Chief, EMS	895	1,000,000
	Miami Fire Department P.O. Box 330708 Miami, FL 33133 (305) 579-6230	Ron Coleman Chief, Training Division	34	365,000

\*Permanent

\*\*Student



## VI. NATURAL DISASTERS

### C. Response Plans

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Florida (continued)	Miami Beach Fire Department 2300 Pinetree Drive Miami Beach, FL 33140 (305) 673-7120	John D. Shelton Chief, Rescue Division	7.1	93,000
Illinois	Rolling Meadows Fire Department 2455 Plum Grove Road Rolling Meadows, IL 60008 (312) 397-3352	Thomas Quillin Fire Chief	5	21,000
	Waukegan Fire Department 105 North West Street Waukegan, IL 60085 (312) 689-7503	William Peterson Fire Chief	26	70,000
Iowa	Iowa City Fire Department 410 East Washington Street Iowa City, IA 52240 (319) 356-5255	Arthur C. Kloss Battalion Chief	27	51,500
	Keokuk Fire Department 111 South Thirteenth Street Keokuk, IA 52632 (319) 524-5225	Lannie E. Hatton Fire Chief	46	15,000
	Marshalltown Fire Department 107 South First Avenue Marshalltown, IA 50158 (515) 754-5723	James L. Simmons Assistant Chief	30	27,000
	Mason City Fire Department 350 Fifth Street, S.W. Mason City, IA 50158 (515) 423-2145	Ronald C. Van Horn Fire Chief	65	31,000
	Webster City Fire Department 812 Des Moines Street Webster City, IA 50595 (515) 832-2431	Terry Johnston Fire Chief	77	9,000
	West Des Moines Fire Department 318 Fifth Street West Des Moines, IA 50265 (515) 223-3221	Randall Bracken Fire Chief	17.5	25,000

## VI. NATURAL DISASTERS

### C. Response Plans

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
Iowa (continued)	Zearing Fire Department Zearing, IA 50278 (515) 487-7234	Philip McBride Fire Chief	17	600
Louisiana	New Orleans Fire Department 317 Decatur Street New Orleans, LA 70130 (504) 581-6200	Richard Blackman Captain	199	565,000
Maryland	Baltimore County Fire Department 724 York Road Townson, MD 21204 (301) 494-4500	Paul H. Renicke Fire Chief	615	750,000
Massachusetts	Plymouth Fire Department 114 Sandwich Street Plymouth, MA 02360 (617) 746-2212	Arthur H. Lamb Fire Chief	109	38,000
Mississippi	Pass Christian Fire Department 110 West Second Street Pass Christian, MS 39571 (601) 452-9715	George M. Mixon Fire Chief	6 900*	5,050 200,000*
Missouri	Lee's Summit Fire Department 207 South Douglas Street Lee's Summit, MO 64063 (816) 251-2345	Mike Wren Acting Fire Chief	74	30,000
	Prarie Township Fire Protection District 706 Walnut Street P.O. Box 205 Greenwood, MO 64034 (816) 537-7000	Robert L. Rice Fire Chief	65	10,000
Nebraska	Grand Island Fire Department 302 South Pine Street Grand Island, NE 68801 (308) 381-5300	George Arnett Fire Chief	18.5	34,000

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\*Multijurisdictional

## VL. NATURAL DISASTERS

### D. Training Manuals

<u>State</u>	<u>Agency</u>	<u>Contact</u>	<u>Square Miles</u>	<u>Population</u>
No locally developed training manuals were identified for national disasters.				

## VI. NATURAL DISASTERS

### E. Experienced Persons and Organizations

<u>State</u>	<u>Contact</u>	<u>Agency</u>	<u>Areas of Expertise</u>
California	Wharton, Richard C. Coordinator	Office of State Fire Marshal California Fire Academy 836 Asilomar Boulevard Pacific Grove, CA 93950 (408) 646-4240	Earthquake Training Planning
	Wynyard, Robert L. Chief of Academic Division	California Specialized Training Institute P.O. Box G Camp San Luis Obispo, CA 93406 (805) 544-7100	Training Programs
Colorado	Bush, Stan G.	Colorado Search and Rescue 2415 East Maplewood Avenue Littleton, CO 80121 (303) 798-2438 (303) 794-2304	Training Response Risk Analysis
	White, Gilbert F. Director	Natural Hazards Research and Applications Information Center Institute of Behavioral Science No. 6 Campus Box 482 University of Colorado Boulder, CO 80309 (303) 492-6818	Information Clearing- house
District of Columbia	Rubin, Claire B. Project Manager	Natural Disaster Recovery and Mitigation Resource Referral Service The Academy for Contemporary Problems Suite 390 400 North Capitol Street, NW Washington, DC 20001 (202) 638-1445	Information Referral
Illinois	Boecker, Paul H. Fire Chief	Lisle-Woodbridge Fire District 1005 School Street P.O. Box 610 Lisle, IL 60532 (312) 964-2233	Training

## **VI. NATURAL DISASTERS**

### **E. Experienced Persons and Organizations**

<u><b>State</b></u>	<u><b>Contact</b></u>	<u><b>Agency</b></u>	<u><b>Areas of Expertise</b></u>
Mississippi	Guice, Wade Director	Harrison County Civil Defense P.O. Box 68 Gulfport, MS 39501 (601) 864-3843	Multijurisdictional Response Plans Hurricanes
Oklahoma	Darby, David T. Assistant Chief for Operations	Oklahoma City Fire Department 820 N.W. Fifth Street Oklahoma City, OK 73107 (405) 235-3314	Training Planning
Virginia	Coleman, Chap Emergency Preparedness Coordinator	Alexandria Fire Department 900 Second Street Alexandria, VA 22314 (703) 838-4610	Planning Simulation Exercises
	Lavoie, Kenneth R. Fire Chief	Hampton Fire Department 22 East Lincoln Street Hampton, VA 23669 (804) 727-6580	Planning Earthquakes
	Rule, Charles H. Fire Chief	Alexandria Fire Department 900 Second Street Alexandria, VA 22314 (703) 838-4600	Planning

## **VI. NATURAL DISASTERS**

### **E. Experienced Persons and Organizations**

<b><u>United States</u></b>	<b><u>Contact</u></b>	<b><u>Agency</u></b>	<b><u>Areas of Expertise</u></b>
Federal	Clark, Robert, Ph.D. Associate Director for Hydrology	National Weather Service Room 504 8060 Thirteenth Street Silver Spring, MD 20910 (301) 427-7658	Floods
	Neil, Frank Director	National Hurricane Center 1320 South Dixie Highway Coral Gables, FL 33146 (305) 666-4612	Hurricanes (Atlantic Coast)
	Ostby, Frederick P. Director	National Service Storms Forecast Center (NSSFC) 601 East Twelfth Street Kansas City, MO 64106 (816) 374-3427	Tornadoes

## **VL. NATURAL DISASTERS**

### **F. Reference Materials**

#### **Books and Reports**

Baker, Earl J., ed. Hurricanes and Coastal Storms. Report Number 33. Orlando, FL:  
Florida Sea Grant College, 1980.

## **VL. NATURAL DISASTERS**

### **F. Reference Materials**

#### **Articles in Journals**

Bowen, John E. "Handling Flood Emergencies." Fire Chief Magazine 23 (June 1979): 41-43.