RISK COMMUNICATION & MANAGEMENT PLAN

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Environmental Public Health Tracking Program

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Point of Contact

The Missouri Department of Health and Senior Services' (DHSS) Environmental Public Health Tracking (EPHT) Program is responsible for ensuring the goals and activities in this Risk Communication and Management Plan (RCMP) are completed.

For more information, please contact:

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A complete staff listing is included as Appendix A: EPHT Staff Listing.

Authority

This Risk Communication and Management Plan conforms to rules, regulations, guidance, policies, and procedures under the following:

Federal:

- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- Emergency Planning and Community-Right-to-Know Act (EPCRA)
- Natural Resource Damage Assessment (NRDA)
- National Environmental Policy Act (NEPA)
- Resource Conservation and Recovery Act (RCRA)
- Occupational Safety and Health Act (OSHA)
- Health Insurance Portability and Accountability Act of 1996 (HIPAA)
- Executive Order 12898 of February 11, 1994 - Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations (Amended by Executive Order 12948 of January 30, 1995)
- Executive Order 12906 of April 11, 1994 - Coordinating Geographic Data Acquisition and Access: The National Spatial Data Infrastructure
- Executive Order 12915 of May 13, 1994 - Federal Implementation of the North American Agreement on Environmental Cooperation
- Executive Order 13045 of April 21, 1997 - Protection of Children From Environmental Health Risks and Safety Risks (Amended by Executive Order 13229 of October 09, 2001/Amended by Executive Order 13296 of April 18, 2003)
- Executive Order 13231 of October 16, 2001 - Critical Infrastructure Protection in the Information Age
- Executive Order 13407 of June 26, 2006 - Public Alert and Warning System
- Department of Health and Human Services, Centers for Disease Control and Prevention publication “CDC’s Strategy for the National Environmental Public Health Tracking Program” of Fiscal Years 2005 - 2010
- Department of Health and Human Services, Centers for Disease Control and Prevention publication “CDC’s National Environmental Public Health Tracking Program National Network Implementation Plan (NNIP)” of August 2006

State:

- All Missouri Revised Statutes, in particular:
  - Title IV - Executive Branch
  - Title XII - Public Health And Welfare
  - Title XXXIX - Conduct Of Public Business (Sunshine Law)
  - Title XLI – Codes and Standards
- All Missouri Code of State Regulations, in particular:
  - Title 19
- Missouri State Emergency Operations Plan

State (cont.):

- Executive Order 05-20 of July 21, 2005 - Establishes the Missouri Homeland Security Advisory Council
- Executive Order 05-42 of November 14, 2005 - Establishes the National Incident Management System as the standard for emergency incident management in the State of Missouri.
- Executive Order 06-09 of February 10, 2006 - Establishes the Homeland Security Advisory Council as a continuing board and updates the structure of Homeland Security (Amends Executive Order 05-20)
- Executive Order 06-23 of June 27, 2006 - Establishes Interoperable Communication Committee
- Executive Order 01-16 of September 21, 2001 - Reauthorizes the Missouri Commission on Intergovernmental Cooperation
- Executive Order 02-22 of December 17, 2002 - Establishes the Office of Child Welfare Ombudsman

Departmental:

- Missouri Department of Health and Senior Services Administrative Policy Manual
- Missouri Department of Health and Senior Services Operational Directives
- Established Trading Partnership Agreements

Purpose

This Risk Communication and Management Plan (RCMP) has been created to identify and address the needs between the Missouri Department of Health and Senior Services' (DHSS) Environmental Public Health Tracking (EPHT) program and the citizens of Missouri.

This plan has been produced to enhance coordination and information exchange between the community, the Missouri Environmental Public Health Tracking Program, and all partner entities by providing an overall reference tool for all parties interested in the EPHT program at DHSS.

The mission and purpose of the EPHT Program is to provide information to and from a nationwide network of integrated health and environmental data that drives actions to improve the health of communities. This national network will integrate three distinct components: hazard monitoring, exposure surveillance, and health effects surveillance.

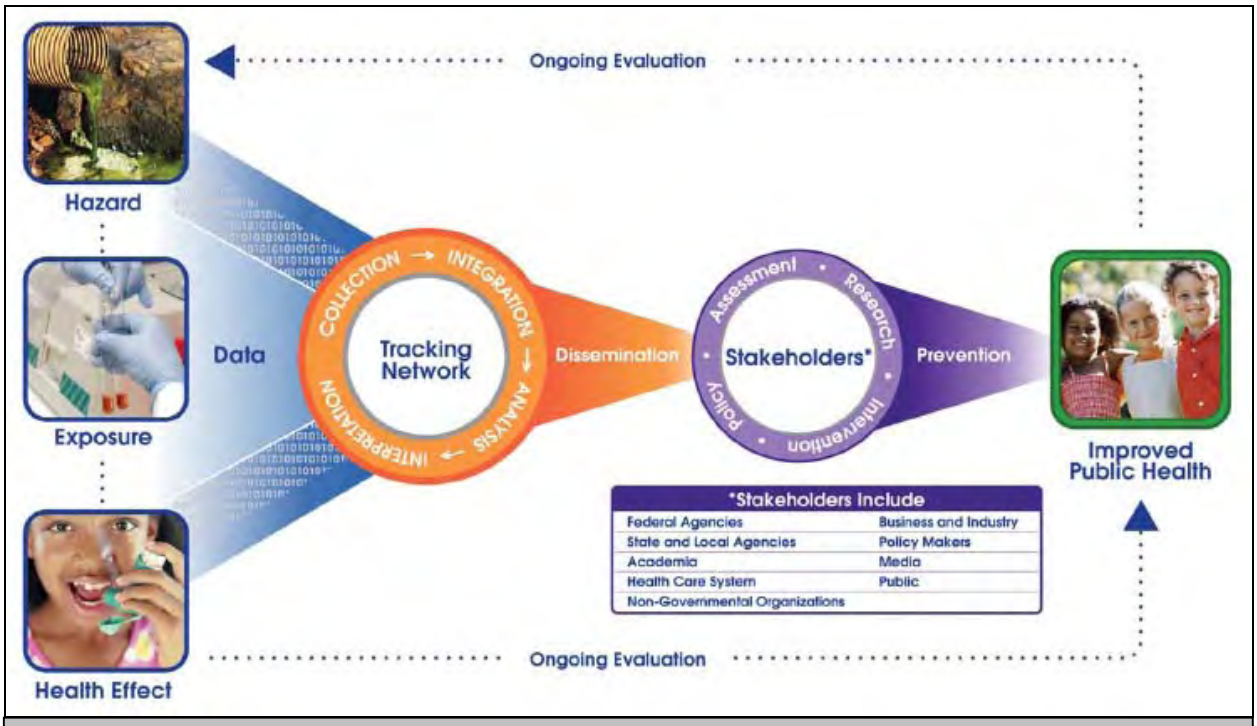


Figure 1: EPHT Concept

The Centers for Disease Control's (CDC) Environmental Tracking Branch is establishing the network by drawing on a wide range of expertise from federal agencies, state and local health and environmental agencies, non-governmental organizations, state public health and environmental laboratories, and the program's schools of public health working in partnership with each other. A complete grantee listing is included as Appendix B: EPHT Grantee Map.

National Environmental Public Health Tracking Network Goals are:

1. Build a sustainable National Environmental Public Health Tracking Network
2. Enhance Environmental Public Health Tracking workforce and infrastructure
3. Disseminate information to guide policy, practice, and other actions to improve the nation's health
4. Advance environmental public health science and research
5. Foster collaboration among health and environmental programs

Missouri Environmental Public Health Tracking Network Goals are:

1. Develop a PHIN-compliant secure network for the collection, access, analysis, and dissemination of environmental public health data, knowledge, and information.
2. Enhance Missouri's EPHTN workforce and infrastructure.
3. Use the EPHTN to guide policy, practice, and other actions to improve the health of Missourians.
4. Foster collaboration among Missouri's Environmental Public Health Tracking partners.

Scope

Background

In January 2001, the Pew Environmental Health Commission issued the report "America's Environmental Health Gap: Why the Country Needs a Nationwide Health Tracking Network." The report, which stated that the existing environmental health system is neither adequate nor well organized, recommended the creation of a "Nationwide Health Tracking Network for disease and exposures."

Currently, no systems exist at the state or national level to track many of the exposures and health effects that may be related to environmental hazards. In addition, in most cases, existing environmental hazard, exposure, and disease tracking systems are not linked together. Because existing systems are not linked, it is difficult to study and monitor relationships among hazards, exposures, and health effects.

Environmental public health tracking is the ongoing collection, integration, analysis, and interpretation of data about the following factors:

- Environmental hazards
- Exposure to environmental hazards
- Health effects potentially related to exposure to environmental hazards

The Environmental Public Health Tracking Network will help to protect communities by providing information to federal, state, and local agencies. These agencies, in turn, will use this information to plan, apply, and evaluate public health actions to prevent and control environmentally related diseases.

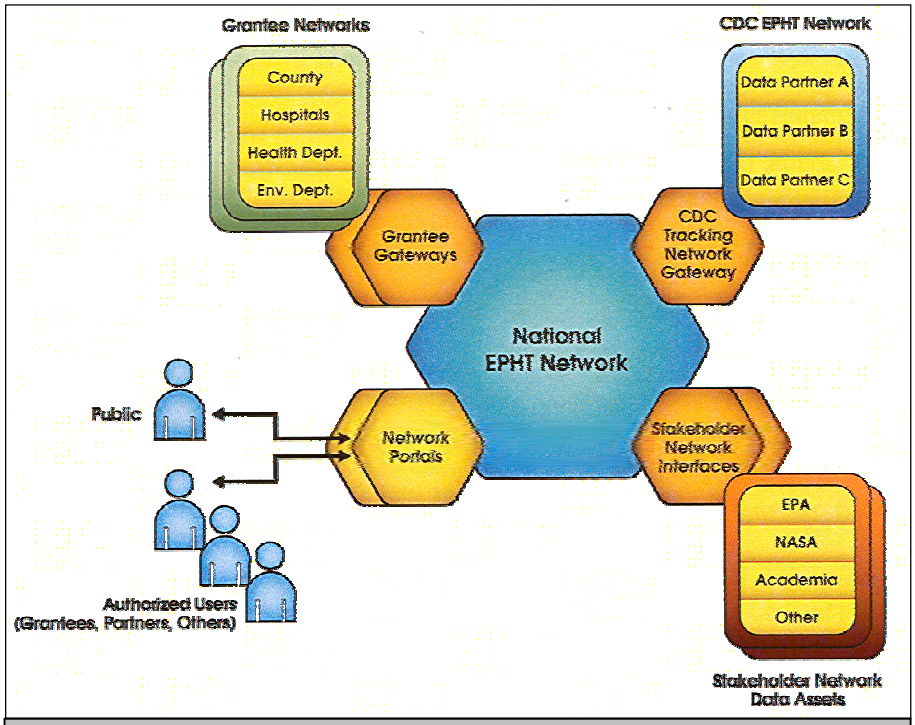


Figure 2: Overview of the National EPHT Network

Missouri's Environmental Public Health Tracking History
Since joining the program in 2002, Missouri has collaborated with federal, state, and local partners to bring together its distributed environmental data. These efforts have provided a means to evaluate the effectiveness of environmental monitoring in the state.

Missouri's EPHT network concept is based on the primary epidemiological factors of:

- Person data – Characteristics such as demographic data (e.g. age, gender, race, etc.) and/or biometric date (e.g. weight, height, eye/hair color, etc.) will be captured for each case to serve as personal identifiers. Additionally, specific descriptors related to the particular case will also be recorded (signs/symptoms, laboratory test results, etc.). Lastly, idiosyncratic labels such as individual genetic maps or DNA codes may also be used, when/if they become available.
- Place data – Normal residence location will be geo-coded; also, other sites such as day cares, schools, workplaces, recreational venues, etc. will be determined and notated. Additionally, place may be defined as site of the exposure and include activities such as avocations, travel, or diet.
- Time data – Specific details of date and clock period will be taken for onset of conditions or determination of test results. Time may also be used to predict exposure windows of opportunity or incubation periods.

New enterprise data systems, like Lead Application MOHSAIC, provide access to child and address information to assist in case management and risk activities. Providers, local public health agencies, and Medicaid managed care plans can access child health information from multiple data sources through the application's Child Web Summary.

The use of technologies like Geographic Information Systems (GIS) and Global Positioning Systems (GPS) has further enhanced tracking efforts, while Web mapping applications have improved the dissemination of environmental health information. Additionally, Missouri is currently planning to develop its own centralized metadata registry. Team members are actively participating in efforts to develop business rules and a standardized metadata registry logical data model.

Key projects undertaken since 2002:

- A collaborative project between Missouri EPHT program and the Center for Applied Environmental Public Health (CAEPH) at Tulane University that examined the relationship between demolition of housing units constructed prior to 1978 and blood lead levels in children living in the vicinity of the demolition site.
- At the request of the U.S. Environmental Protection Agency (EPA), DHSS, in conjunction with the Centers for Disease Control and Prevention's (CDC) Agency for Toxic Substances and Disease Registry (ATSDR) assisted in evaluating the health risk of mine tailings used as agricultural lime.
- The Local Environmental Public Health Initiative is a collaborative effort between the Missouri Office of Administration's (OA) Information Technology Services Division (ITSD)/GIS Unit and the EPHT team that includes the purchase of GIS

and GPS software, equipment, and training for local public health agency staff throughout the state to improve their monitoring and response capacities.

- The Environmental Public Health Mapper is a collaborative effort between EPHT, the Missouri Hazardous Substances Emergency Events Surveillance Program (HSEES), and the Center for Agricultural, Resource, and Environmental Systems (CARES). It provides a dynamic approach for presenting Missouri's environmental public health data for 2001-2005.
- In an attempt to identify both active and former lead mining, milling and smelter sites that may pose an environmental or human health risk, the EPA, Missouri Department of Natural Resources (DNR), and DHSS are cooperating in a project to update the Incidents of Mines, Occurrences, and Prospects (IMOP) Database.
- A collaborative project between the DHSS and DNR led to the purchase by the Doe Run Company of 160 houses in Herculaneum, Missouri where children under the age of 72 months lived.
- The Relative Pocket of Need (RPoN) is a modular formula developed by the EPHT team to calculate need for a wide variety of public health concerns and assist in decision-making by public health managers.
- The Tulane University Academic Partner of Excellence, along with several of its EPHT partners, explored the feasibility of establishing a Mercury in Fish Interstate Network (Mercury FIN). The goal of the network was to demonstrate and implement the EPHT framework using fish tissue data.

Missouri's Key Milestones

January 2001	PEW Environmental Health Commission calls for the creation of a coordinated public health system to prevent disease by tracking environmental health threats.
January through March 2002	In response, Congress discusses and appropriates funding to the CDC to enable the development of the national EPHT Program.
March through July 2002	CDC develops the EPHT grant and solicits Requests for Applications (RFA).
July through August 2002	DHSS Section for Environmental Public Health develops and submits grant proposal
September 2002	Section for Environmental Public Health is awarded funding for the EPHT program along with 19 other state and local health departments and 3 schools of public health.
October 2002	EPHT program commences.
December 2002	EPHT program moves to the DHSS Office of Surveillance (OOS)
January 2003	OOS begins to execute the EPHT program
January 2003 through present	Multiple grant activities and collaborative projects

September 2005	Original 3-year grant ends. CDC issues a 10-month extension to current grantees, prior to releasing a new RFA.
November 2005	Missouri EPHT program is moved to the newly created Bureau of Environmental Epidemiology within the Section for Disease Control and Environmental Epidemiology.
April through May 2006	DHSS EPHT develops and submits grant proposal.
July 2006	10-Month Grant Extension Ends. Missouri EPHT program is awarded funding to continue activities.
August 2006	New EPHT 5-year grant cycle begins.
August 2006 through present	Multiple grant activities and collaborative projects focusing on network development and implementation.

CDC's National EPHT Network Timeline

Fiscal Year 2005	• Fund up to five Academic Partners for Excellence in EPHT for methods development and/or training • Implement EPHT 101 training course • Identify National EPHT Network standards and specifications (update annually) • Disseminate EPHT Research Agenda • Deploy outreach strategy • Launch EPHT communications library • Expand partnership to at least two additional organizations/agencies (repeat annually) • Publish EPHT mini-monograph in scientific literature • Convene National EPHT Conference (repeat annually) • Complete state/local data linkage project initiated in FY 2002
Fiscal Year 2006	• Collate and disseminate information about lessons learned from completed state/local/national projects • Establish recommendations for initial set of methods and tools for National EPHT Network (update annually) • Disseminate National EPHT Network Implementation Plan version 1.0 • Fund state/local health departments to construct state/local networks • Begin construction of CDC gateway for National EPHT Network • Disseminate EPHT Communications Plan version 1.0 • Evaluate outreach strategy • Begin implementation of at least two regional training courses per year • Complete state/local data linkage projects initiated in FY 2003

Fiscal Year 2007	• Expand the number of state/local health departments funded to construct local/state networks (contingent on funding levels and annually thereafter) • Establish trading partner agreements between CDC and current state/local/federal partners (update annually) • Produce EPHT annual report • Evaluate communications activities • Update EPHT Research Agenda
Fiscal Year 2008	• Facilitate deployment of state/local networks • Launch awareness campaign to promote use of the Network • Deploy National EPHT Network • Publish EPHT monograph in scientific literature
Fiscal Year 2009	• Evaluate National EPHT Network design, functionality, and content • Publish EPHT annual report • Begin development of 2010–2015 strategic plan
Fiscal Year 2010	• Disseminate National EPHT Network Enhancement Plan • Update EPHT Research Agenda

Organization and Assignment of Responsibilities

DHSS Staff/Program Organization

The department is organized into three programmatic divisions: Regulation and Licensure, Senior and Disability Services, and Community and Public Health.

The Division of Regulation and Licensure ensures the quality of a variety of entities including child care and lodging facilities, hospitals and ambulatory surgical centers, medical and industrial sources of radiation, home health and hospice providers, long-term care facilities including residential care, intermediate care and skilled nursing facilities, emergency medical services and lead remediators and pharmacies and persons authorized to prescribe or dispense controlled substances.

The Division of Senior and Disability Services investigates allegations of elder abuse and administers programs designed to maximize independence and safety for adults who are at risk of abuse, neglect, and financial exploitation or have long-term care needs that can be safely met in the community.

The Division of Community and Public Health administers programs that impact family health, the prevention of chronic diseases, nutrition and other programs that improve the health of communities. It is also the principal unit involved in the surveillance and investigation of the cause, origin, and method of transmission of communicable diseases and environmentally related medical conditions including the EPHT program.

More information on the Department's organization is included as Appendix A: EPHT Staff Listing and Appendix C: DHSS Organization Chart.

Designation of Spokesperson

The EPHT program relies on the DHSS Office of Public Information to speak publicly on behalf of the program. Roger Gibson, BS, MPH, the Environmental Public Health Tracking Program Grant Manager, has been designated as the EPHT contact to the Office of Public Information. Mr. Gibson has managed the EPHT program since its inception. He is responsible for grant expenditures, deliverables, and program coordination. Mr. Gibson has 30 years public health experience in management, environmental public health, environmental epidemiology, and surveillance. He was responsible for the DHSS environmental public health response to the flood of 1993. He has also served as bureau chief of the former Bureau of Community and Environmental Health as well as the deputy chief of the former Office of Surveillance.

Information on contacting Mr. Gibson is included in the *Point of Contact* Section of this plan.

24/7 Staffing for Crisis

DHSS has implemented emergency response and terrorism procedures and made plans for the specialized equipment and staff needed to respond more quickly if a catastrophic event occurred in Missouri.

The Center for Emergency Response and Terrorism (CERT) was created to coordinate regional and state planning for, and response to, public health emergencies and natural disasters, including biological, chemical, and nuclear terrorism.

The Department Situation Room (DSR) ensures staffing and functional ability to operate as a command-and-control center in the event of an emergency or crisis. The DSR has state laboratory, epidemiology, communication and medical capacity. The DSR is staffed by a duty officer 24 hours a day, 7 days a week, and monitors the day-to-day emergency preparedness of the state. For emergencies and disease reporting, call the DSR at 800-392-0272.

Missouri's best defense is a coordinated response that incorporates state and local capabilities into one plan, and this is being accomplished through contracts with 32 local public health agencies and the hiring of regional planners, regional epidemiology specialists, regional public information officers, and regional trainers. State and local public health agencies have made significant improvements in planning, surveillance and epidemiology, laboratory capacity, communications and public information, and education and training.

Public Health's Role

- Activate and maintain High Alert Disease Reporting System
- Assure public health investigation response
- Assure rapid medical care on a large scale
- Assure lifesaving medical supplies
- Prevent secondary transmission
- Provide public information
- Provide ongoing education and training
- Assure rapid chemical and nuclear response
- Assure management of fatalities
- Assure immediate communications among experts, supply sources and on-site managers

Interaction/Responses Required of Other Agencies

CERT also ensures interdepartmental coordination between other local and state agencies on public health emergency planning and response along with hospitals, other healthcare organizations, and other agencies like local law enforcement. DHSS developed the first Memorandum of Understanding in the nation with the FBI to aid in investigations of terrorist acts. The center also assures that the state and regional plans are regularly exercised, evaluated and refined based on the exercises and evaluations.

Partnerships

BEE has a long established history of collaboration with local, state, and federal entities. While future EPHT projects will involve Missouri-based agencies, the EPHT team will also continue to vigorously pursue opportunities to work with agencies in other states and at national levels. Our commitment to working closely with our partners is illustrated by the following list of collaborative partners, past and present, including: the Missouri

Departments of Administration (OA), Agriculture (DOA), Conservation (MDC), Economic Development (DED), Elementary and Secondary Education (DESE), Natural Resources (DNR), Social Services (DSS), and the Missouri Census Data Center (MCDC).

Within DHSS, the EPHT team continues to collaborate with the following: Missouri Cancer Registry, Chronic Disease, Minority Health, Special Health Care Needs, Health Informatics, Vital Records, and the Maternal, Child, and Family Health programs.

The Missouri EPHT team has also collaborated with several colleges and universities including: Tulane University, University of Missouri-Columbia, Lincoln University, Saint Louis University, Washington University in St. Louis, Missouri Southern State College, Central Methodist University, and University of California-Berkeley.

Further collaborative relationships have been established with the following federal agencies: EPA, ATSDR, United States Geological Survey (USGS), Department of Housing and Urban Development (HUD), Department of Health and Human Services (HHS), and CDC.

In an attempt to normalize data collection and sharing with our partners in the future, the EPHT program has developed the Missouri Data Investigation, Collection, and Evaluation (DICE) protocol. This protocol includes flowcharts and templates that document the processes followed by all EPHT staff when contacting and investigating potential data sources, assessing data available, and evaluating its potential for partnership or inclusion on the state EPHT network. This protocol includes a Missouri-specific Trading Partnership Agreement (TPA) template to provide a consistent standard for all Missouri EPHT partnerships.

More information on EPHT partnerships is included as Appendix E: Trading Partnership Agreement Contacts.

Situations and Assumptions

How risks are identified
The Missouri EPHT team, as part of its self-assessment process, undertakes an ongoing, continual Strengths/Weaknesses/Opportunities/Threats (SWOT) Analysis. This analysis identifies what is happening in the program and describes key factors that may influence programmatic issues. The detailed evaluation of trends, conditions, opportunities, and obstacles provides direction in the development of the program's goals and objectives.

The process of identifying potential risks, establishing causes, and estimating the probability that adverse effects will occur begins with silent brainstorming by utilizing a survey of EPHT team members and affiliated partners.

The survey is sent to each person with instructions to complete the questionnaire based on their own experiences and viewpoint for each goal and objective identified in the Missouri EPHT Strategic Plan (see figure 3).

What could go wrong?	
What is the likelihood that it would?	☐ Low ☐ Medium ☐ High
Who would be affected?	
What is the seriousness?	☐ Minimal ☐ Moderate ☐ Severe ☐ Extreme
How can this be avoided?	
What is the contingency plan?	
What will it cost (estimate)?	$
Who needs to be contacted?	
What message needs to be relayed?	
What are the roles/responsibilities of each team member?	
What criteria can be used to evaluate the results?	
Thoughts/Comments:	

Figure 3: Initial Questionnaire of EPHT Team Members and Affiliated Staff

Upon receipt of the completed questionnaires, the responses are compiled and consolidated (see figure 4). The consolidated responses are then distributed to all EPHT team members and affiliated staff.

Goal	
Objective	
Strategies	

What Could Go Wrong	Likelihood	Seriousness

How Can This Be Avoided?	What Is The Contingency Plan?

Who Would Be Affected?	Who Would Need To Be Contacted?

What will It Cost (estimate)?	What Message Needs To Be Relayed?

Thoughts/Comments

RETREAT NOTES: _____

_____

_____

Figure 4: Compiled Questionnaire Response Format

A retreat is held for the purpose of reviewing and evaluating the results of the survey. Free-form brainstorming is encouraged. An affinity diagram is then created to organize the risks to each goal and objective into a visual pattern.

Once the group reaches consensus regarding the risks to each goal and objective, the likelihood and seriousness of each are discussed. Likelihood refers to the probability that the risk may occur. Responses are classified as low, medium, or high. Seriousness refers to the impact the risk would have on the EPHT program, if the risk were to occur. Responses are classified as low, moderate, severe, or extreme.

In order to produce a risk register, numerical values have been assigned to each classification for both likelihood and seriousness (see figure 5). The risks to each goal and objective are scored individually with the minimum possible score a 2 and the

maximum possible score a 7 (see figure 6). Once the scores are calculated, a risk plot chart is produced to organize the information into a visual pattern. The risk plot chart is color coded by priority. Red represents the highest priorities, yellow the medium, and green the lowest (see figure 7).

	Likelihood	Seriousness
Low/Low	1	1
Medium/Moderate	2	2
High/Severe	3	3
Extreme	N/A	4

Figure 5: Risk Register Classification Values

	Likelihood	Seriousness	Risk Score
Risk A	1	3	4
Risk B	2	1	3
Risk C	3	4	7
Risk D	3	2	5

Figure 6: Example of Risk Register Scoring

High		D		C
Medium	B			
Low			A	
	Low	Moderate	Severe	Extreme

Figure 7: Example of Risk Plot Charting

By utilizing both the risk register and risk plot chart, the EPHT team is then able to stratify, or rank, each risk and plan appropriate communication and management strategies for each.

Special Considerations to Special Populations

It is the policy of DHSS to provide equal opportunity to applicants, employees and clients without regard to race, color, religion, sex, age, national origin, political belief, veteran status, or disability.

In accordance with the Affirmative Action Program, Governor's Executive Order 94-03, applicable federal and state laws and regulations, and the principles of affirmative action and equal employment opportunity, DHSS provides equal opportunity for all in recruitment, hiring, training, promotion, transfer, compensation, and all other terms and conditions of employment without regard to protected category status. These same principles apply to all aspects of service provision. DHSS is firmly committed to compliance and enforcement of all federal and state regulations, which forbid discrimination in the delivery of services to clients and patients served by the programs

of the Department. DHSS conducts routine compliance reviews of all contractors to ensure regulations are met.

All staff and contractors of DHSS adhere to the DHSS Administrative Policy and the Workforce Diversity Plan. Supervisory and management staff shall assure that the intent, as well as the stated requirements, are implemented in all employee relations and personnel practices.

Responsibility for Public Notification and Media Involvement
DHSS is frequently called upon to answer questions or make statements on complex issues. In order for the EPHT program to maintain credibility with the media, elected officials, and the public, it is important that all information that is released be accurate and consistent with Department priorities and policies.

The DHSS Office of Public Information coordinates all media contacts for DHSS, including the EPHT team, and provides information in response to inquiries from other agencies and the public. The office also provides training in risk communication to assist department employees in efforts to reduce and prevent illness, injury and death during a public health response.

The duties of the office include:

- Preparing and distributing news releases and reports on activities of the department,
- Designing and editing publications including newsletters, brochures, and pamphlets for divisions and programs within the department,
- Advising other units of the department about the communications aspects of public health and senior services programs and assisting them in designing their publications and audiovisual materials, and
- Providing video services for the department.

A complete contact listing is included as Appendix D: DCP Public Notification Staff Contact Listing.

Process/Procedures for Public Notification
Interaction with the media and the public
In accordance with DHSS policy, the EPHT team will respond by answering specific questions about previously published information or public facts and established Department policy. Replies to correspondence will be responded to within 10 calendar days with the requested information or an explanation to the initiator of the correspondence of the delay and an approximate date when the full response will be available.

In case of contact with the media, the EPHT team member will send an electronic mail message or call the Chief of the Office of Public Information, to inform him/her that the information has been requested and how the team member responded. The team

member will only discuss established DHSS policy and will avoid giving personal opinions that are not accepted Department policy.

If a reporter or a citizen contacts an EPHT team member regarding an issue the team member believes is controversial or they feel uncomfortable answering, the team member shall contact the Chief of the Office of Public Information, before responding to the inquiry or refer the reporter/citizen to the Chief of the Office of Public Information.

This policy/procedure should not be construed as limiting the rights of an individual to exercise freedom of speech.

Interaction with the State Legislature, Congressional Delegation, or their staffs

Non-budgetary programmatic issues:

Telephone Contacts. When an EPHT team member receives a call from state or federal legislators or their staff, they are expected to answer specific questions regarding facts or clearly established policy but should refer any requests for opinions on issues not of a general nature to the Bureau of Environmental Epidemiology Chief, the Section of Disease Control and Environmental Epidemiology Chief, and Division of Community and Public Health Director. After such a contact, the team member will, within 24 hours, either call or send a brief electronic mail message update to those management staff listed above, the DHSS deputy director, and the Department Legislative Liaison.

Written Requests. Responses to written requests from the Legislature, Congress, or their staffs shall be routed through the Division of Community and Public Health Director's Office to the Department Legislative Liaison. Responses are to be provided within 10 calendar days with either the full information or an explanation of the delay and date for full reply.

Testimony. The Department director, chief operating officer, deputy director, Department Legislative Liaison, division directors, center directors, or their designees act to represent the Department at legislative and congressional hearings. When possible, planned testimony will be prepared in writing and provided to the Department Legislative Liaison at least 24 hours prior to the hearing unless directed otherwise.

Program Initiated Contacts. It is standard procedure for the Department director, chief operating officer, deputy director, division directors, center directors, and Department Legislative Liaison to, when necessary, initiate contacts with the Governor's Office, legislature, congress, or their staffs. Other Department staff may initiate such contacts with the prior approval of the Division of Community and Public Health Director. All such contacts will be reported within 24 hours either by phone or a brief electronic mail message to the Legislative Liaison.

Budget/funding issues

Telephone Contacts. When an EPHT team member receives a call from the Legislature, Congress, Governor's Budget Office, or their staffs, they are expected to answer specific questions regarding facts or established policy but they must refer any requests for opinions on budgetary issues, Department policy, facilities, etc., to the Director of the Division of Community and Public Health. After such a contact, the team member will, within 24 hours, either call or send a brief electronic mail message update to those staff listed above, in addition to the chief operating officer, the DHSS deputy director, and the Department Legislative Liaison.

Written Requests. The DHSS Division of Administration coordinates responses to written requests on budgetary matters.

Testimony. The Department director, chief operating officer, deputy director and/or division and center directors testify at state budget hearings. It is the primary responsibility of the DHSS Division of Administration to interface with the Gubernatorial, Senate or House budget staffs, the Congressional budget office and Office of Management and Budget on Department budgetary issues. The Department budget staff will attend all DHSS-related budget hearings and coordinate appropriate written response to questions that arise.

Fiscal Notes. Fiscal notes are formal requests from the state legislature asking state departments to estimate their costs for implementing proposed items of legislation. It is the policy of the DHSS to use fiscal notes to reflect, as accurately as possible, the true cost of a bill. It is the duty of the Division of Administration to coordinate fiscal note preparation by working with the Department Legislative Liaison, deputy director(s) and the division(s) or center(s) involved to assure that this policy is followed.

Other Requests for Information

Employees shall use good judgment when contacted about sensitive issues by key policymakers such as:

- County Commissioners/Board of Trustee members
- State Ombudsman
- City councilmen or aldermen
- Executives of state organizations and associations.

If the contact relates to a controversial or newsworthy issue, the Office of Public Information will be involved. If a request for information relates to legislation or legislative issues, the Department Legislative Liaison shall be involved. In other instances, the information may need to be conveyed directly to the Department Director’s Office or to one of the division/center directors, and the district/regional director.

Data Releases

Data releases are governed by many sources. Details regarding specific release of data may vary, depending upon the intended purpose, and are found in each Trading Partnership Agreement.

In general, statistical data can be released to such entities as local public health agencies, community planning partners, health care providers, and the general public in aggregate format. However, in some cases where aggregate data contains certain small numbers (termed small cell data) and could indirectly identify a patient (for example, release of risk and race in low prevalence and low population counties), data may be released in an alternate format (e.g., less than five cases, less than ten cases, etc.).

Patient level records are not public information, and may be shared only with other public health authorities and co-investigators of a health study if they abide by the same confidentiality restrictions required by the Department of Health and Senior Services under section 192.067 of Missouri's Revised Statutes.

Concept of Operations

> "Risk analysis is the science of evaluating health, environmental, and engineering risks resulting from past, current, or anticipated, future activities."
>
> "Risk analysis is an interdisciplinary science that relies on epidemiology and laboratory studies, collection of exposure and other field data, computer modeling, and related social and economic and communication considerations. In addition, social dimensions of risk are addressed by social scientists."
>
> - Risk Analysis
> An International Journal

Risk analysis, for the purpose of this plan, includes risk assessment, risk management, and risk communication. The EPHT team and affiliated partners understand that circumstances may arise that could create unique and unexpected situations. While no one document can detail every possible risk, this plan was created to address those risks specifically associated with Missouri's EPHT network and it's inclusion in the national network.

This plan is based on the Missouri EPHT Program's *Strategic Plan through July 31, 2010*. The use of the strategic plan as the source of the *Risk Communication and Management Plan* was made to:

- Be proactive, not reactive
- Build off of existing resources
- Provide detail for data partners and stakeholders
- Integrate planning processes to provide for consistent, cohesive self-assessment and evaluation of program activities

The Missouri EPHT *Strategic Plan through July 31, 2010* is available on the DHSS website at: http://www.dhss.mo.gov/EPHT/Reports.html.

General Risks

Risks

General risks to the Missouri EPHT program/network and its inclusion in the national network include:

A. A change in funding of the EPHT Program
B. CDC could change the priority of the EPHT Program
C. DHSS could change the priority of the EPHT Program
D. ITSD could change the priority of the EPHT Program
E. Reorganization of state agencies could impact partnerships
F. Change in DHSS application architecture (MOHSAIC)
G. Loss of staff involved in EPHTN
H. Inability of hire for vacant positions
I. Misconceptions/confusion about the EPHT Program and Network

Risk Register

Risk	Likelihood	Seriousness	Risk Score
A	1	4	5
B	1	4	5
C	1	3	4
D	1	3	4
E	2	2	4
F	1	3	4
G	1	2	3
H	2	2	4
I	3	3	6

Risk Plot Chart

High			**I**	
Medium		**E H**		
Low		**G**	**C D F**	**A B**
	Low	Moderate	Severe	Extreme

Mitigating Factors and/or Contingency Plans

In order to diminish these risks, the EPHT team is working to:

- Continue to educate higher management in both the Department of Health and Senior Services and the Office of Administration about the benefits, functionalities, and partnerships of the EPHTN.
- Ensure continuation of external funding.
- Educate and promote the necessity and use of both the national and state EPHTN.

Goal 1:	Develop a PHIN-compliant secure network for the collection, access, analysis, and dissemination of environmental public health data, knowledge, and information.
Objective 1:	House and maintain data in a way that can be added to the National EPHT Network.

Risks

Risks to this goal and objective include:

A. Bad data quality from the source
B. Use of data for reasons other than it was collected
C. Standards not descriptive or over prescriptive

Risk Register

Risk	Likelihood	Seriousness	Risk Score
A	3	2	5
B	3	1	4
C	1	1	2

Risk Plot Chart

High	**B**	**A**		
Medium				
Low	**C**			
	Low	Moderate	Severe	Extreme

Mitigating Factors and/or Contingency Plans

In order to diminish these risks, the EPHT program is:

- Following proper information technology (IT) practices including the following of PHIN security and network standards.
- Conducting thorough testing of all IT systems to bear out any potential problems and the solutions necessary to repair them.
- Ensuring Missouri's participation in the Standards and Network Development (SND) subcommittee, to develop national standards for both the EPHTN and the data sets to be exchanged.
- Documenting in detail all policies and procedures necessary within each Trading Partnership Agreement for both data acquisitions and exchanges.
- Working with sister state agencies to adopt statewide equipment, software, and data standards.

Goal 1:	Develop a PHIN-compliant secure network for the collection, access, analysis, and dissemination of environmental public health data, knowledge, and information.
Objective 2:	Provide secure access to data for potential users.

Risks

Risks to this goal and objective include:

A. Network traffic from all users simultaneously could overload the system
B. Data may be lost through a catastrophic network failure
C. Sensitive data may be accessed by unauthorized parties through intrusive measures (hacking)
D. Unintentional unauthorized data access

Risk Register

Risk	Likelihood	Seriousness	Risk Score
A	1	2	3
B	1	4	5
C	1	4	5
D	1	2	3

Risk Plot Chart

High				
Medium				
Low		**A D**		**B C**
	Low	Moderate	Severe	Extreme

Mitigating Factors and/or Contingency Plans

In order to diminish these risks, the EPHT program is:

- Following proper information technology (IT) practices including the following of PHIN security and network standards.
- Conducting thorough testing of all IT systems to bear out any potential problems and the solutions necessary to repair them.
- Conducting load surveys of assess the condition of network traffic.
- Utilizing the “least-access” security method to assign user roles and access.
- Archiving all network files on a regular schedule. In the event of a server failure, data can to restored to their latest archived state.

Goal 1:	Develop a PHIN-compliant secure network for the collection, access, analysis, and dissemination of environmental public health data, knowledge, and information.
Objective 3:	Provide mechanisms for secure data transport.

Risks

Risks to this goal and objective include:

A. Unable to procure needed equipment
B. Failure to secure transport protocols
C. National PHIN standards don't work
D. National standards are not compatible with partners
E. National standards are not created in time for state implementation

Risk Register

Risk	Likelihood	Seriousness	Risk Score
A	1	2	3
B	1	3	4
C	2	2	4
D	2	2	4
E	1	2	3

Risk Plot Chart

High				
Medium		**C D**		
Low		**A E**	**B**	
	Low	Moderate	Severe	Extreme

Mitigating Factors and/or Contingency Plans

In order to diminish these risks, the EPHT program is:

- Ensuring Missouri's participation in the Standards and Network Development (SND) subcommittee, to develop national standards for both the EPHTN and the data sets to be exchanged.
- Documenting in detail all policies and procedures necessary within each Trading Partnership Agreement for both data acquisitions and exchanges.
- Working with sister state agencies to adopt statewide equipment, software, and data standards.

Goal 2:	Enhance Missouri's EPHTN workforce and infrastructure.
Objective 1:	Build EPHTN expertise through workforce development.

Risks

Risks to this goal and objective include:

A. Lack of participation in EPHT-related trainings
B. Resource and personnel limitations to provide training
C. Loss of collaboration on Local Emergency and Environmental Public Health Initiative

Risk Register

Risk	Likelihood	Seriousness	Risk Score
A	2	2	4
B	2	3	5
C	2	3	5

Risk Plot Chart

High				
Medium		**A**	**B C**	
Low				
	Low	Moderate	Severe	Extreme

Mitigating Factors and/or Contingency Plans

In order to diminish these risks, the EPHT program is:

- Educating stakeholders on the utility of the EPHTN
- Evaluating training effectiveness

Goal 2:	Enhance Missouri's EPHTN workforce and infrastructure.
Objective 2:	Facilitate the development and use of EPHTN by the enhancement and support of technological resources.

Risks

Risks to this goal and objective include:

A. Unable to procure equipment
B. Lack of appropriately trained support personnel
C. Unable to assist in upgrading partners' equipment to EPHTN standards

Risk Register

Risk	Likelihood	Seriousness	Risk Score
A	2	3	5
B	2	2	4
C	2	2	4

Risk Plot Chart

High				
Medium		**B C**	**A**	
Low				
	Low	Moderate	Severe	Extreme

Mitigating Factors and/or Contingency Plans

In order to diminish these risks, the EPHT program is:

- Selecting partners carefully
- Providing technical assistance to partners

Goal 3:	Use the EPHTN to guide policy, practice, and other actions to improve the health of Missourians.
Objective 1:	Identify, facilitate, and communicate emerging issues and the risks from environmental exposures to DHSS, allied agencies, and Local Public Health Agencies.

Risks

Risks to this goal and objective include:

A. Inappropriate or incomplete datasets
B. Inappropriate or incomplete data analysis
C. Conditions chosen because of influence, public opinion, and/or unfounded mandates

Risk Register

Risk	Likelihood	Seriousness	Risk Score
A	2	2	4
B	3	2	5
C	3	3	6

Risk Plot Chart

High		**B**	**C**	
Medium		**A**		
Low				
	Low	Moderate	Severe	Extreme

Mitigating Factors and/or Contingency Plans

In order to diminish these risks, the EPHT program is:

- Educating and promoting the necessity and use of metadata
- Providing consultation and technical assistance
- Promoting the use and understanding of good science through EPHT-related trainings

Goal 3:	Use the EPHTN to guide policy, practice, and other actions to improve the health of Missourians.
Objective 2:	Encourage the use of EPHTN to develop and implement education and outreach strategies by DHSS, allied agencies, and Local Public Health Agencies.

Risks

Risks to this goal and objective include:

A. Actions/reactions of program staff based on influence, public opinion, and/or unfunded mandates
B. Logistical problems in coordinating public events
C. Partners ignore/refuse technical advise

Risk Register

Risk	Likelihood	Seriousness	Risk Score
A	2	2	4
B	3	1	4
C	2	2	4

Risk Plot Chart

High	**B**			
Medium		**A C**		
Low				
	Low	Moderate	Severe	Extreme

Mitigating Factors and/or Contingency Plans

In order to diminish these risks, the EPHT program is:

- Working closely with stakeholders
- Continuing to educate program management and staff on EPHT
- Ensuring planning of public events and synthesizing lessons learned
- Publicly displaying products of the EPHTN regularly

Goal 4:	Foster collaboration among Missouri's Environmental Public Health Tracking partners.
Objective 1:	Identify and recruit partners for inclusion in EPHTN activities.

Risks

Risks to this goal and objective include:

A. Potential EPHT partners not inclined/choose not to participate
B. Potential EPHT partners unable to participate
C. Potential EPHT partners have restrictive policies
D. Lack of funding for support of partners

Risk Register

Risk	Likelihood	Seriousness	Risk Score
A	3	2	5
B	2	3	5
C	3	3	6
D	3	2	5

Risk Plot Chart

High		**A D**	**C**	
Medium			**B**	
Low				
	Low	Moderate	Severe	Extreme

Mitigating Factors and/or Contingency Plans

In order to diminish these risks, the EPHT program is:

- Continuing to educate partners about the importance and functionalities of the EPHTN
- Creating innovative methods to obtain participation
- Creating useful products that directly benefit partners

Goal 4:	Foster collaboration among Missouri's Environmental Public Health Tracking partners.
Objective 2:	Work with the Missouri EPHT Advisory Group to identify environmental public health concerns.

Risks

Risks to this goal and objective include:

A. Lack of participation in group
B. Lack of formal structure creates challenges
C. Personal interests influencing group
D. Regional Priorities influencing group
E. Lack of experts/expertise
F. Lack of data to adequately identify concerns

Risk Register

Risk	Likelihood	Seriousness	Risk Score
A	1	1	2
B	2	1	3
C	3	1	4
D	3	1	4
E	1	2	3
F	3	2	5

Risk Plot Chart

High	**C D**	**F**		
Medium	**B**			
Low	**A**	**E**		
	Low	Moderate	Severe	Extreme

Mitigating Factors and/or Contingency Plans

In order to diminish these risks, the EPHT program is:

- Creating an inventory of experts to act as a knowledge base
- Continuing a flexible communication system to interact with partners
- Retaining a informal group structure
- Supporting health and environmental data collection
- Supporting health and environmental data analysis

Goal 4:	Foster collaboration among Missouri's Environmental Public Health Tracking partners.
Objective 3:	Investigate and pursue funding to enhance and improve the EPHTN.

Risks

Risks to this goal and objective include:

A. Lack of potential funding sources/opportunities
B. Shortage of time/staff availability
C. Available funding opportunities fail to support the mission and vision of the EPHT program
D. Unable to secure funding
E. Funding secure is inadequate

Risk Register

Risk	Likelihood	Seriousness	Risk Score
A	2	2	4
B	3	2	5
C	2	1	3
D	2	2	4
E	3	1	4

Risk Plot Chart

High	**E**	**B**		
Medium	**C**	**A D**		
Low				
	Low	Moderate	Severe	Extreme

Mitigating Factors and/or Contingency Plans

In order to diminish these risks, the EPHT program is:

- Enhancing grant –writing skills
- Making grant-finding a priority
- Writing good proposals
- Support partner's efforts to secure funding

Goal 4:	Foster collaboration among Missouri's Environmental Public Health Tracking partners.
Objective 4:	Identify and improve processes for working with partners.

Risks

Risks to this goal and objective include:

A. Turf battles
B. Failure to improve despite efforts
C. Partners unwilling to cooperate
D. Implementation of change not possible
E. Changes do not uniformly benefit everyone

Risk Register

Risk	Likelihood	Seriousness	Risk Score
A	3	2	5
B	2	2	4
C	3	2	5
D	2	2	4
E	3	2	5

Risk Plot Chart

High		**A C E**		
Medium		**B D**		
Low				
	Low	Moderate	Severe	Extreme

Mitigating Factors and/or Contingency Plans

In order to diminish these risks, the EPHT program is:

- Examining effects of change for all parties prior to implementation
- Soliciting input from all interested parties
- Providing technical assistance
- Implementing pilot projects for proposed changes
- Evaluating effects of implemented changes

Potential Costs

In the event that these risks were to occur, potential monetary costs would be limited to the capital already expended in benefit of the program or those necessary to repair and/or replace equipment needed to operate Missouri's EPHTN portal.

However, non-monetary costs would be substantial and threaten the viability of Missouri's network. These costs include the loss of:

- Data quality, availability, continuity, and reliability
- Collaborative data sharing, projects, and research with other states and universities
- Staff time, talent, experience, and credibility
- Goodwill and faith by stakeholders and/or partners
- Recruiting new partners and the retention of existing partners

EPHT Communications

In the event that any of these risks were to occur, the EPHT team will work closely with the Office of Public Information to develop and utilize messages appropriate to each audience. Messages will be tailored specifically to each established security role and delivered in the most efficient and timely manner possible.

Primary delivery strategies include posting the notice on Missouri's EPHTN portal, electronic mail, and telephone. Secondary delivery strategies include posting the notice on the Missouri State Government and the Department of Health and Senior Services Internet sites.

Condition-Specific Communications

The EPHT program will share results of its analysis and findings with the DHSS program dedicated to that condition. The program will be responsible for determining the need for any condition-specific communications necessary. For these communications, the EPHT team will act as the knowledge base and work closely with the program responsible and the Office of Public Information to develop and test appropriate messages and strategies.

Plan Development and Maintenance

This RCMP is based on previous experiences, ongoing community involvement, information gathered from personal interviews, and other input from community members interested in and/or involved in the EPHT program (e.g., the public, partner entities, elected officials, local business and industry, and government representatives).

The comments received during the interviews have been analyzed, and community involvement and public information activities will continue to be tailored to meet the needs identified by the community.

The RCMP will continue to be revised and updated, as needed, as the program progresses. As part of the EPHT program's ongoing self-assessment, interested parties from the EPHT program, DHSS, ITSD, and other partner entities will meet periodically throughout the year and review this plan to determine whether revisions are needed. Revisions will be published annually.

The RCMP is posted on the DHSS Internet site and available at: http://www.dhss.mo.gov/EPHT/Reports.html. The plan is also provided to all partner entities and included in executed Trading Partnership Agreements (TPA).

Appendices

A. EPHT Staff Listing (1 pages)
B. EPHT Grantee Map (1 page)
C. DHSS Organization Chart (1 pages)
D. DHSS Public Notification Contact Listing (1 pages)
E. Trading Partnership Agreement Contacts (1 pages)
F. EPHT Acronym List (3 pages)
G. References and Sources (6 pages)

Appendix A

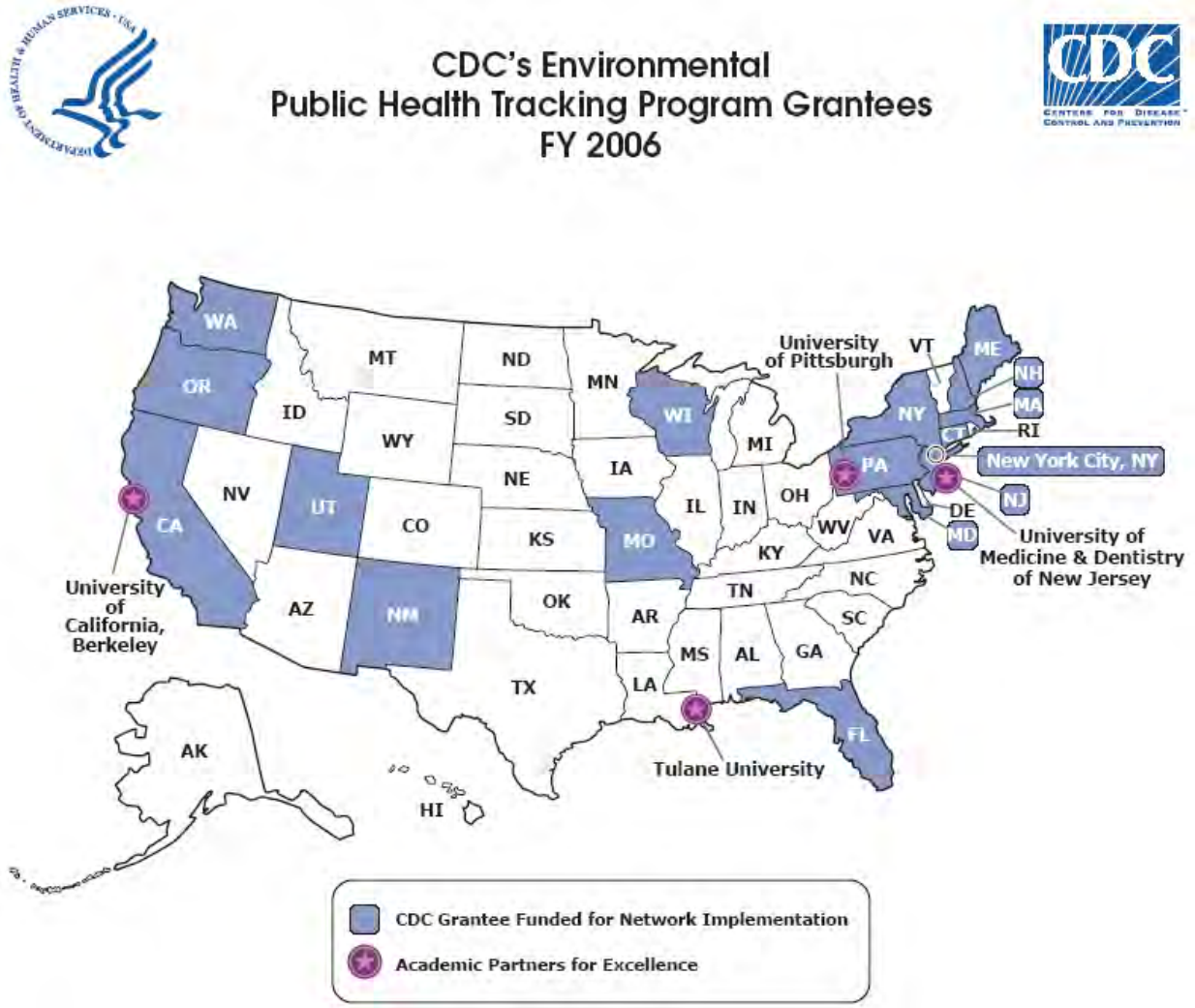
EPHT Staff Listing

Position Title	Staff Name	Contact Number*	% of Time
Public Health Manager	Roger Gibson	751-6102	100%
Environmental Epidemiologist			100%
Epidemiology Specialist			100%
Research Analyst II	Ray Shell	526-0207	100%
Research Analyst II	Kris Schwartz	526-0806	100%
Research Analyst III	David Litchfield	751-6416	15%
Computer Information Technology Specialist I	Bruce Gibson	526-1029	100%
Computer Information Technologist II	Tracey Tiethoff	526-3617	100%
Health Program Representative I/II			100%
Office Support Assistant			90%
Geographic Information Systems Analyst	Jeff Patridge	522-8330	95%
Geographic Information Systems Analyst			15%
Geographic Information Systems Specialist	Deborah Briedwell	522-8306	15%

*All telephone numbers are within the 573 area code.

Appendix B

EPHT Grantee Map



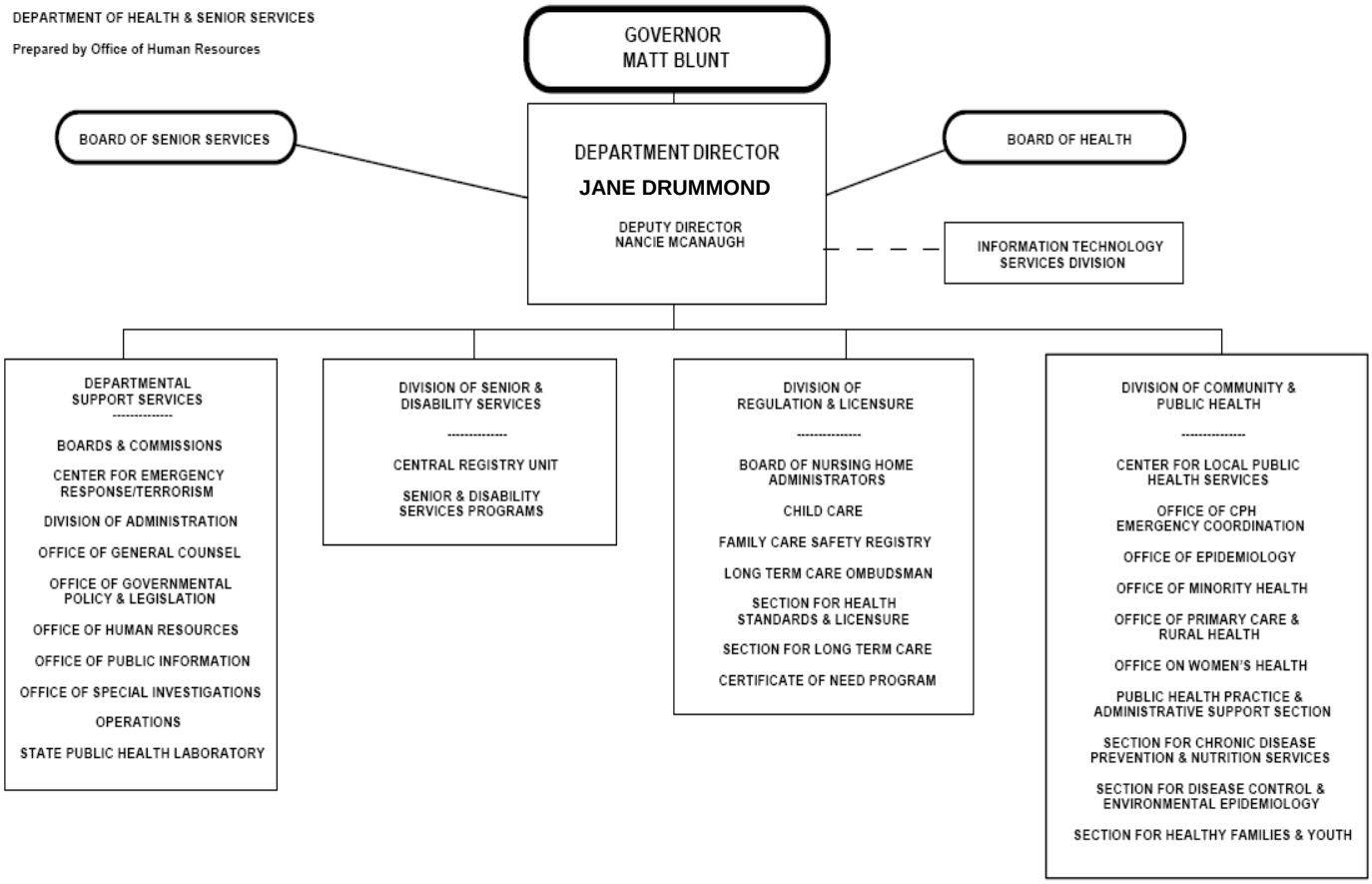
Summary

Funded for Network Implementation			
California	Massachusetts	New York City	Washington
Connecticut	Missouri	New York State	Wisconsin
Florida	New Hampshire	Oregon	
Maine	New Jersey	Pennsylvania	
Maryland	New Mexico	Utah	

Academic Partners for Excellence			
Tulane University	University of California, Berkeley	University of Pittsburgh	University of Medicine and Dentistry of New Jersey

Appendix C

DHSS Organization Chart



Appendix D

Division of Community and Public Health
Public Notification – Staff Contact Listing

DHSS Department Director – Jane Drummond
Executive Assistant – Debbie Mebruer

DHSS Deputy Director – Nancie McAnaugh
Executive Assistant – Kathy Branson

Office of Governmental Policy and Legislation Chief– Andrew Wankum
Assistant – Tracy Kramel

Community and Public Health Division Director – Glenda Miller
Assistant – Angie DeBroeck

Community and Public Health Deputy Division Director – Harold Kirbey
Community and Public Health Director of Operations – Perry Mathes
Assistant – Stacy Kempker

Section for Disease Control and Environmental Epidemiology Chief – Brad Hall
Assistant – Monica Shoults

Bureau of Environmental Epidemiology Chief – Gale Carlson
Assistant – Teresa Stangl

Appendix E

Trading Partnership Agreement (TPA) Contacts

The EPHT team has completed and submitted a TPA template to the DHSS, Office of General Counsel for review. Pending the legal opinion, no trading partnership agreements have been executed.

Appendix F

EPHT Program – Acronym List

Acronym	Meaning
ABLES	Adult Blood Lead Epidemiology and Surveillance
ACS	American Community Survey
ACSII	American Standard Code for Information Interchange
APEX	Academic Partners for Excellence
ARUP	Associated Regional Utah Pathologists
ATSDR	Agency for Toxic Substances and Disease Registry
AVR	analysis, visualization, and reporting
BEE	Bureau of Environmental Epidemiology
BHI	Bureau of Health Informatics
BRFSS	Behavioral Risk Factor Surveillance System
BVR	Bureau of Vital Records
BT	Local Bioterrorism Program
CAFO	concentrated animal feeding operations
CARES	Center for Agricultural, Resource, and Environmental Systems, MU
CDC	Centers for Disease Control and Prevention
CLPPP	Childhood Lead Poisoning Prevention Program
DCEE	Section for Disease Control and Environmental Epidemiology
DCPH	Division of Community and Public Health
DED	Department of Economic Development
DESE	Department of Elementary and Secondary Education
DHSS	Department of Health and Senior Services
DICE	Data Investigation, Collection, and Evaluation protocol
DNR	Department of Natural Resources
DOA	Department of Agriculture
DSS	Department of Social Services
EPA	Environmental Protection Agency
EPHT	Environmental Public Health Tracking
FGDC	Federal Geographic Data Committee
FOIA	Freedom of Information Act
FTE	Full Time Employee
GIS	Geographic Information System
GPS	Global Positioning System
HAN	Health Alert Network
HHS	Health and Human Services
HSEES	Hazardous Substances Emergency Events Surveillance
HUD	Housing and Urban Development

Acronym	Meaning
IDPH	Illinois Department of Public Health
INPHO	Information Network for Public Health Officials
ITSD	Information Technology Services Division
JCP	Java Community Process
JSR	Java Specification Request
LDAP	Lightweight Directory Access Protocol
LPHA	Local Public Health Agency
LSO	local security officer
MAN	Metropolitan Area Network
MCDC	Missouri Census Data Center
MCO	Managed Care Organization
MDC	Missouri Department of Conservation
MEA	Missouri Enterprise Architecture
MHA	Missouri Hospital Association
MICA	Missouri Information for Community Assessment
MOHSAIC	Missouri Health Strategic Architectures and Information Cooperative
MOHSIS	Missouri Health Surveillance Information System
MOU	Memorandum of Understanting
NAHDO	National Association of Health Data Organizations
NAPHSIS	National Association for Public Health Statistics and Information Systems
NBS	NEDSS Base System
NCEH	National Center for Environmental Health
NCPHI	National Center for Public Health Informatics
NEDSS	National Electronic Disease Surveillance System
NIST	National Institute of Standards and Technology
OA	Missouri Office of Administration
OASIS	Organization for the Advancement of Structured Information Standards
ODS	operational data store
OMB	Office of Management and Budget
PHASE	Public Health Air Surveillance Evaluation
PHCDM	Public Health Conceptual Data Model
PHDIR	Public Health Directory
PHPAS	Section for Public Health Practice and Administrative Support
PHIN	Public Health Information Network
PMO	Program Marketing and Outreach
PSO	program security officer
QA	quality assurance
QC	quality control
RPoN	Relative Pocket of Need formula
SDWIS	Safe Drinking Water Information System

Acronym	Meaning
SND	Standards and Network Development
SOA	service oriented architecture
SPHL	State Public Health Lab (Missouri)
STELLAR	Systematic Tracking of Elevated Lead Levels and Remediation
TCAEPH	Tulane Center of Applied Environmental Public Health
TPA	Trading Partnership Agreement
UDS_IN	Undifferentiated Data Store Inbound
USGS	United States Geological Survey
VPN	Virtual Private Network

Appendix G

References and Sources

"Aims and Scopes", Risk Analysis, An International Journal, n.d. http://www.blackwellpublishing.com/aims.asp?ref=0272-4332&site=1 (accessed November 3, 2006).

"*Defense Acquistion University*." n.d. http://www.deskbook.osd.mil/jsp/default.jsp (accessed Nov. 3, 2006).
AT&L Knowledge Sharing Systems

"Main Page," Risk Analysis, An International Journal, n.d. http://www.blackwellpublishing.com/journal.asp?ref=0272-4332 (accessed November 3, 2006).

"Missouri Department of Health and Senior Services," Missouri Department of Health and Senior Services, n.d. http://www.dhss.mo.gov/ (accessed November 3, 2006).

"*Naval Safety Center - Operational Risk Management*." n.d. http://www.safetycenter.navy.mil/orm/default.htm (accessed Oct. 12, 2006).

"*Public Participation Toolbox*." n.d. http://chppm-www.apgea.army.mil/risk/PDF/toolbox.pdf (accessed Oct. 5, 2006).
U.S. Army Center for Health Promotion and Preventive Medicine

"*Risk Management Toolkit*." n.d. http://www.mitre.org/work/sepo/toolkits/risk/ (accessed Nov. 2, 2006).

"*U.S. Army Center for Health Promotion and Preventive Medicine*." n.d. http://chppm-www.apgea.army.mil/ (accessed Oct. 5, 2006).

"*US Air Force Center for Environmental Excellence (AFCEE)*." n.d. http://www.afcee.brooks.af.mil/afceehome.asp (accessed Nov. 2, 2006).
Allen, F. W. (1987). Towards a holistic appreciation of risk: The challenge for communicators and policy makers. *Science, Technology & Human Values*, *12* (3- 4), 138- 143.

Baird, B. R. N. (1986). Tolerance for environmental health risks: The influence of knowledge benefits, voluntariness, and environmental attitudes. *Risk* analysis 6, 425-435.

Bradbury, J. A. (1989). The policy implications of differing concepts of risk. Science Technology & Human Values, 14, 380- 399.

CDCynergy 2001 - Your Guide to Effective Health Communication. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. CD-Rom. Version 1.2.1

Chess, C., Saville, A., Tamuz, M., & Greenberg, M. (1992). The organizational links between risk communication and risk management: The case of Sybron Chemicals Inc. *Risk Analysis*, 12, 431- 438. (*)

Clarke (Eds.), Organizations uncertainties and risk (pp. 27- 53). Boulder CO: Westview Press.

Clarke, L. (1989). Explaining choices about technological risks. Social Problems, 1, 22- 35.

Clarke, L. (1992). Context dependency and risk decision making. In J. F. Short, Jr., & L.

Cohen, B., & Lee, I. (1979). A catalog of risks. *Health Physics*, *11*, 879- 887.

Covello, V. T. (1989). Issues and problems in using risk comparisons for communicating right- to- know information on chemical risks. *Environmental Science and Technology*, 23, 1444- 1449.

Covello, V. T. (1991). Risk comparisons and risk communication: Issues and problems in comparing health and environmental risks. In R. E. Kasperson & P. M. Stallen (Eds.), *Communicating risk to the public* (pp. 79124). Dordrecht: Kluwer Academic Press.

Covello, V. T. (1992). Risk communication: An emerging area of health communication research. In S. A. Deetz (Ed.), *Communication Yearbook 15* (pp. 359- 373). Newbury Park CA: Sage Publications. (*)

Covello, V. T., & Allen, F. (1988). *Seven cardinal rules of risk communication*. Washington DC: Environmental Protection Agency.

Covello, V. T., & Mumpower, J. (1985). Risk analysis and risk management: An historical perspective. *Risk Analysis*, 5, 103- 120.

Covello, V. T., McCallum, D. B., & Pavlova, M. T. (Eds.) (1989). *Effective risk communication: The role and responsibility of government and nongovernment organizations.* New York: Plenum Press. (*)

Covello, V. T., Slovic, P., and von Winterfeldt, D. (1986). Risk communication: A review of the literature. *Risk Abstracts*, *3* (4), 172- 182.

Covello, V. T., von Winterfeldt, D., & Slovic, P. (1986). - Communicating risk information to the public. *Risk Abstracts*, 3, 1- 14.

Decker, Chris. "*Navy ATFP Risk Management & Critical Infrastructure Protection*." Feb. 2006. http://www.tisp.org/files/isbe2006/decker---government-forum.pdf (accessed Nov. 2, 2006).

Department of Defense, Defense Acquisition University/Defense Systems Management College. *DSMC Risk Management Guide for DoD Acquisition*, 2001. Fort Belvoir, VA: Defense Acquisition University Press, 2001.
Fourth Edition

Fietkau, H. J. (1990). Accident prevention and risk communication in environmental protection: A sociopsychological perspective. *Industrial Crisis Quarterly*, 4, 277- 289.

Fiorino, D. J. (1989). Technical and democratic values in risk analysis. *Risk Analysis*, 9, 293- 299.

Fiorino, D. J. (1990). Citizen participation and environmental risk: A survey of institutional mechanisms. *Science. Technology, & Human Values*, *15* (2), 226- 243.

Fischhoff, B. (1985). Managing risk perception. *Issues in* Science *and Technology*, 2, 83- 96.

Fischhoff, B. (1987). Treating the public with risk communication: A public health perspective. *Science, Technology & Human Values*, *12* (3- 4), 13- 19.

Fischhoff, B., Lichenstein, S., Slovic, P., Derby, S. C., & Keeney, R. (1982). *Acceptable risk*. Cambridge MA: Cambridge University Press.

Fulton, Keith and Sandy Martinez. ""*Hands-On Skill Building" - Risk Communication*." n.d. http://www-nehc.med.navy.mil/EP/RC%20Article%20-%20Risk%20Communication1.pdf (accessed Nov. 3, 2006).

Graham, John D and Lorenz Rhomberg. "How Risks Are Identified and Assessed." Annals of the American Academy of Political and Social Science, Vol. 545. Challenges in Risk Assessment and Risk Management (May 1996): 15-24.

Hadden, S. G. (1989). *A citizen's right to know: Risk communication and Public policy*. Boulder CO: Westview.

Hance, B. J., Chess, C., & Sandman, P. M. (1988). *Improving* dialogue with communities: A risk communication manual *for government*. Report to the New Jersey Department of Environmental Protection, Division of Science and Research. Trenton: New Jersey Department of Environmental Protection.

Heimer, C. A. (1988). Social structure, psychology, and the estimation of risk. *Annual Review of* Sociology 14, 491519.

Johnson, B. B. (1993). "The mental model" meets "the planning process": Wrestling with risk communication research and practice. R*isk Analysis*, 13, 5- 8.

Johnson, B. B. (1993). Advancing understanding of knowledge's role in lay risk perception. *RISK: Issues in Health & Safety*, *4*, 189- 212. (*)

Johnson, B. B. (1993). Coping with paradoxes of risk communication: observations and suggestions. *Risk Analysis* 13, 241- 243. (*)

Johnson, B. B., Sandman, P. M., & Miller, P. (1992). Testing the role of technical information in public risk perception. *RISK: Issues in Health & Safety*, 3, 341364. (*)

Kasperson, R. E. (1986). Six propositions on public participation and their relevance for risk communication. *Risk Analysis*, 6, 275- 281. (*)

Kasperson, R. E. (1987). Public perceptions of risk and their implications for risk communication and management. In S. R. McColl (Ed.), *Environmental health risks: Assessment and management* (pp. 287- 296). Waterloo ONT: University of Waterloo Press.

Kasperson, R. E., Renn, O., Slovic, P., Brown, H. S., Emel, J., Goble, R., Kasperson, J. X., & Ratick, S. (1987). The social amplification of risk: A conceptual framework. *Risk analysis*, 8, 177- 187.

Keeney, R., & von Winterfeldt, D. (1986). Improving risk communication. *Risk Analysis*, 6, 417- 424.

Krimsky, S., & Plough, A. (1988). *Environmental hazards: Communicating risks as a social process*. Dover MA: Auburn House.
Lave, L. (Ed.) (1987). *Risk assessment and management*. New York: Plenum Press.

Leiss, W. (Ed.) (1990). *Prospects and problems in risk communication*. Waterloo, ONT: Univ. of Waterloo Press.

McColl, S. R. (Ed.) (1987). *Environmental health risks: Assessment and management*. Waterloo ONT: University of Waterloo Press.

Merkhofer, I. W. (1987). The use of risk comparison to aid the communication and interpretation of the risk analyses for decision- making. In L. Lave (Ed.), *Risk assessment and management* (pp. 581- 607). New York: Plenum Press.

Missouri Department of Health and Senior Services, Section for Disease Control and Environmental Epidemiology. *120 Day Plan Report*, 2006. Jefferson City, MO: DCPH/SDCEE/BEE/EPHTP, 2006.

Missouri Department of Health and Senior Services, Section for Disease Control and Environmental Epidemiology. *EPHT Strategic Plan through July 31, 2010*, 2006. Jefferson City, MO: DCPH/SDCEE/BEE/EPHT, 2006.

Missouri Department of Health and Senior Services. *Administrative Manual*, n.d. Jefferson City, MO: MDHSS/DO, 2006.
Revised 01-31-2006

Missouri Department of Health and Senior Services. *Strategic Plan*, n.d. Jefferson City, MO: MDHSS/DO, 2006.

Missouri Information Technology Advisory Board. *Risk Management: Guidelines and Best Practices*, 2003. Jefferson City, MO: Project Management Committee-Risk Management Subcommittee, 2003.
Release 2.0

National Research Council (1989). *Improving risk communication.* Washington DC: National Academy Press.

Renn, O. (1990). Risk perception and risk management: A review. *Risk Abstracts*, *7* (1), 1- 9.

Renn, O. (1992). Risk communication: Towards a rational discourse with the public. *Journal of Hazardous Materials*, 29, 465- 519. (*)

Slovic, P. (1986). Informing and educating the public about risk. *Risk Analysis*, 6, 403-415. (*)

Slovic, P. (1987). Perception of risk. *Science*, *236*, 280285.

Slovic, P., Fischhoff, B., & Lichtenstein, S. (1981). *The assessment and perception of risk*. London: The Royal Society.

Stalling, R. A. (1990). Construction of risk. *Social Problems*, 37, 80- 95.
Starr, C. (1987). Risk management, assessment, and acceptability. *Risk Analysis*, 5, 98+.

Tasmanian State Government. *Guidelines - Complete Publication*, 2005. Hobart, Tasmania: 2005.
Version 5.0: http://www.projectmanagement.tas.gov.au/guidelines/pm6sum.htm

Texas Department of State Health Services. *Writing a Public Health Crisis and Emergency Risk Communication Plan*, n.d. Austin, TX: n.d.
http://www.dshs.state.tx.us/riskcomm/documents/Risk_Communication_Plan.pdf

Thomas, L. (1986, March). Risk communication: Why we must talk about risk. *Environment*, 28, 40+.

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. *CDC's Strategy for the National Environmental Public Health Tracking Program*, 2005. Atlanta, GA: CDC/NCEH/EHHE/EPHT: 2005.
Fiscal Years 2005-2010

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. *CDC's National Environmental Public Health Tracking Program National Network Implementation Plan (NNIP)*, 2006. Atlanta, GA: CDC/NCEH/EHHE/EPHT, 2006.
Version 1.0

U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. *Crisis and Emergency Risk Communication*, 2002. Atlanta, GA: 2002.
By: Barbara Reynolds, M.A., CDC in collaboration with: Julia Hunter Galdo and Lynn Sokler, Prospect Center of the American Institutes for Research

U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration. *Communicating in a Crisis: Risk Communication Guidelines for Public Officials*, 2002. Washington, DC: Widmeyer Communication of Washington, D.C., 2002.

United States Government Accountability Office. *United States Government Accountability Office Report to Congressional Committees: CATASTROPHIC DISASTERS Enhanced Leadership, Capabilities, and Accountability Controls Will Improve the Effectiveness of the Nation's Preparedness, Response, and Recovery System*, 2006. Washington, DC: 2006.
GAO-06-618

von Winterfeldt, D., John, R. S., & Borcherding, K. (1981). Cognitive components of risk ratings. *Risk Analysis*, 1, 277- 28.

Weinstein, N. D., & Sandman, P. M. (1993). Some criteria for evaluating risk messages. *Risk Analysis*

Wilson, R., & Crouch, E. (1987). Risk assessment and comparisons: An introduction. *Science*, *236*, 267- 270.