

AN EVALUATION

*Regional Hazardous  
Materials Response Teams*

*Department of Military Affairs*

*02-1*

*January 2002*

**2001-2002 Joint Legislative Audit Committee Members**

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Brian Burke  
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State Auditor - Janice Mueller

Editor of Publications - Jeanne Thieme

Audit Prepared by

Don Bezruki, Director and Contact Person  
Joshua Smith  
Julia North  
Jeffrey Ripp

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State of Wisconsin \ LEGISLATIVE AUDIT BUREAU

JANICE MUELLER  
STATE AUDITOR

22 E. MIFFLIN ST., STE. 500  
MADISON, WISCONSIN 53703  
(608) 266-2818  
FAX (608) 267-0410  
Leg.Audit.Info@legis.state.wi.us

January 23, 2002

Senator Gary R. George and  
Representative Joseph K. Leibham, Co-chairpersons  
Joint Legislative Audit Committee  
State Capitol  
Madison, Wisconsin 53702

Dear Senator George and Representative Leibham:

As requested in 1999 Wisconsin Act 9 and directed by the Joint Legislative Audit Committee, we have completed an evaluation of the activities and expenditures of Wisconsin's regional hazardous materials (hazmat) response teams. This evaluation was undertaken and largely completed before the terrorist attacks of September 11, 2001. In light of nationwide concerns about terrorist activity involving weapons of mass destruction, including biological or chemical agents, we have issued a separate letter to the Committee outlining the role of hazmat teams in responding to terrorist threats and the availability of federal funding to enhance state and local preparedness.

Wisconsin has a well-established response network of eight regional hazmat teams that are jointly funded by the State and by local fire departments. These teams are trained and equipped to respond to incidents requiring the highest level of skin and respiratory protection. Wisconsin's statewide response coverage, ongoing training of hazmat personnel, and established response protocols and procedures provide a solid base for current efforts to develop and implement additional plans to respond to potential terrorist threats from chemical or biological agents.

In fiscal year 2000-01, the State, through the Department of Military Affairs, provided \$1.4 million in general purpose revenue to the regional hazmat teams. Wisconsin's hazmat expenditures have been significantly higher than those of other states. The Legislature may wish to review the roles of the hazmat teams and methods of allocating funds among them, as well as the possibility of developing alternative funding sources for their activities.

We appreciate the courtesy and cooperation extended to us by the eight regional response teams and the Department of Military Affairs. The Department's response is Appendix 4.

Respectfully submitted,

A handwritten signature in cursive script that reads 'Janice Mueller'.

Janice Mueller  
State Auditor

JM/DB/ss



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## Summary

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The Department of Military Affairs' Division of Emergency Management, which is more commonly known as Wisconsin Emergency Management (WEM), contracts with municipal fire departments in eight regions of the state to respond to releases of hazardous substances such as industrial chemicals, fertilizers, pesticides, petroleum products, explosives, and radioactive substances in industrial accidents and transportation and other incidents. The contracts establish eight regional hazardous materials (hazmat) response teams, also known as Level A teams, and require that each team maintain adequately trained and equipped staff capable of responding to incidents that require the highest level of skin and respiratory protection, anywhere in their respective regions. The current regional teams, composed of ten career fire departments, are located in Appleton, Chippewa Falls, Eau Claire, La Crosse, Madison, Milwaukee, Oshkosh, Racine, Superior, and Wausau.

The State also encourages counties to contract with a local fire department or other entity for county-wide response to incidents less serious than those requiring Level A protective equipment but that still exceed the capabilities of smaller fire departments, which are often staffed by volunteers. WEM provides matching equipment grants of up to \$10,000 annually to counties that plan for responding to such county-wide Level B incidents.

In fiscal year (FY) 2000-01, the State provided \$1.4 million in general purpose revenue (GPR) grants to the regional Level A teams, as well as \$457,801 in GPR-funded equipment grants for county-wide Level B teams. An additional \$336,232 in GPR and federal funds was available for hazardous materials response planning and training for team members and other local responders.

While most accidental releases of hazardous materials pose limited danger, the potential for significant harmful effects is always present, as demonstrated by the 1992 train derailment that released chemicals into the Nemadji River in Superior and the 1996 train derailment in Weyauwega that led to the evacuation of 1,700 people from the city. A significant reason for having specially trained hazmat teams is that most fire departments do not have the resources to respond to all possible hazmat incidents: 82.5 percent of all Wisconsin fire departments are staffed by volunteers.

From January 1996 through December 2000, regional hazmat teams responded to 146 incidents throughout the state, or an average of about 29 incidents per year. The number of responses has declined each year from 1996 through 2000. Regional team leaders believe the decline in the number of Level A responses during this period is the result of factors that include their education and prevention efforts with companies that handle hazardous materials, as well as their improved ability to provide assistance by telephone, which makes it possible for local responders—rather than the regional teams—to address some incidents.

Of the 146 regional team responses to hazardous materials incidents from 1996 through 2000, 45.2 percent were outside of the regional teams' home cities. For the 116 incidents for which response time was available, teams arrived within a two-hour response time goal in 93.1 percent of responses; 58.6 percent of responses were within 30 minutes.

While Wisconsin's regional Level A teams are well-established, county-wide Level B teams are still under development. As of May 2001, eight counties had not determined who would respond to incidents requiring Level B protective equipment within their borders. An additional 8 counties were developing county-wide Level B teams, while 56 counties had identified one or more local fire departments or a private contractor to respond to Level B incidents within their borders.

As noted, the State provides funding for the hazmat teams to maintain equipment and provide training to the firefighters. Between FY 1998-99 and FY 2000-01, WEM spent more than \$7.0 million on hazmat-related activities, of which 66.4 percent went to the regional Level A hazmat teams. Regional teams have broad discretion over how they use their grant funds, and our review found variations among the teams in which types of costs they charged to their contracts. However, in all cases expenditures made with grant funds were related to hazmat activities. Overall, the regional teams spent an average of 46.1 percent of their grant funds on personnel-related costs, such as overtime costs, incentive pay, and training, and 53.9 percent of the grant funds on equipment, vehicles, and other related costs. All teams also used local funds to support hazmat costs.

In addition to receiving state and local funds to maintain their hazmat capabilities, regional and county hazmat teams are authorized to recover the costs of responding from the party responsible at the site the incident occurred. We note that the teams' charges to responsible parties vary widely. For example, hourly reimbursement rates for primary hazmat response vehicles ranged from \$29 per hour in Madison to \$150 per hour in Chippewa Falls, and the rates for a fire engine ranged from \$40 per hour in Madison to \$200 per hour in Wausau. In cases where the hazmat team is unable to collect from the responsible party, s. 166.215,

Wis. Stats., authorizes WEM to reimburse the hazmat teams for their response costs. WEM may face shortfalls in its reimbursement appropriation in the near future, and we include a recommendation that WEM improve the way that claims are processed by standardizing reimbursement rates to ensure that funds are used more efficiently.

The total level of state funding for the regional teams and how the funding is allocated among the teams have long been matters of debate. While the State has appropriated \$1.4 million annually for the regional teams since FY 1994-95, that amount is not based on, and until the current contract was not allocated according to, an established funding formula. In the absence of information on the actual costs of operating the hazmat teams, it is difficult to determine the adequacy or fairness of existing state funding levels.

Based on our survey of other states, some level of state support of local hazmat costs is relatively common: 19 of the 32 other states that responded to our survey, or 59.4 percent, indicated that they provided some state funding for hazmat response in FY 1999-2000. However, Wisconsin provided the highest level of support from general fund tax dollars. Wisconsin's expenditures were higher than those of every state responding to our survey, including states with larger populations, such as Illinois, Indiana, and Michigan. Nine states raise some or all of the revenue for their hazmat teams through state fees on hazardous materials transporters or facilities. Wisconsin imposed fees on transporters when the regional hazmat teams were first established, but those fees were found unconstitutional in 1996 because the rates were not established proportional to each transporter's activity within the state. WEM modified its fees to comply with a Wisconsin Court of Appeals ruling and estimated the new schedule would apply to 1,500 transporters and would generate \$996,700 in FY 1995-96. Although the modified fee schedule was adopted by administrative rule, a series of legislative actions prohibited its implementation. The Legislature subsequently appropriated GPR for the teams in 1997 Wisconsin Act 27.

Beginning in FY 2000-01, WEM allocated funds among the eight regional teams according to standardized costs, as determined by WEM, for personnel, supplies and equipment, vehicle replacement, and outreach to local fire departments. WEM's new funding model appears logical and reasonable, but WEM could refine its model by determining the minimum number of trained responders required to provide adequate coverage for each region and using this number to calculate how much each team should receive for personnel. In addition, WEM could adjust its model to more fully reflect differences associated with the risk of hazardous materials incidents in each region.

While hazmat officials would agree that Wisconsin has a well-established response network, in some cases difficulties have been noted in making clear distinctions between incidents requiring Level A and Level B response. This has led to occasional friction between the regional and county teams, including disagreements on how state hazmat funds should be allocated between the two types of teams.

Our survey of other states indicates they have chosen to organize their response structures in a variety of ways. Of the 32 states responding to our survey, 16 reported having regional hazmat teams, and 4 reported that they are attempting to form regional teams. Like Wisconsin, 12 of the 16 states with regional teams indicated that personnel from local fire departments respond to regional incidents. However, some states organize their regional teams differently than Wisconsin does. For example, Minnesota operates a regional system with a single heavily equipped statewide team and ten regional chemical assessment teams, which are smaller than Level A units and are able to respond quickly to determine whether a full hazmat team is needed. Some have suggested increased reliance in Wisconsin on county-wide Level B teams as assessment teams could provide for quicker response, ensure that regional Level A teams respond only to incidents that require their full capabilities, limit a regional team's response costs, and help clarify the types of incidents to which regional or county teams should respond.

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## Introduction

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**Regional Level A teams respond to incidents that require the highest level of protective clothing and equipment.**

The Department of Military Affairs' Division of Emergency Management, which is more commonly known as Wisconsin Emergency Management (WEM), contracts with municipal fire departments in eight regions of the state to respond to releases of hazardous substances such as industrial chemicals, fertilizers, pesticides, petroleum products, explosives, and radioactive substances in industrial accidents and transportation and other incidents. The contracts establish eight regional hazardous materials (hazmat) response teams, also known as Level A teams, and require that each team maintain adequately trained and equipped staff capable of responding to incidents that require the highest level of skin and respiratory protection, anywhere in their respective regions.

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**County-wide Level B teams generally respond to incidents requiring less-protective clothing.**

The State also encourages counties to contract with a local fire department or other entity for county-wide response to incidents less serious than those requiring Level A protective equipment but that still exceed the capabilities of smaller fire departments, which are often staffed by volunteers. WEM provides matching equipment grants of up to \$10,000 annually to counties that plan for responding to such county-wide Level B incidents. In some cases, the same municipal fire department responds to both regional Level A and county-wide Level B incidents.

In fiscal year (FY) 2000-01, the State provided \$1.4 million in general purpose revenue (GPR) grants to the regional Level A teams, as well as \$457,801 in GPR-funded equipment grants for county-wide Level B teams. An additional \$336,232 in GPR and federal funds was available for hazardous materials response planning and training for team members and other local responders.

1999 Wisconsin Act 9 included a non-statutory provision requesting an audit of WEM's hazmat response activities, including its contracts with the regional teams. Therefore, at the direction of the Joint Legislative Audit Committee, we reviewed:

- the expenditure of contract funds by the regional teams;
- the number and types of incidents to which regional teams have responded annually;
- other states' structures and funding for hazmat response;

- federal requirements for hazmat response teams; and
- the relationship between the regional Level A and county-wide Level B teams.

In conducting our evaluation, we visited the regional teams to review expenditures and discuss response data and state and federal requirements. We interviewed WEM officials, staff of county-wide Level B teams, county emergency management directors, and private industry representatives. We also conducted a survey of emergency management directors in other states.

### **Statewide Hazardous Materials Response System**

Wisconsin's hazardous materials response system is one part of the State's broader emergency management system, which is designed to prepare the State and its subdivisions to respond to natural or man-made disasters or enemy action. Chapter 166, Wis. Stats., establishes the State's organization of emergency management, enumerates the powers and duties of the Governor and responsible state and local officials, and establishes processes for state compliance with various federal emergency planning and preparedness requirements.

To implement this system during emergencies, WEM has developed the Wisconsin Emergency Operations Plan, which establishes the responsibilities of state and local officials to take specified actions in nine functional areas, such as direction and control, response coordination, health and medical care, and law enforcement. For each functional area, lead and support agencies are identified. For example, in the direction and control functional area, the lead agency is WEM, and 16 agencies have supporting responsibilities; for the health and medical care functional area, the lead agencies are the departments of Health and Family Services (DHFS) and Agriculture, Trade, and Consumer Protection, while the supporting agencies are WEM, the Department of Natural Resources (DNR), and the American Red Cross. All counties, towns, and municipalities are also required by ch. 166, Wis. Stats., to appoint local emergency management directors responsible for developing local plans consistent with state plans.

Following a 1990 study that examined Wisconsin's hazardous materials risks and determined that response capabilities could be improved, the Legislature directed WEM to contract with local hazmat teams to provide statewide response coverage for the most serious hazmat incidents. In Wisconsin, more than 6,800 facilities use or store hazardous materials in sufficient quantity to be required annually to report their inventories to state government. In addition, the federal Department of Transportation estimates that 3.2 billion tons of

hazardous materials are shipped nationwide annually, although information on amounts shipped within Wisconsin is not available. While most accidental releases of hazardous materials pose limited danger, the potential for significant harmful effects is always present, as demonstrated by the 1992 train derailment that released chemicals into the Nemadji River in Superior and the 1996 train derailment in Weyauwega that led to the evacuation of 1,700 people from the city.

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**Volunteers staff  
82.5 percent of Wisconsin  
fire departments.**

A significant reason for having specially trained hazmat teams is that most fire departments do not have the resources to respond to all possible hazmat incidents. As shown in Table 1, 82.5 percent of all Wisconsin fire departments are staffed by volunteers. Regional team and county officials with whom we spoke indicated that volunteer departments frequently do not have the resources for specialized hazmat training and equipment, and it is more difficult to train volunteers because sessions must be scheduled outside of normal business hours. In contrast, regional teams are able to provide most of the necessary training to their members, who are career firefighters, during the normal workday.

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Table 1

**Types of Fire Departments in Wisconsin**  
January 2001

<u>Type of Department</u>	<u>Number</u>	<u>Percentage of All Departments</u>	<u>Definition</u>
Volunteer	725	82.5%	No member is paid for 36 hours or more of work per week, although some firefighters may be compensated for fire calls, training, or clothing.
Combination	88	10.0	Full-time paid, paid-on-call, and volunteer members.
Career	34	3.9	All members in paid full- or part-time positions.
Special	<u>32</u>	<u>3.6</u>	Includes fire department affiliates; federal, state, or military fire departments; and private fire brigades.
Total	879	100.0%	

Source: Department of Commerce

Table 2 highlights the differences between regional Level A and county-wide Level B hazmat teams. Among the most significant are that the Level A teams receive state worker's compensation benefits and statutory immunity from civil liability for all responses, whereas Level B teams receive worker's compensation coverage through their localities and statutory immunity from civil liability only for responses requiring less-protective clothing. Unlike regional Level A teams, county-wide Level B teams are often composed of both career and volunteer fire departments.

Table 2

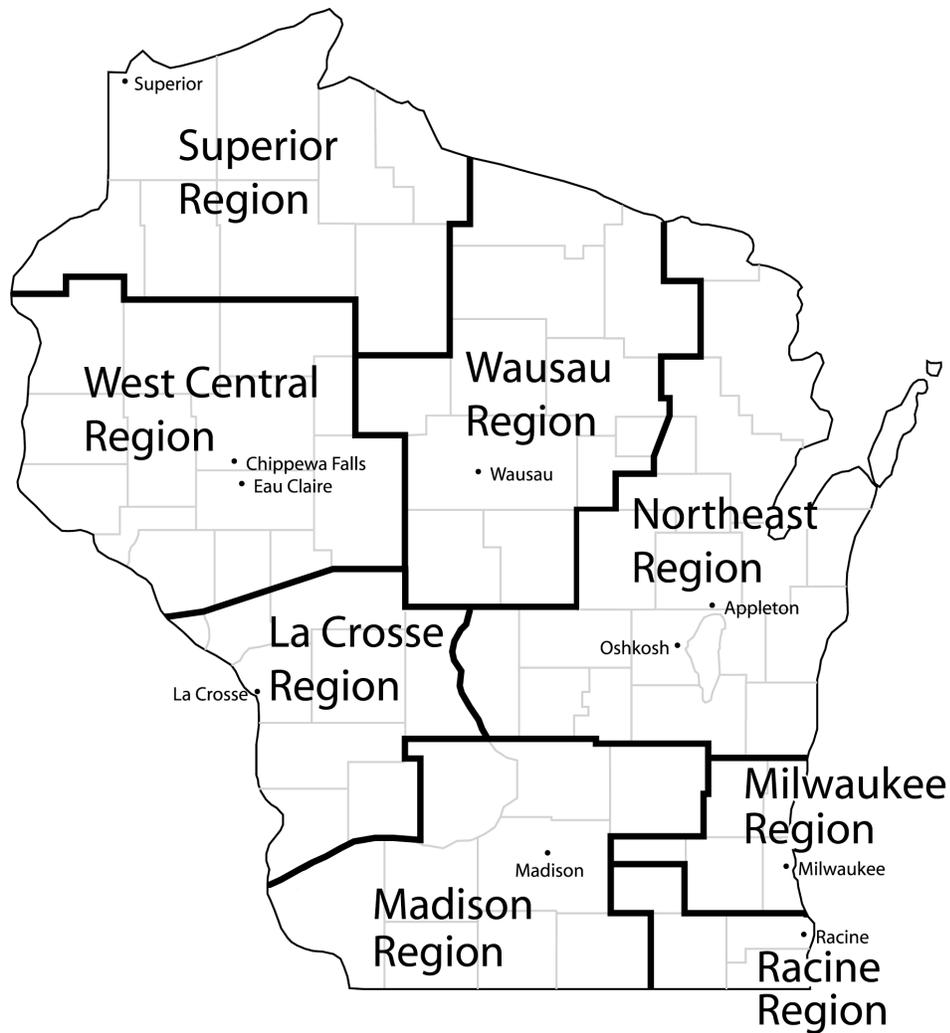
**Differences between Regional Level A and County-wide Level B Hazmat Teams  
FY 2001-02**

<u>Level A Teams</u>	<u>Level B Teams</u>
Contract with the State to provide guaranteed coverage to a specified region of multiple counties	Voluntary program to provide county-wide coverage
8 teams	35 teams
Career fire departments	Both volunteer and career fire departments
Funding of \$1.4 million GPR in FY 2001-02 divided among the teams	Funding of \$468,000 GPR in FY 2001-02 for up to \$10,000 in grants annually per team for hazardous materials equipment (20 percent local match is required)
Worker's compensation benefits provided by the State	Worker's compensation benefits provided by locality
Statutory immunity from civil liability for the team, its members, and its home municipality for all responses	Statutory immunity from civil liability for the team, its members, and its home municipality for responses requiring Level B protective equipment

Wisconsin's regional hazmat teams are established in s. 166.215, Wis. Stats. Although statutes allow for a maximum of nine regional teams, eight currently exist. As shown in Figure 1, the Appleton and Oshkosh municipal fire departments operate jointly as the Northeast Wisconsin Hazmat Team, and the Eau Claire and Chippewa Falls municipal fire departments operate jointly as the West Central Wisconsin Hazardous Response Team.

Figure 1

**Regional Level A Hazmat Teams**



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**Of the 32 other states responding to our survey, 16 reported having regional hazmat teams.**

Most of the 32 other states that responded to our survey reported some form of multi-jurisdictional hazmat response coverage. As shown in Table 3, 16 other states reported having regional teams, and 20 reported having county teams. Statewide teams respond to hazmat incidents anywhere within seven other states. Wisconsin and 23 other states reported having city response teams, which include municipal fire departments that respond to calls within their own jurisdictions; however, only 2 other states indicated that city response teams whose responsibility is limited to their own jurisdictions are the only responders to hazmat incidents. A combination of private industry and local mutual aid agreements, which are negotiated among neighboring municipalities, was reported by ten other states. Survey responses are summarized in Appendix 1.

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**Statutes require both regional and county team members to be trained to federal standards.**

Wisconsin statutes require members of both the regional and the county-wide teams to undergo hazmat response training that complies with training standards issued by the federal Occupational Safety and Health Administration and the National Fire Protection Association, an organization that conducts research and training on fire safety issues. These national standards include three levels of training:

- first responder awareness level, which trains individuals to recognize hazmat incidents and notify proper authorities but to take no action beyond notification;
- first responder operations level, which trains individuals to respond to incidents in a defensive fashion to protect nearby persons, property, or the environment but to take no action to stop a release of hazardous materials; and
- hazardous materials technician level, which trains individuals to stop the release of hazardous materials.

Table 3

**Types of Hazardous Materials Response Teams, by State**  
2001

<u>State</u>	<u>City Team*</u>	<u>County Team</u>	<u>Regional Team</u>	<u>Statewide Team</u>	<u>Other**</u>
Alabama	X	X			
Arizona	X	X	X	X	
Arkansas	X		X		X
Colorado	X	X	X	X	
Georgia	X	X			
Hawaii		X			
Idaho	X		X		
Illinois	X	X	X		
Indiana	X	X			X
Iowa	X	X	X		
Kansas			X		
Maine	X	X	X		X
Maryland	X	X		X	
Michigan	X	X			
Minnesota	X		X	X	X
Nebraska	X	X	X	X	
Nevada		X	X		
New Hampshire			X		X
New York	X	X	X		
North Carolina	X	X	X		
North Dakota	X				
Ohio	X	X			
Oklahoma	X				
Oregon			X		
Pennsylvania		X			X
South Carolina	X	X		X	
South Dakota					X
Utah					X
Vermont				X	
Virginia	X	X	X		
Washington	X				X
Wisconsin	X	X	X		
Wyoming	X	X			X

\* Includes municipal fire departments that respond first to calls within their own jurisdictions.

\*\* Includes private teams and local teams that respond outside of their jurisdictions under mutual aid or contractual agreements.

Wisconsin statutes require regional and county team members to be trained to the technician level. According to federal standards, hazmat technicians must receive initial classroom training of at least 24 hours. Each subsequent year, technicians must demonstrate their competency in topics that include:

- identifying unknown materials using testing equipment;
- selecting, using, and maintaining personal protective equipment;
- understanding chemical properties and behavior;
- controlling and containing hazardous materials;
- assessing risk; and
- implementing decontamination procedures.

Wisconsin's regional teams require their members to participate in between 24 and 48 hours of refresher training annually to demonstrate their competency with these tasks. In addition, teams report that their members collectively spend many hours each year developing their skills through exercises and drills, equipment testing and monitoring, and actual responses.

Although both regional and county team members are required to be trained to the technician level, the majority of firefighters in Wisconsin who are not on hazmat teams typically have more limited hazmat response training. Training to the first responder awareness level is required of all firefighters hired in Wisconsin since 1995. Additional training to the first responder operations level is available as part of an optional firefighter certification program operated by the Wisconsin Technical College System Board. However, no state agency or other organization collects data on the number of firefighters working in Wisconsin who are currently trained to these levels.

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Wisconsin's Level A regional teams are well-established and appear to be meeting their goals for responding to the most serious hazmat incidents statewide. County-wide Level B teams are still under development, as only 56 counties have contracted for county-wide response. Eight of Wisconsin's 72 counties are in the process of developing contracts for Level B incidents, and 8 other counties have not determined who would respond to Level B incidents within their borders.

### Regional Team Activities

Both DNR and DHFS compile data on hazardous materials incidents. In 2000, 604 hazardous materials spills that may have had an effect on the environment were reported to DNR, while DHFS identified 478 hazmat incidents with potential human health effects. However, not all hazardous spills required a response by a regional team because, in some cases, the spills did not pose a large threat or occurred at industrial sites where personnel were trained in dealing with accidents resulting from the mishandling of substances used daily. According to the National Fire Protection Association, hazmat incidents account for about 1.0 percent of a local fire department's calls, and a single call per year is not unusual in many municipalities. Nevertheless, because the possible consequences to human health and the environment resulting from a single serious incident are so great, state officials developed the teams to provide statewide response coverage. Hazmat incidents reported to DNR and DHFS from 1996 through 2000 are listed in Appendix 2 and Appendix 3.

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**The number of Level A responses declined each year from 1996 through 2000.**

As shown in Table 4, the eight regional Level A teams responded to a total of 146 incidents from January 1996 through December 2000, which is an average of about 29 responses per year. Although hazmat responses vary depending on the substance involved and other on-site conditions, for each of these responses a regional team determined that its presence at the scene of the incident was required. The number of responses by regional teams has declined each year, from 38 in 1996 to 19 in 2000. However, because the regional teams may respond to hazmat incidents in their own jurisdictions without reporting to WEM, these figures may not completely reflect the teams' response activities.

Table 4

**Regional Team Responses**  
1996 through 2000

<u>Team</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>Total</u>	<u>Percentage of Total</u>
Milwaukee	13	10	8	8	2	41	28.1%
Northeast*	8	8	4	4	3	27	18.5
Madison	5	8	5	3	2	23	15.7
West Central	6	3	3	3	2	17	11.6
Racine	2	1	3	4	5	15	10.3
Wausau	1	3	3	4	3	14	9.6
Superior	3	1	2	1	0	7	4.8
La Crosse	<u>n/a</u>	<u>n/a</u>	<u>n/a</u>	<u>n/a</u>	<u>2</u>	<u>2</u>	<u>1.4</u>
Total	38	34	28	27	19	146	100.0%

\* The Northeast region is currently served by teams in Appleton and Oshkosh, with subcontractors in Brown and Marinette counties. From 1996 through 2000, the Northeast region was also served by hazmat teams in Manitowoc and Sheboygan counties.

As reasons for the decline, regional team leaders and WEM staff include:

- regional team education and prevention efforts, which have been addressed to companies that handle hazardous materials, other local responders, and the public;
- the improved ability of regional team staff to provide technical assistance by telephone, which makes it possible for local responders—rather than the regional teams—to address some incidents;
- industry efforts to reduce the risk of hazardous materials incidents by using fewer or safer chemicals in production processes;

- improved shipping practices by companies that transport hazardous materials; and
- underreporting by the regional teams of the number of incidents to which they have responded.

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**Between October 10 and October 17, 2001, regional teams reported sending personnel to respond to at least 93 anthrax threats.**

Preliminary data indicate the number of regional team responses decreased to 11 in 2001. However, the number of official Level A responses may not accurately reflect the workload of the regional teams because the large number of anthrax threats in 2001 were not reported to WEM as official Level A responses. During the first week of anthrax threats nationally, October 10 to October 17, 2001, the regional teams reported sending personnel to respond to at least 93 anthrax threats, although no more than 15 required the full hazmat team to respond with Level A protective equipment. In most of the 93 cases, smaller assessment units of the hazmat teams or regular fire department engine companies accompanied by hazmat personnel responded. In addition, the teams provided telephone advice in at least 32 instances. Reported anthrax threats continued in following weeks, but in smaller numbers. Comparatively, the regional teams responded to only three threats of anthrax release in 1999 and 2000.

As shown in Table 5, 52.7 percent of the Level A responses from 1996 through 2000 were in the cities in which the regional teams are based, and 76.0 percent were within a regional team’s home county. This is somewhat as expected because the location of regional teams was based, in part, on the risk of an incident in an area.

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Table 5

**Location of Regional Team Responses**  
1996 through 2000

	<u>Number of Responses</u>	<u>Percentage of Responses</u>
Responses in a regional team’s city	77	52.7%
Responses outside a regional team’s city but in a team’s county	34	23.3
Responses outside a regional team’s county	32	21.9
Information not available	<u>3</u>	<u>2.1</u>
Total	146	100.0%

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**The regional teams arrived within two hours in 93.1 percent of hazmat responses.**

In 93.1 percent of responses, the regional teams arrived at incident scenes within a two-hour response time goal specified by WEM during the creation of regional teams, largely because of their proximity. Data on response time are available for 116 incidents, and for the majority of these the response time was 30 minutes or less. Specifically:

- 58.6 percent of responses were made in 30 minutes or less;
- 80.2 percent of responses were made in one hour or less;
- 93.1 percent of responses were made in two hours or less; and
- 100.0 percent of responses were made in three hours or less.

Although some other states may have hazmat teams that can respond statewide, few states reported having specially trained teams capable of responding anywhere in the state within three hours. Of the 32 states responding to our survey:

- 7 have their entire state covered by teams that can arrive at an incident in three hours or less;
- 15 have at least 50 percent of their state covered by teams that can arrive at an incident in three hours or less; and
- 10 have less than 50 percent of their state covered by teams that can arrive at an incident in three hours or less.

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**The majority of incidents to which the regional teams respond occur at facilities such as manufacturing plants.**

As shown in Table 6, 69.9 percent of responses from 1996 through 2000 were to incidents at facilities such as manufacturing plants, schools or universities, and public utility plants. An additional 25.3 percent were to transportation-related incidents, which include accidents involving tractor-trailers or railroad cars. Information on the source of release was not available for 1.4 percent of incidents. These data are similar to United States Department of Health and Human Services data in 16 states that show about 80 percent of releases are from facilities and 20 percent are transportation-related.

Table 6

**Source of Release for Regional Team Responses**  
1996 through 2000

<u>Source of Release</u>	<u>Number of Responses</u>	<u>Percentage of Responses</u>
Facility	102	69.9%
Transportation	37	25.3
Other*	5	3.4
Source not available	<u>2</u>	<u>1.4</u>
Total	146	100.0%

\* Includes parking lots, beaches, and containers found along highways but not directly associated with a transportation incident.

Incidents at facilities that are located in populated areas and typically have employees on site are more likely to require evacuations than are transportation incidents. Evacuations were conducted during 93 responses, or 70.5 percent of those for which data were available.

Evacuations were also more common than injuries, which occurred in 48 responses. These numbers include employees, the general public, or emergency responders who might have gone to the hospital for observation but did not sustain visible injuries. Often injuries occur before the regional team arrives, such as during the initial release of the hazardous material. From 1996 through 2000, two deaths were associated with hazmat incidents to which regional teams responded, and in both instances the fatal injury occurred before the regional team arrived.

**Example of a Regional Team Response**

The unique nature of each chemical and of release conditions—including the amount of chemical released, the location of release, and weather conditions—makes it difficult to describe a typical response. Nevertheless, a July 2000 incident in Wausau provides an example of what can occur during a Level A response and the types of procedures followed by a regional team.

At 6:40 p.m. on Saturday, July 8, 2000, the Wausau Fire Department received a call from a citizen regarding a possible fire at a chemical storage and mixing facility in downtown Wausau. Within minutes, the first firefighters arrived at the nearly 20,000-square-foot facility, which was located 50 feet from the Wisconsin River and 8 blocks from the closest fire station. Two additional fire engines had arrived by 6:55 p.m. A team of firefighters that entered the building wearing standard oxygen masks and flame-resistant suits encountered heavy smoke and fumes, but no flames. They determined that a chemical reaction had likely produced the fumes and alerted the Wausau Regional Response Team, the specialized hazmat response unit of the Wausau Fire Department. While traveling to the incident, the regional team consulted WEM's incident response guidelines, which are used to determine the level of response warranted, and determined that a Level A response was required because the amount and identity of the product causing the smoke was unknown.

Thirteen members of the regional team arrived on the scene at 7:00 p.m. with communication and decontamination vehicles. The team conferred with the facility owners and determined that the smoke could be coming from an area where chemicals had been mixed earlier in the day. Since the identity of the product and its hazards were still unknown, the team decided to use Level A suits for personnel entering the building, to ensure the greatest skin and respiratory protection.

Following protocols of an incident command system, the incident commander:

- designated planning, entry, decontamination, and safety leaders from among the regional team;
- established the perimeters of the "hot" zone, which is the area where team members are required to dress in Level A suits;
- established the perimeters of the "warm" zone, which is the area used for operations that require lower levels of protective gear; and
- placed the command trailer in the warm zone and the decontamination trailer at the boundary between the hot and warm zones.

The safety and planning leaders assisted regular fire department staff and the Wausau Police Department in directing traffic away from the site. As a precautionary measure, a paper mill and several homes downwind of the site were evacuated. During the course of the incident the wind shifted, and the safety leader moved the command and decontamination trailers to keep them out of the smoke.

One member of the regional team, trained as an emergency medical technician, performed mandatory pre-entry medical evaluations on four team members. The entry team leader then helped the four team members to dress in Level A suits and verified that the suits, oxygen masks, and two-way radios were functioning properly. Meanwhile, the decontamination leader and three other team members dressed in Level B suits and prepared their decontamination supplies. Two members in Level A suits entered the facility, while two members remained outside as back-up in the event of an accident. The entry team identified the source of the smoke as a burning pallet ignited by 1,300 pounds of a water treatment chemical that was undergoing a chemical reaction, radioed their findings to the incident commander, and left the building to plan the next stage of the response.

Searching the reference materials in the command trailer, the planning leader and the incident commander found that the chemical was non-flammable but could produce toxic and explosive gases if mixed with small amounts of water or heated to above 400° F. Recommended procedures called for either diluting the chemical with a large volume of water or isolating and stabilizing the material and controlling the reaction using chemicals the team had available. To limit the risk of environmental damage to the nearby Wisconsin River, the isolation and chemical stabilization option was chosen.

The back-up entry team entered the facility to stabilize and contain the product, while the first entry team remained in Level A suits as the new back-up team. A dry chemical extinguisher was used to stop the reaction, and the product was contained in clean 55-gallon drums that were moved to a dry area on the loading dock for collection and disposal by a private contractor. All team members who had entered the facility exited and went to the decontamination trailer, where other team members removed chemical residue from their suits and equipment using soap and water in order to ensure that chemicals did not come in contact with their skin upon removing the suits. Afterwards, the emergency medical technician performed the required post-entry medical evaluations. At 9:39 p.m., the incident commander notified WEM that the team had responded. All emergency personnel left the scene by 10:04 p.m., about three and one-half hours after the initial fire call.

The chemical facility reimbursed the Wausau regional team \$6,041 for costs related to the response effort. These costs included replacing the disposable Level A suits and other supplies used to contain the chemical, hourly charges for the use of the vehicles and an ambulance, and overtime costs for the regional team staff.

This incident was typical of many regional responses in that it involved an unknown chemical, was handled promptly by the team with only minor precautionary evacuations, and resulted in no injuries or deaths. Many incidents occur within the normal jurisdictions of the regional teams, and in this case the regional team would have responded regardless of the results of WEM's response guidelines, because the facility was located within the City of Wausau. Furthermore, the regional teams are typically able to recover their response costs from the responsible party, as allowed by ch. 166.215, Wis. Stats.

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**Incidents that require the full capabilities of the regional teams are relatively rare.**

However, incidents that require the full capabilities of the regional teams, such as this one, are relatively rare. More common are minor releases, spills resulting from overturned commercial vehicles, or leaking railroad cars. While such incidents also require specialized training and equipment, as well as the quick response time demonstrated by the Wausau Regional Response Team, in some cases they can be addressed by local responders, such as county-wide Level B teams or personnel at an industrial site who are trained in dealing with incidents involving substances used at the site.

### **Outreach to Other Responders**

As part of their contracts with the State, regional teams are expected to develop effective working relationships with the other emergency response professionals in their region. WEM provides regional teams with funding for outreach to coordinate response planning with Level B teams and other local responders and to raise public awareness of hazardous materials present in their community. Generally, each team plans and conducts its own outreach activities. For example:

- The regional teams have developed a 20-minute presentation, which has been modified by each team, describing the team's services, how to contact the team, and what the local fire department can expect when the team arrives at an incident.
- The West Central team reported visiting all of the local emergency planning committees that requested a presentation, which was 9 of the 13 in the region. Additionally, the team reported making visits in 2000 to 20 Chippewa County industrial sites that were required to report on-site hazardous materials storage.
- The Superior team has attempted to send a representative to each of the approximately 120 fire departments in the region to share information about the team. In addition, the team plans a yearly conference to which it invites personnel from fire departments, emergency management offices, police departments, industry, and hospitals to discuss the team's role and learn what it can better do to respond to these parties' needs.
- The Racine team's outreach program includes a variety of activities with other fire departments, local government agencies, and the public. The team reported that firefighters spent a total of 235 hours on outreach activities between January 1999 and April 2001.

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**Many counties have had little direct experience with the regional teams.**

Although most county emergency management directors and county hazmat team staff with whom we spoke indicated overall satisfaction with the regional teams' capabilities to respond or otherwise provide assistance to counties during emergencies, there were no incidents requiring a Level A response in 32 of Wisconsin's 72 counties from 1996 through 2000. It should be noted, however, that incidents requiring a lower level of response, such as by a county-wide Level B team or a regular fire department, may have occurred in these counties.

## County-wide Level B Teams

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**As of May 2001, eight counties had not determined who would respond to Level B incidents within their borders.**

Counties may receive state matching grants for hazmat response equipment for their Level B teams if they complete a county emergency management plan that identifies a team within the county or from another county under contract to respond to releases requiring Level B protective equipment. The Legislature appropriated \$468,000 in GPR in FY 2001-02 for these matching grants. As shown in Figure 2, according to reports submitted to WEM in May 2001, 8 counties had not determined who would respond to Level B incidents within their borders, 8 counties were developing a Level B team or preparing to contract with another county, and 56 counties had identified a team to respond to Level B incidents within their borders. Of the 56 counties that had identified a Level B responder:

- 35 identified one or more local fire departments within the county;
- 12 indicated that a response team maintained by a private company provided Level B coverage; and
- 9 identified one or more fire departments from another county.

In FY 2000-01, 37 of these counties received state grants for hazmat equipment.

Hazardous materials officials in the state report that fewer counties have developed teams within their own borders than state planners originally expected. Although some of the counties without their own teams, such as Lafayette County, are in rural parts of the state with relatively few facilities reporting hazardous materials, others, such as Racine County, are in areas with greater risks.

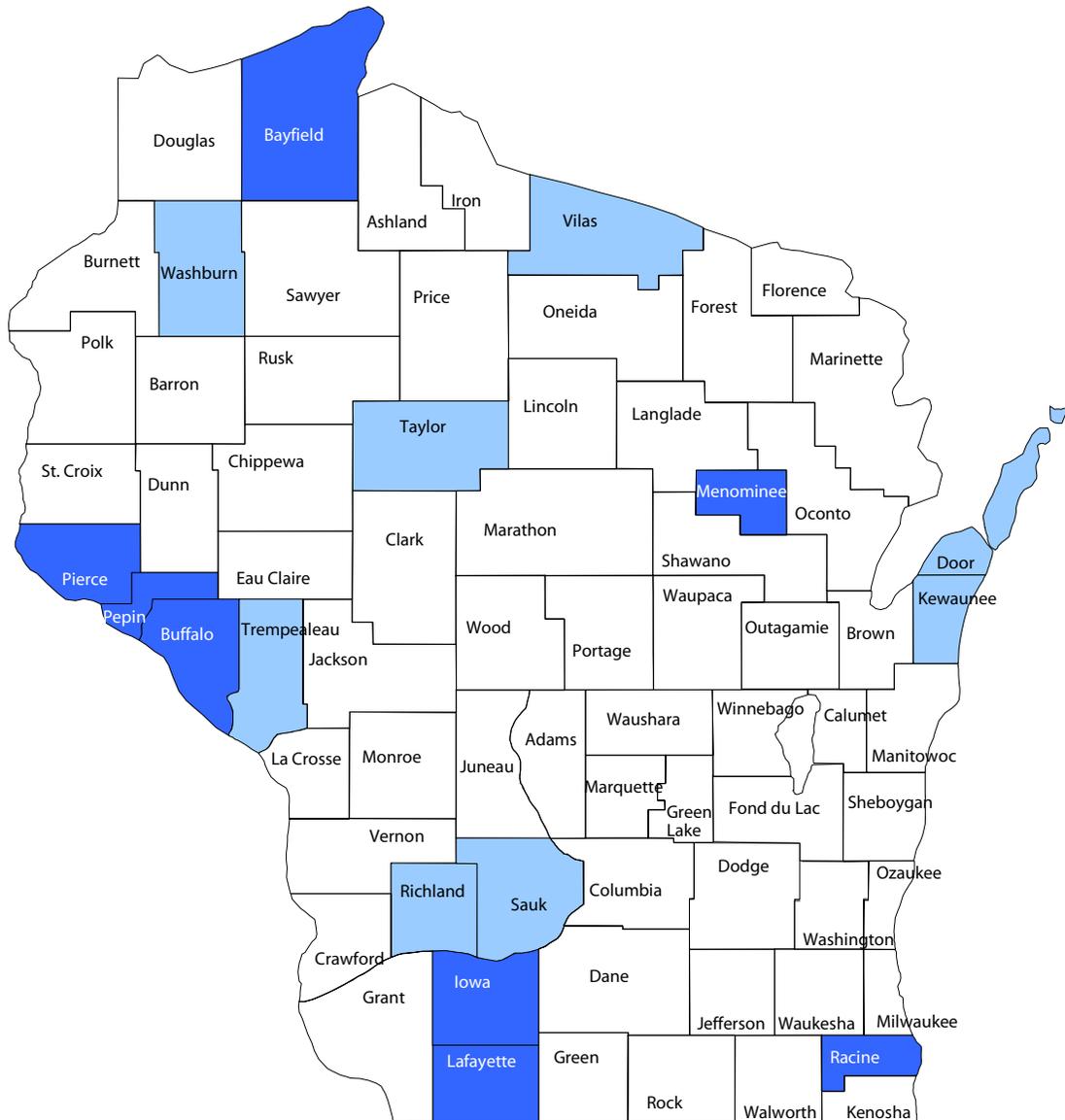
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**A wide range of opinion exists regarding what constitutes a functioning Level B team.**

Statewide data on responses by county teams or incidents requiring Level B equipment are not collected. However, there is interest among some emergency professionals in providing additional money and training for county teams. County emergency management personnel estimate that the cost of establishing a team capable of responding with Level B equipment ranges from a low of \$20,000 for basic response to a high of \$175,000 for a well-equipped team, which likely includes a response vehicle and other capital equipment. This wide range suggests a difference in opinion on what constitutes a functioning team.

Figure 2

**Status of County-wide Level B Teams  
May 2001**



-  Counties that have not determined who would respond to Level B incidents.
-  Counties developing a Level B team or preparing to contract with another county.
-  Counties that have identified a team to respond to Level B incidents.

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## State Funding and Regional Team Expenditures

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In FY 2000-01, the State provided \$1.4 million in GPR for contracts with the regional Level A teams. Because contracts do not require the hazmat teams to report on their expenditures, questions have been raised about how funds have been allocated among the teams and how they have been spent. We found that the teams have used their contract funds according to local needs and priorities, with nearly all of the teams reporting that personnel costs accounted for the majority of their expenditures.

In addition to their annual contracts, regional teams may also request reimbursement from WEM for the costs of responding to incidents in which a responsible party does not pay. In the future, however, WEM's ability to equitably reimburse hazmat teams for such incidents may be limited as a result of declining spending authority and the absence of standardized reimbursement rates.

### State and Federal Funding for Hazmat Response

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**WEM spent more than \$7.0 million on hazmat response activities from FY 1998-99 through FY 2000-01.**

From FY 1998-99 through FY 2000-01, WEM's hazmat expenditures, which are shown in Table 7, were supported by approximately \$6.4 million in GPR; \$513,179 in federal funds from the federal Department of Transportation; and \$113,596 from the State's Environmental Fund, which provides funding to numerous environmental management programs. Local governments and responders, including the regional teams, received \$6.1 million, or 87.1 percent, of the \$7.0 million spent during these years. The remainder of funds were used by WEM for program administration, travel and training, and other supplies and services.

Table 7

**WEM Hazmat Expenditures**  
FY 1998-99 through FY 2000-01

	<u>1998-99</u>	<u>1999-00</u>	<u>2000-01</u>	<u>Total</u>	<u>Percentage of Total</u>
Regional team contracts*	\$1,674,148	\$1,577,340	\$1,400,000	\$4,651,488	66.4%
County equipment grants	340,285	404,724	457,801	1,202,810	17.2
Federal training and planning	123,276	155,570	234,333	513,179	7.3
State training	193,928	39,057	101,899	334,884	4.8
WEM program administration	77,119	86,647	91,903	255,669	3.6
Response reimbursement	<u>21,154</u>	<u>24,118</u>	<u>5,400</u>	<u>50,672</u>	<u>0.7</u>
Total	\$2,429,910	\$2,287,456	\$2,291,336	\$7,008,702	100.0%

\* Since FY 1994-95, regional team base contracts have been \$1.4 million annually, but the Joint Finance Committee supplemented these amounts in FY 1998-99 and FY 1999-00.

WEM's county equipment grant program provides up to \$10,000 per year, contingent upon a 20 percent local match, to counties that plan for response to less-serious incidents by Level B teams. From FY 1998-99 through FY 2000-01, the Legislature appropriated \$568,000 annually for this program, but counties have never fully utilized the appropriation. In 2001 Wisconsin Act 16, the Legislature reduced the amount appropriated to \$468,000 for each year of the FY 2001-03 biennium.

The federal Department of Transportation's Hazardous Materials Emergency Planning grant program provides another source of funding for hazmat response training and planning. WEM expended \$513,179 of these funds from FY 1998-99 through FY 2000-01 for both local hazardous materials planning and emergency response training. Federal rules require that 60 percent of the funds be used for training, of which at least 75 percent must benefit local public responders. The \$334,884 in state training expenditures shown in Table 7 was funded by state sources, including the Environmental Fund. In FY 2000-2001, at least 18 hazmat response training courses were offered to local responders, including chemistry of hazardous materials, hazmat technician training, hazmat incident management, and emergency response to terrorism.

Program administration activities accounted for 3.6 percent of WEM's total hazmat expenditures from FY 1998-99 through FY 2000-01 and included the salary and benefits of one full-time employee, state employee travel and training costs, printing and postage, and other supplies and services. Funding for program administration was incorporated into WEM's general program administration appropriation in 2001 Wisconsin Act 16, the 2001-03 Biennial Budget Act. In addition, between FY 1998-99 and FY 2000-01, WEM reimbursed the regional and county-wide teams for \$50,672 in response costs for incidents in which the responsible party could not be identified or was unwilling or unable to pay, as authorized in ch. 166, Wis. Stats., although WEM was able to recover \$19,841 of this amount from responsible parties through litigation or other means.

### **State Contracts with Regional Teams**

The State's contracts with the regional hazmat teams were initially funded by fees assessed against hazardous materials transporters, but in 1996 the Wisconsin Court of Appeals ruled that these fees were unconstitutional because they were not apportioned to each transporter's activity within the state, and therefore were an illegal barrier to interstate commerce. Although a modified fee schedule was adopted by administrative rule, a series of legislative actions prohibited the new rule from taking effect, and 1997 Wisconsin Act 27 made GPR the source of contract funding.

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**Three supplements to the \$1.4 million annual appropriation for the regional teams have been approved since FY 1998-99.**

The Legislature has appropriated \$1.4 million for the contracts each year since FY 1994-95. WEM requested and received additional funding under s. 13.10, Wis. Stats., including \$274,148 for FY 1998-99, \$177,340 for FY 1999-00, and \$9,500 for FY 2001-02, in order to extend some existing contracts with regional teams so that all eight would expire at the same time. All amounts were transferred from other WEM appropriations.

Table 8 lists contract amounts for each team from FY 1998-99 through FY 2001-02. Before FY 2000-01, WEM negotiated contract amounts based on budgets submitted by the teams and each team's prior funding level. WEM also adjusted payments as new teams were added and their territories changed. Beginning in FY 2000-01, WEM allocated funds according to standardized costs it established for personnel, supplies and equipment, vehicle replacement, and outreach to local fire departments.

Table 8

**Regional Team Contract Amounts**  
FY 1998-99 through FY 2001-02

	<u>1998-99</u>	<u>1999-00</u>	<u>2000-01</u>	<u>2001-02</u>
La Crosse*	\$ 0	\$ 0	\$ 202,600	\$ 202,600
Madison	300,000	300,000	194,400	194,400
Milwaukee	300,000	300,000	270,350	279,850
Northeast**	250,000	234,039	169,700	169,700
Racine	275,000	185,000	119,500	119,500
Superior	200,000	178,000	149,448	149,448
Wausau	127,473	130,301	129,202	129,202
West Central***	<u>221,675</u>	<u>250,000</u>	<u>164,800</u>	<u>64,800</u>
Total	\$1,674,148	\$1,577,340	\$1,400,000	\$1,409,500

\* La Crosse became a regional team on July 1, 2000.

\*\* Includes amounts for the cities of Appleton and Oshkosh and for Brown, Manitowoc, Marinette, and Sheboygan counties.

\*\*\* Includes the cities of Chippewa Falls and Eau Claire.

**Regional Team Expenditures**

**Regional team expenditures reported from 1998 through 2000 appear consistent with contract terms.**

The regional teams have flexibility in determining how to spend their contract funds and are not required by their contracts to spend funds on specific equipment or training. Eligible costs are broadly defined and include, but are not limited to, salaries and wages for team members, tuition and travel for training courses for team members, medical examinations, response vehicles, disposable supplies, and equipment. Even though we found that teams exercise flexibility in their spending priorities, expenditures reported from 1998 through 2000 appear consistent with the purpose of the contracts.

However, determining how the teams use their funding is complicated by several factors. First, team expenditures in a given year often do not match contract payment amounts, because the teams are allowed to carry unused funding into subsequent years. Second, the cities whose fire departments staff the regional teams operate on a fiscal year that ends on December 31, but contract payments are based on the state fiscal year that ends on June 30. Third, the cities' accounting systems do

not track expenditures by activity and, therefore, cannot accurately report a total for local funds spent on hazmat response. For example, the City of Milwaukee has not established an account for tracking regional team contract expenditures and does not distinguish between the state contract and other fire department funds.

Although contracts do not require the regional teams to report their hazmat expenditures, the teams reported to us that they spent \$4.7 million in state funds from 1998 through 2000, as shown in Table 9. Because the City of Milwaukee does not segregate contract-related purchases from other fire department expenditures, the Milwaukee team estimated its contract expenditures. Although the amounts shown in Table 9 reflect the best available information on team expenditures, the table should be interpreted with caution both because it reflects only state contract expenditures and because the regional teams have great flexibility in which costs to charge to their contracts and which to pay for with other fire department funds.

Table 9

**Regional Team State Contract Expenditures by Year**  
1998 through 2000

	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>Total</u>
La Crosse*	\$ 0	\$ 0	\$ 71,456	\$ 71,456
Madison	112,023	393,995	160,347	666,365
Milwaukee**	318,753	338,140	304,111	961,004
Northeast***	318,684	198,093	175,792	692,569
Racine	156,743	196,873	148,705	502,321
Superior	215,299	245,154	186,645	647,098
Wausau	262,582	123,444	136,534	522,560
West Central	<u>289,757</u>	<u>171,010</u>	<u>178,848</u>	<u>639,615</u>
Total	\$1,673,841	\$1,666,709	\$1,362,438	\$4,702,988

\* Expenditures are for the period from July 1, 2000 through June 30, 2001.

\*\* Estimate.

\*\*\* Includes funds transferred to Brown, Manitowoc, Marinette, and Sheboygan counties.

**Personnel-related costs accounted for 46.1 percent of reported team expenditures from 1998 through 2000.**

As shown in Table 10, personnel-related costs totaled \$2.2 million, or 46.1 percent of reported team expenditures. Seven of the eight teams reported both that they pay hazmat team members an incentive in addition to regular wages, in order to retain highly trained staff, and that they have little control over the amount of the incentive, since it is negotiated between the city and the firefighters' union. The amount of incentive pay varies among teams and differs within some teams depending on the rank of the firefighter. Regional teams reported incentive pay ranging from \$400 to \$1,700 per year for each member. In addition, most teams charge their contract for overtime wages for off-duty training. Training and travel expenditures accounted for only 2.5 percent of total costs, likely because a majority of the training is completed on site with in-house instructors, and the majority of training costs were reported as overtime wages. Further, the regional teams take advantage of other sources of state funding through WEM for training and travel.

Table 10

**Regional Team Expenditures by Category**  
1998 through 2000\*

	<u>1998</u>	<u>1999</u>	<u>2000</u>	<u>Total</u>	<u>Percentage</u>
Personnel					
Salaries and fringe benefits**	\$ 348,695	\$ 462,240	\$ 374,749	\$1,185,684	25.2%
Incentive pay	245,777	215,811	211,453	673,041	14.3
Medical evaluations	73,802	35,784	81,873	191,459	4.1
Training and travel	<u>36,711</u>	<u>32,760</u>	<u>46,084</u>	<u>115,555</u>	<u>2.5</u>
Subtotal	704,985	746,595	714,159	2,165,739	46.1
Equipment and supplies	325,288	384,861	353,794	1,063,943	22.6
Response vehicles	364,576	337,210	94,973	796,759	16.9
Subcontracts/transfers***	157,779	81,308	89,384	328,471	7.0
Insurance	81,253	80,019	79,968	241,240	5.1
Administrative costs	<u>39,960</u>	<u>36,716</u>	<u>30,160</u>	<u>106,836</u>	<u>2.3</u>
Total	\$1,673,841	\$1,666,709	\$1,362,438	\$4,702,988	100.0%

\* Includes La Crosse expenditures from July 1, 2000 through June 30, 2001, and estimated expenditures for Milwaukee.

\*\* Includes overtime wages and fringe benefits paid for off-duty training.

\*\*\* Includes funds transferred to other fire departments or other accounts within a regional team's fire department.

The remaining 53.9 percent of regional team expenditures shown in Table 10 include:

- equipment and supplies, such as new equipment purchases, equipment maintenance, protective clothing, and decontamination supplies;
- response vehicles, including both vehicle purchases and maintenance costs;
- subcontracts with other fire departments or transfers to other accounts within a team's fire department;
- insurance, which is largely the cost of an additional worker's compensation policy to cover the Milwaukee team's responses outside of that city's normal jurisdiction, because the City of Milwaukee offers higher levels of coverage for its firefighters than the State does; and
- administrative costs, such as rented space and the salary of a private consultant who serves as the teams' statewide coordinator and lobbyist.

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**Team spending can vary by year based on local priorities, labor agreements, and which costs are charged to the state contract.**

Spending within a category can vary from year to year because of changes in local priorities, increased overtime and incentive pay costs determined through local labor agreements, infrequent vehicle purchases, and local decisions on which costs to charge against the contract. For example, the teams do not consistently charge the costs of incentive pay, overtime, and equipment purchases to their contracts and instead may use other fire department funds to cover these expenses in some years.

Differences in equipment and vehicle expenditures among the teams can be attributed to differences in each team's needs based on its region's geography and demographics, the types of facilities and hazmat risks in the region, and its existing equipment inventory. For example, the Northeast regional team maintains equipment appropriate for a response at a paper mill, whereas the Madison team is more likely to respond to an incident at a campus research laboratory. Additionally, WEM has not mandated that the teams use standardized response vehicles, so some teams use trailers to haul equipment and supplies, while others use converted delivery trucks. The La Crosse team indicated the command vehicle it is planning to purchase, which would be outfitted with computers and other state-of-the-art communications equipment as other teams' vehicles are, may cost \$300,000.

## Local Funding for Regional Teams

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**Because regional team members also serve as firefighters, it is difficult to track the amount of local funding spent to maintain the regional teams.**

While most teams track the expenditures they charge to their state grants, none of the teams segregate the total cost of their hazmat unit from other fire department operating costs because city accounting systems do not track expenditures by activity, and members of the regional teams also serve as local firefighters. Likewise, the regional teams share facilities, equipment, and administrative support staff with the local fire department. Vehicles purchased with local funds are used for hazmat responses, and hazmat vehicles may be used for fire calls.

Although teams reported that the contract funds do not pay for the full cost of maintaining regional teams, and each of the teams reported using local funds for its support, only three were able to provide estimates of local support. The City of Milwaukee Fire Department estimated it spent about \$670,000 in local funds in FY 2000-01, or 72.0 percent of the estimated cost of maintaining the Milwaukee regional team. The Madison team estimated that the city provided about \$339,000 in 1999 for such things as training, administration, and medical services, which represented 60.1 percent of the team's total cost. Northeast team members estimated that Appleton has provided \$100,000 per year. Based on the amount of state funding Appleton retained in 2000, the city's support was 57.4 percent of the cost of maintaining the Appleton team. In comparison, Minnesota estimates that it funds about half the cost of maintaining its regional teams, which are also units of local fire departments.

The regional teams reported that the cost of on-duty staff time for training, meetings, equipment maintenance, and other hazmat-related tasks constitutes the majority of additional local expenditures for the regional teams. For example, staff from the Oshkosh team estimated that local funds paid for 84.5 percent of the hours its members spent in hazmat training between 1998 and 2000. Superior staff estimated that 78.6 percent of overtime costs spent on hazmat-related tasks in calendar year 2000 were paid for with local funds. Racine staff reported that local funds paid for 16.0 percent of the wages for staff time dedicated to hazmat duties between January 1998 and April 2001. The number of hours dedicated to hazmat duties varies among communities largely because of differences in the sizes of teams.

Local fire departments also reported using donations and payments received through contracts with other local governments to support the regional teams. For example, Wausau and La Crosse solicited a total of \$90,000 in local donations to purchase trailers and decontamination supplies. Furthermore, all but three of the regional Level A teams also serve as the team responsible for responding to Level B incidents in one

or more counties, for which contracts are negotiated and the fire departments receive additional payments. Each team negotiates its own contracts with the counties for which it provides Level B response service, and the amount of these county contracts ranges from about \$5,000 per year in Chippewa County to \$35,000 per year in Dane County. Specifically:

- the West Central regional team contracts with Eau Claire and Chippewa counties;
- the La Crosse regional team contracts with La Crosse County and Allamakee County, Iowa;
- the Madison regional team contracts with Dane County;
- the Northeast regional team contracts with Winnebago, Outagamie, and Calumet counties; and
- the Superior regional team contracts with Douglas, Washburn, and Burnett counties.

The Racine and Wausau regional teams are not the designated Level B response teams for their counties; the Milwaukee regional team provides Level B response coverage for the City of Milwaukee and assists other municipal fire departments in providing coverage for the remainder of Milwaukee County when needed. Although some of the regional teams segregate the amount they receive for Level B service from their Level A contract funds, either source of funding may be used to purchase multi-purpose response equipment for both Level A and Level B responses.

### **Reimbursement of Costs by Responsible Parties**

In addition to receiving state and local funds to maintain their hazmat capabilities, regional and county-wide hazmat teams are authorized to recover the costs of responding from the party responsible at the site an incident occurred. A provision included in 2001 Wisconsin Act 16, the 2001-03 Biennial Budget Act, also gives WEM and the regional teams new authority to seek reimbursement from responsible parties when the potential for a hazmat incident required a regional team response, but no release of hazardous materials actually occurred. Reimbursable costs include wages of responders and replacement firefighters, vehicle usage, consumable supplies, and equipment repair or replacement. Cost-recovery efforts and the amounts charged vary by region because the teams may establish their own charges for a response. As noted, ch. 166.215, Wis. Stats., authorizes WEM to reimburse the regional and

county-wide teams for their response costs when the responsible party cannot be identified or is unwilling or financially unable to pay. However, WEM's ability to equitably reimburse hazmat teams may be limited because of declining spending authority and the absence of standardized reimbursement rates.

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**Response costs billed to the parties responsible for a hazmat incident vary widely.**

Although all charges to responsible parties must be approved by a local reviewing entity designated by the fire department, rates vary widely. For example:

- Hourly reimbursement rates for primary hazmat response vehicles ranged from \$29 per hour in Madison to \$150 per hour in Chippewa Falls. The rates for a fire engine ranged from \$40 per hour in Madison to \$200 per hour in Wausau.
- Four of the eight teams charged responsible parties for vehicle mileage, which ranged from \$0.50 per mile for a command vehicle in La Crosse to \$5.00 per mile for any vehicle in Oshkosh.
- Four of the teams charged responsible parties for both overtime and on-duty salary costs for responders, whereas the other four teams charged only overtime costs.
- Most of the teams charged responsible parties for fringe benefits, which are often calculated as a percentage of wages. Madison charged 28.9 percent, whereas Chippewa Falls, Eau Claire, and Superior charged 45.0 percent of wages.
- Three teams added a 10 to 15 percent surcharge on the cost of consumable supplies, whereas two teams, Racine and Wausau, added administrative surcharges of 10 percent and 11 percent, respectively, to their total response costs.

From 1998 through 2000, the regional teams reported that they recovered at least \$213,000 from responsible parties, which is an average of less than \$9,000 annually per team. The cities of Milwaukee and Oshkosh, which do not distinguish between the amounts recovered from Level A and Level B responses, responded to 124 incidents from 1998 through 2000 and billed the responsible parties for 51 of these incidents, or 41.1 percent. The other eight cities billed the responsible parties for 37 of a possible 51 Level A responses, or 72.5 percent. The regional teams cited a variety of local factors that influence whether they attempt to recover costs from responsible parties. For example,

several reported that they rarely pursue full reimbursement for incidents within their normal jurisdictions, reasoning that in these cases responsible parties, including local companies, already support the fire department through local taxes. The Milwaukee team reported that it does not bill responsible parties if total response costs are less than \$200.

The regional teams have submitted estimates of their costs for responding to 68 of the 74 Level A incidents from 1998 through 2000. As shown in Table 11, the majority of responses had reported costs of \$5,000 or less, and only two responses had reported costs greater than \$10,000. The teams reported incurring no costs for eight responses. It should be noted that the teams might not have attempted to recover all of the costs they reported, or they may have negotiated lower settlement amounts with the responsible parties. WEM does not track reimbursements received by the regional teams.

Table 11

**Estimated Cost per Level A Response**  
1998 through 2000

<u>Cost</u>	<u>Number of Responses</u>	<u>Percentage of Total</u>
No data	6	8.1%
\$0	8	10.8
\$1 to \$1,000	12	16.2
\$1,001 to \$5,000	39	52.7
\$5,001 to \$10,000	7	9.5
> \$10,000	<u>2</u>	<u>2.7</u>
Total	74	100.0%

**WEM reimburses team response costs when the responsible party does not pay.**

To be reimbursed with state funds, a team must file a notice of intent with WEM within 30 days of the date of its response and must demonstrate that it made a good-faith effort to collect reimbursement from the responsible party before submitting its claim. State administrative rules indicate that costs eligible for reimbursement include:

- vehicle and equipment usage;

- personnel expenses, including indirect costs such as fringe benefits and firefighters called in to take the place of responding hazmat team members; and
- other necessary and reasonable expenses related to response team services based on actual expenditures.

From FY 1998-99 through FY 2000-01, WEM reimbursed the regional and county-wide teams for \$50,672 in response costs for 20 incidents in which the responsible party could not be identified or was unwilling or unable to pay, although, as noted, \$19,841 was eventually recovered by WEM. The Joint Finance Committee also approved the transfer of \$118,036 from the reimbursement appropriation in FY 1997-98, and \$177,400 in FY 1999-00, to extend certain regional teams' contracts so that all contracts would end on June 30, 2002. As a result of payments to the teams and transfers to other appropriations, the spending authority for the continuing appropriation from which response costs are paid has declined over the years. At the end of FY 2000-01, the budget authority in the reimbursement appropriation was \$39,197.

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**WEM may have insufficient funding to reimburse regional team response costs.**

WEM has been able to reimburse the teams for all claims submitted in the past, but it anticipates shortfalls in the reimbursement appropriation in the future. For example, it is currently reviewing a reimbursement request from the Northeast team for an incident in December 2000 that totals more than is available in the appropriation for the 2001-2003 biennium. If WEM is unable to recover costs from the responsible party, the cities of Appleton and Oshkosh may have to absorb some of those costs. In addition, the regional teams have been incurring costs for responding to recent anthrax threats. Although regional team chiefs are reluctant to charge for this service, they indicated that continued response to these types of incidents may require them to at least attempt to recover their costs. To the extent that a party responsible for these threats cannot be identified, the teams may request reimbursement from WEM.

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**WEM should establish standard rates for reimbursing hazmat team response costs.**

If claims exceed available appropriation authority, WEM could request funding from the Joint Finance Committee under s. 13.10, Wis. Stats., as it has done in the past to extend existing contracts with some regional teams. However, WEM could first be expected to standardize reimbursement rates, which currently vary widely for similar services and equipment. For example, WEM reimbursed one team \$18 per hour and another team \$75 per hour for response vehicle costs. Although teams may wish to retain their flexibility in charging responsible parties for costs they do not intend to recover from WEM, to ensure that available state funding is distributed equitably, we recommend the Division of Emergency Management establish standard rates it will reimburse regional Level A and county-wide Level B teams for their costs in such areas as vehicle usage, consumable supplies, and equipment repair or replacement, as well as for administrative surcharges that may not be directly related to a response effort.

In the absence of additional reimbursement appropriations from state funds, the regional teams may be eligible for reimbursement from the federal Environmental Protection Agency, which administers a program under which local units of government are eligible for up to \$25,000 in reimbursement if they can demonstrate that local and state funds are not available for this purpose and that reasonable attempts have been made to recover costs from the responsible party. However, Congress appropriated only \$1.27 million for this program for the federal fiscal year ending on September 30, 2001, which is similar to the appropriation level since the program's inception in 1987. Regional and county-wide teams in Wisconsin are not guaranteed to be reimbursed with federal funds because requests across the nation are addressed on a first-come, first-served basis. Only two Wisconsin communities have been reimbursed under this program, and both incidents occurred before the State's reimbursement appropriation was established in 1995.

\*\*\*\*



In light of the new reality of the need for terrorism preparedness, the Legislature may be asked to consider a number of issues relating to the hazmat teams, including assessing the adequacy of overall funding levels or the potential for securing funding sources other than GPR. In addition, some consideration may be necessary to further define the relationships and the respective roles of regional Level A and county-wide Level B teams, and how funds are allocated to them.

### **State Funding Levels for Hazmat Teams**

As noted, the State has appropriated \$1.4 million annually for the regional Level A response team contracts since FY 1994-95. Appropriations for matching equipment grants for county-wide Level B teams have ranged from \$468,000 to \$720,000 annually since FY 1994-95. Traditionally, the amounts appropriated have not been based on a formula that links funding with need, as defined by the State, or on a cost-sharing basis that specifies shares for various cost categories. In part, this is because WEM has no information on the actual costs of operating the various hazmat teams: currently, even the teams that track the expenditures they charge to state contracts do not segregate their locally supported hazmat costs from other fire department operating costs.

The original decision by the State to not require local teams to fully segregate their hazmat costs from other fire department costs may have been based on the recognition that most teams had already established Level A capability within their communities, and the major purpose of the state contracts was for the teams to provide coverage extending beyond their municipal boundaries.

In the absence of data on the total cost of operating the hazmat teams, it is difficult to determine the adequacy or fairness of existing state support for this purpose. However, we found that some level of state support for local hazmat costs is relatively common in other states: 19 of the 32 other states that responded to our survey, or 59.4 percent, indicated that they provided some state funding for hazmat response in FY 1999-2000.

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**Wisconsin's hazmat expenditures were higher than those of all other states responding to our survey.**

As shown in Table 12, Wisconsin's level of GPR support was higher than that of all 12 of the other states that provided us with information on their total funding for all hazmat response activities. Compared to Wisconsin's \$2.1 million:

- Virginia spent \$1.6 million, or approximately \$500,000 less than Wisconsin;
  - Minnesota, Maryland, Oregon, and North Carolina each spent approximately \$1 million, or from \$1.1 to \$1.2 million less than Wisconsin; and
  - Seven other states spent from \$1.3 to \$2.0 million less than Wisconsin.
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Table 12

**Amount of State Funding for Hazmat Response\***  
FY 1999-2000

<u>State</u>	<u>Total</u>	<u>State Administration and Training</u>	<u>Funding for Hazmat Teams</u>	<u>Other**</u>
Colorado	\$67,200			
Idaho	273,400			
Kansas	500,000	\$250,000	\$150,000	\$100,000
Maine	100,000		100,000	
Maryland	1,000,000			
Minnesota	1,061,200	312,000	720,000	29,200
North Carolina	900,000			
North Dakota	110,000	55,000		55,000
Oregon***	950,000	217,800	732,200	
Pennsylvania	824,000			
Vermont	170,000	70,000	100,000	
Virginia	1,579,800	1,178,300	401,500	
Wisconsin	2,131,900	125,700	1,982,100	24,100

\* Does not include federal funds expended by any state.

\*\* Includes program administration, reimbursed team response costs, and payments to local emergency planning committees.

\*\*\* Yearly average of funding reported for the 1999-2001 biennium.

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In light of Wisconsin's deteriorating fiscal condition, there may also be some interest in reviewing its sources of funding for hazmat costs. In FY 2000-01, approximately 90 percent of WEM's expenditures for hazmat activities were GPR funded, while 10 percent were federally funded. Among the 32 other states responding to our survey, 12 reported using general fund revenue to support their hazmat activities, as shown in Table 13. No state funding for hazmat response activities was reported by 12 other states, which indicated they rely on a combination of local and federal funding and fees that local responders collect directly from responsible parties. These included states with larger populations than Wisconsin, such as Illinois, Indiana, and Michigan.

As also shown in Table 13, nine other states fund hazmat costs at least in part by levying fees on transporters and facilities that store hazardous materials. Two other states indicated they allow counties to levy such fees. Wisconsin had originally funded its regional Level A teams through fees on transporters of hazardous materials, but as noted, the Wisconsin Court of Appeals found these fees unconstitutional in 1996 because they were not apportioned to each transporter's activity within the state. WEM modified the fees to comply with the court's ruling and estimated the new schedule, which was adopted by administrative rule, would apply to approximately 1,500 transporters and would generate approximately \$996,700 in FY 1995-96. However, a series of legislative actions prohibited the modified fee schedule from being implemented, and 1997 Wisconsin Act 27 changed the funding source to GPR in October 1997. Facilities that store hazardous materials in Wisconsin are currently assessed fees that are used to fund county emergency management planning.

While Wisconsin's hazmat expenditures are higher than other states', the regional teams believe the State provides insufficient funding overall and requested additional funding of \$248,000 in FY 2000-01, and \$196,000 in FY 2001-02. In addition, the teams have expressed concerns over how funding is allocated among the teams by WEM.

Table 13

**Sources of State Funding for Hazmat Response**  
2001

<u>State</u>	<u>General Purpose Revenue</u>	<u>Responsible Party Charges Paid to State</u>	<u>Fees on Transporters or Facilities</u>	<u>Other*</u>	<u>No State Funding</u>
Alabama					X
Arizona**	X	X			
Arkansas					X
Colorado	X				
Georgia					X
Hawaii**	X	X	X	X	
Idaho	X	X			
Illinois					X
Indiana					X
Iowa					X
Kansas				X	
Maine			X		
Maryland		X	X		
Michigan					X
Minnesota	X	X	X		
Nebraska**	X				
Nevada**	X	X		X	
New Hampshire					X
New York**	X				
North Carolina	X				
North Dakota			X		
Ohio**	X		X		
Oklahoma					X
Oregon		X	X		
Pennsylvania			X		
South Carolina**	X				
South Dakota	No response				
Utah					X
Vermont			X		
Virginia	X	X		X	
Washington					X
Wisconsin	X			X	
Wyoming					X

\* Includes state fire fund, state environmental fund, state emergency response committee grants, or petroleum storage fees.

\*\* Although these states indicated that they provided state funding, they did not indicate the amount of funding provided.

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**Beginning in FY 2000-01, WEM used a funding model to allocate funding among the regional teams.**

Based on the \$1.4 million annual appropriation for the regional teams, WEM indicates it intends to renegotiate three- or five-year regional team contracts with participating fire departments, which would begin on July 1, 2002. WEM officials have said they intend to use a funding model similar to the model used in the two-year contract cycle that began in FY 2000-01, which:

- established an estimated cost of \$2,550 per hazmat team member, with the number of members established by each team;
- established an outreach cost by estimating that the regional teams would visit each fire department in their region once every other year, at a cost of \$400 per visit;
- gave each team an allowance of \$15,000 for disposable supplies such as suits and decontamination supplies;
- estimated that the teams would need to replace durable equipment on a ten-year cycle, allowing the Madison, Milwaukee, and Northeast Level A teams \$45,000 per year based on a \$450,000 inventory, and the remaining teams \$30,000 per year based on a \$300,000 inventory; and
- adjusted the base amounts determined by the model to account for specific local costs.

WEM's funding model appears both logical and reasonable. However, one weakness is that it provides funding based on the number of personnel each fire department assigns to its team, which is a result of local preferences and labor agreements. This model provides no incentive to limit team membership and appears to lead to the inequitable distribution of funds. For example, team membership ranges from 24 in La Crosse to 75 in Madison and Milwaukee. Under the current model, La Crosse receives \$61,200 for personnel, while Madison and Milwaukee receive \$191,250. WEM could refine its funding model by determining the minimum number of trained responders required to provide adequate coverage for each region and using this number to calculate how much each team should receive for personnel. Although the number of team members necessary could differ between larger and smaller regions, increased standardization of personnel costs would allow WEM to more equitably and efficiently use and allocate available funding.

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**WEM may wish to consider additional information on risk factors in future funding decisions.**

WEM may also wish to consider risk information in its future funding decisions. For example, the amount of funding available to each team could be adjusted based on risk indicators that include geographic area and population, frequency of hazardous materials spills, and the number of facilities that are federally required to report hazardous materials usage. Table 14, which compares funding levels in 2000 with various risk factors, shows that:

- The Milwaukee region ranked first in population and reported the second-highest occurrence of spills to DNR, and its team received the largest share of contract funds.
- The Northeast region covers the largest area, has the largest number of facilities reporting hazardous materials usage, and reported the largest number of spills, and its team received the fourth-highest allocation of contract funds.
- The Madison region ranked third in population, number of spills reported to DNR, and number of reporting facilities, and its team received the third-largest allocation of contract funds.
- The La Crosse region includes the smallest percentage of the state population and has the third-smallest area and relatively few spills and reporting facilities, but its team received the second-largest allocation in 2000. However, the amount awarded includes start-up costs for the team in the first year of its contract. Future funding for the La Crosse team would be expected to be lower.

WEM may also need to review funding decisions based on the frequency and severity of regional team responses to chemical or biological terrorist threats.

Table 14

**Comparison of Team Funding with Estimated Risks  
2000**

	Percentage of Contract Funds*	Percentage of State Square Mileage	Percentage of State Population	Percentage of DNR Spills**	Percentage of Facilities***	Funding per Capita
Milwaukee	19.3%	3.2%	28.7%	21.5%	20.9%	\$0.18
La Crosse	14.5	9.7	5.0	2.7	6.1	0.76
Madison	13.9	13.9	16.7	19.6	21.8	0.22
Northeast	12.1	20.1	21.6	30.4	24.8	0.15
West Central	11.8	17.7	8.8	8.5	9.1	0.35
Superior	10.7	16.1	2.7	3.8	2.5	1.03
Wausau	9.2	16.6	7.8	4.3	7.9	0.31
Racine	<u>8.5</u>	<u>2.7</u>	<u>8.7</u>	<u>9.2</u>	<u>6.9</u>	<u>0.25</u>
Total	100.0%	100.0%	100.0%	100.0%	100.0%	\$0.26

\* Percentage of contract funds received in FY 2000-01.

\*\* Wisconsin DNR spills database, 2000 data.

\*\*\* WEM database of facilities that are required to report hazardous materials under the Emergency Planning and Community Right-to-Know Act.

**Defining Level A and Level B Team Responsibilities**

**Confusion in defining the level of response necessary has led to friction between the regional and county teams.**

Another factor affecting funding decisions, and which the Legislature may also wish to consider, is the State's dual hazmat response structure, which divides responsibilities between the regional Level A and county-wide Level B teams. While most hazmat officials would agree that Wisconsin has a well-established response network, in some cases difficulties have been noted in making clear distinctions between incidents requiring Level A and Level B response. This has led to occasional friction between the regional Level A and county-wide Level B teams, including disagreements on how state hazmat funds are allocated.

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**New response guidelines due from WEM in 2002 may clarify the roles of regional and county-wide teams.**

Questions about which level of response is appropriate in particular situations may be addressed once WEM issues new guidelines on this topic, which it expects to do by summer 2002. Current guidelines, which have been in place since 1996, address only Level A responses. WEM staff believe the new guidelines will help to clarify whether the regional Level A or a county-wide Level B team should respond to various types of incidents and will improve coordination and communication between the two types of response teams.

However, a draft version of these guidelines we reviewed does not include specific guidance regarding which type of team should respond to biological terrorism threats, and regional team leaders have expressed confusion over whether they are authorized to respond to these incidents outside their municipal jurisdictions. For example, some recent responses to anthrax threats have required hazmat teams to wear Level A protective equipment, while in other cases in which the threat was more isolated, they have not. WEM staff indicate that they and the regional teams are reviewing whether biological terrorism threats can be included in the forthcoming guidelines.

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**Other states organize their response structures in a variety of ways.**

Other states have faced similar issues regarding response roles, and our survey indicates they have chosen to organize their response structures in a variety of ways. For example:

- In Minnesota, the state-operated regional system has one heavily equipped statewide team, similar to Wisconsin's regional Level A teams, as well as ten regional chemical assessment teams that are smaller than Level A teams and are able to respond quickly to determine whether a larger hazmat team is needed.
- Nebraska sponsors a statewide team that generally provides technical assistance only for hazmat incidents. It is composed of employees from the State Patrol, the State Fire Marshal's office, and the Department of Environmental Quality. Fire departments at the county level have organized a type of regional system in which a few counties maintain teams that respond to other counties. A county receiving assistance pays the responding county for services provided.

- In Colorado, the regional teams are located in the office of the State Patrol and are each composed of two state troopers trained as hazmat technicians. These teams generally respond to transportation-related incidents, although they respond to incidents at facilities upon request. Like Nebraska counties, counties in Colorado organize their own regional teams without state sponsorship.
- Other states reported that they do not have regional teams but that local teams respond outside of their normal jurisdictions under contracts or mutual aid agreements.

In Wisconsin, a modified response structure has developed in the Superior region, where the Level A team based in the City of Superior responds. The Superior Level A team has established relationships with four other local fire departments that act as chemical assessment teams in the region. The Superior team has purchased a van, a trailer, and equipment for each of the four departments to use in responding to incidents in their areas, and it provides training and pays yearly bonuses to the assessment team members. Superior team officials believe that the availability of assessment teams gives the Level A team time to prepare and travel to incidents while the assessment teams gather information that can be used upon the Level A team's arrival. We were also told the relationship among participating fire departments has improved because of this arrangement.

In the Northeast region, the Level A team based in the cities of Appleton and Oshkosh subcontracts with Level B teams in Brown and Marinette counties, which serve as assessment teams. Other Level A teams, including those in the West Central and La Crosse regions, sometimes send their own assessment teams to determine whether the entire Level A team is needed.

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**Using Level B teams to respond as assessment units for the regional teams could potentially lead to more effective response.**

Designating certain Level B teams as assessment teams not only could provide for a quicker response, it could also ensure that regional Level A teams respond only to incidents that require their full capabilities and could limit a regional team's response costs. Recent responses by smaller assessment units of the regional Level A teams to anthrax threats have demonstrated additional benefits of assessment teams, including:

- determining whether a threat is credible and requires the full Level A hazmat team;

- ensuring that the level of response is appropriate to the risk, especially for incidents in which the risk of contamination is small; and
- allowing multiple responses to simultaneous incidents, which occurred several times during the recent anthrax threats and seems more likely to occur during potential terrorist threats than during accidental chemical spills.

If a Level B team responds first to all incidents as an assessment team, current questions regarding the distinction between the type of equipment needed and which type of team should respond would be clarified. Although ch. 166, Wis. Stats., states that regional teams are to assist in responding to incidents requiring Level A protective equipment and county teams are to have the capability to respond to incidents requiring Level B protective equipment, in practice incidents cannot always be clearly categorized by the type of equipment needed. For example, in February 1998, the regional Level A team based in Madison responded to an incident at an apartment in Dane County after the local fire department arrived at the scene and discovered an odorless, colorless irritant affecting residents. After further assessment, the regional team determined that Level A protective equipment was not necessary and used less-protective equipment.

Further complicating efficient response by county-wide Level B teams under the current structure is that some Level B teams are capable of responding to incidents requiring Level A equipment but are reluctant to do so because state immunity from liability for these teams extends only to incidents requiring Level B equipment. The restriction on liability coverage for Level B teams was intended to ensure that Level B teams did not respond to incidents for which they were not trained. If qualified Level B teams were designated as assessment units for the Level A teams, they would receive state immunity from liability for all incidents. Such teams could potentially act more quickly than full Level A teams to assess and limit damage.

Level B teams designated as assessment teams would also receive state worker's compensation coverage when responding as assessment teams. Currently, Level B teams are covered by their own municipalities or counties. Although restrictions on worker's compensation coverage for Level B teams were intended to limit the State's exposure to potentially large payments, serious injuries to regional team members have been limited. Since 1993, there have been six worker's compensation claims filed with the Department of Administration on behalf of Level A team staff, two of which resulted in a paid benefit totaling \$1,113. Twelve states that responded to our survey provide state worker's compensation benefits for local responders.

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**In Minnesota, assessment teams responded to 97.1 percent of regional calls without the aid of a more heavily equipped team.**

Designating Level B teams as assessment teams could also limit response costs. For example, in Minnesota, where assessment teams responded to 97.1 percent of all regional hazmat calls without the aid of a full hazmat team from FY 1996-1997 through FY 2001-01, the average response cost per incident for an assessment team was \$1,600. In contrast, Wisconsin's average cost per incident for response by a regional Level A team was nearly \$4,600 for a similar five-year period.

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## Appendix 1

### Other States' Responses to National Hazmat Survey

In August 2001, we conducted a national survey of state emergency management directors. The first part of this appendix summarizes 32 other states' responses to 12 survey questions. Additional detail is provided in tables at the end of this appendix or in the body of the report. Because some states did not answer every question or did not answer questions completely, the number of responses is indicated after each question. Some questions allow for multiple answers, so percentages will not always total 100.0 percent. Wisconsin is excluded from the summarized responses to survey questions but is included in the tables.

#### Summarized Responses to Survey Questions

1. Does your state have city, county, regional, and/or statewide hazardous materials (hazmat) response teams? **32 responses**

City	<b>71.9%</b>	<b>(23)</b>
County	<b>62.5%</b>	<b>(20)</b>
Regional	<b>50.0%</b>	<b>(16)</b>
Statewide	<b>21.9%</b>	<b>(7)</b>
Other	<b>31.3%</b>	<b>(10)</b>

- 1a. Do you have regional hazmat response teams with different capabilities such as "heavy" and "light" teams (sometimes called chemical assessment teams)? **14 responses**

Yes	<b>42.9%</b>	<b>(6)</b>
No	<b>51.7%</b>	<b>(8)</b>

For additional information, see Table 3 in the body of the report.

2. How much of your state is covered by a hazmat response team capable of hazmat technician-level response that can arrive at the incident in three hours or less? **32 responses**

100 percent	<b>21.9%</b>	<b>(7)</b>
76-99 percent	<b>21.9%</b>	<b>(7)</b>
51-75 percent	<b>25.0%</b>	<b>(8)</b>
26-50 percent	<b>18.8%</b>	<b>(6)</b>
1-25 percent	<b>12.5%</b>	<b>(4)</b>
0 percent	<b>0.0%</b>	<b>(0)</b>

For additional information, see Table A1 at the end of this appendix.

3. How frequently do private contractors provide hazmat technician–level response to hazmat incidents? **32 responses**

100 percent	<b>0.0%</b>	<b>(0)</b>
76-99 percent	<b>9.4%</b>	<b>(3)</b>
51-75 percent	<b>12.5%</b>	<b>(4)</b>
26-50 percent	<b>6.3%</b>	<b>(2)</b>
1-25 percent	<b>46.9%</b>	<b>(15)</b>
0 percent	<b>25.0%</b>	<b>(8)</b>

4. If your state has regional hazmat response teams, who employs the personnel on the teams? **28 responses**

Fire departments	<b>42.9%</b>	<b>(12)</b>
State Patrol	<b>10.7%</b>	<b>(3)</b>
State Fire Marshal	<b>7.1%</b>	<b>(2)</b>
National Guard	<b>0.0%</b>	<b>(0)</b>
Other state agency	<b>14.3%</b>	<b>(4)</b>
Private contractors	<b>3.6%</b>	<b>(1)</b>
Other	<b>17.9%</b>	<b>(5)</b>
Not applicable, my state does not have regional hazmat response teams	<b>42.9%</b>	<b>(12)</b>

For additional information, see Table A2 at the end of this appendix.

5. If your state has regional hazmat response teams, how many regions exist in your state? **27 responses**

1-3	<b>11.1%</b>	<b>(3)</b>
4-6	<b>18.5%</b>	<b>(5)</b>
7-9	<b>3.7%</b>	<b>(1)</b>
10-12	<b>7.4%</b>	<b>(2)</b>
13-15	<b>3.7%</b>	<b>(1)</b>
16-18	<b>3.7%</b>	<b>(1)</b>
19 or more	<b>3.7%</b>	<b>(1)</b>
None, my state does not have regional hazmat response teams	<b>48.1%</b>	<b>(13)</b>

For additional information, see Table A3 at the end of this appendix.

6. If your state has regional hazmat response teams, do you know how many responses to hazmat incidents the regional teams made in 2000? **27 responses**

Yes, known number of responses	<b>29.6%</b>	<b>(8)</b>
No, unknown number of responses	<b>25.9%</b>	<b>(7)</b>
Not applicable, my state does not have regional hazmat response teams	<b>44.4%</b>	<b>(12)</b>

For additional information, see Table A3 at the end of this appendix.

7. If your state government provides state funding for local, regional, or statewide hazmat response, what is the source of that funding (exclude federal government funding)? **31 responses**

Taxpayer funded (such as through a general fund)	<b>38.7%</b>	<b>(12)</b>
Responsible party reimbursement paid directly to the state	<b>25.8%</b>	<b>(8)</b>
Fees levied by the state on transporters or fixed facilities	<b>29.0%</b>	<b>(9)</b>
Other	<b>12.9%</b>	<b>(4)</b>
Not applicable, state government does not provide state funding for hazmat response	<b>38.7%</b>	<b>(12)</b>

For additional information, see Table 13 in the body of the report.

8. If your state government provides state funding for local, regional, or statewide hazmat response, do you know the amount of that funding in fiscal year 2000 (exclude federal government funding)? **31 responses**

Yes, amount known	<b>38.7%</b>	<b>(12)</b>
No, amount unknown	<b>22.6%</b>	<b>(7)</b>
Not applicable, state government does not provide state funding for hazmat response	<b>38.7%</b>	<b>(12)</b>

For additional information, see Table 12 in the body of the report.

9. Is any other funding provided to hazmat responders in your state? **31 responses**

Municipal government funding	<b>51.6%</b>	<b>(16)</b>
County government funding	<b>61.3%</b>	<b>(19)</b>
Federal government funding	<b>51.6%</b>	<b>(16)</b>
Responsible party reimbursement paid directly to responding organizations	<b>51.6%</b>	<b>(16)</b>
Private sources	<b>22.6%</b>	<b>(7)</b>
Other	<b>9.7%</b>	<b>(3)</b>
No other funding is available	<b>3.2%</b>	<b>(1)</b>

For additional information, see Table A4 at the end of this appendix.

10. Does your state government provide state worker's compensation benefits for hazmat responders not employed by the state? **30 responses**

Yes	<b>40.0%</b>	<b>(12)</b>
No	<b>60.0%</b>	<b>(18)</b>

For additional information, see Table A5 at the end of this appendix.

11. Does your state government provide immunity from liability for property damage, injury, or death caused during a hazmat response for hazmat responders not employed by the state or for their sponsoring agency or organization? **30 responses**

Yes	<b>63.3%</b>	<b>(19)</b>
No	<b>36.7%</b>	<b>(11)</b>

For additional information, see Table A5 at the end of this appendix.

12. Aside from OSHA and EPA regulations (29 CFR 1910.120, for example), does your state specify an annual number of training hours, certify hazmat responders, or specify a training curriculum for hazmat responders? **31 responses**

Annual required number of training hours	<b>22.6%</b>	<b>(7)</b>
State certification	<b>25.8%</b>	<b>(8)</b>
State curriculum	<b>29.0%</b>	<b>(9)</b>
Other	<b>16.1%</b>	<b>(5)</b>
No, my state does not specify an annual number of training hours, certify responders, or specify a training curriculum aside from OSHA or EPA regulations.	<b>48.4%</b>	<b>(15)</b>

For additional information, see Table A6 at the end of this appendix.

Table A1

**Percentage of State Covered by Hazardous Materials Technicians  
that Can Arrive in Three Hours or Less  
2001**

<u>Percentage of State Covered</u>	<u>State</u>
1-25%	Kansas North Dakota South Dakota Wyoming
26-50%	Alabama Arizona Nevada New Hampshire Ohio Utah
51-75%	Arkansas Georgia Illinois Indiana Maine Michigan New York Oklahoma
76-99%	Colorado Hawaii Idaho Iowa Minnesota South Carolina Washington
100%	Maryland Nebraska North Carolina Oregon Pennsylvania Vermont Virginia Wisconsin

Table A2

**Employer of the Regional Team Members  
2001**

<u>State</u>	<u>Fire Departments</u>	<u>State Patrol</u>	<u>State Fire Marshal</u>	<u>Other State Agency</u>	<u>Private Contractors</u>	<u>Other*</u>
Arizona	X					
Arkansas	X					
Colorado		X				
Idaho	X	X				
Illinois	X					
Iowa	X				X	X
Kansas			X			
Maine	X					
Minnesota	X					
Nebraska						X
Nevada	X			X		
New Hampshire	X			X		
New York	X	X	X	X		X
North Carolina	X					X
Oregon						X
Virginia	X			X		
Wisconsin	X					

\* Includes local jurisdictions, county emergency management organizations, and private industry.

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Table A3

**States with Regional Teams  
Reported 2001**

<u>State</u>	<u>Number of Regions</u>	<u>Year the First Team Formed</u>	<u>Number of Responses by Teams in Calendar Year 2000</u>
Arizona	4-6	1995	*
Arkansas	1-3	1995	*
Colorado	10-12	1990	192
Idaho	4-6	1989	27
Illinois	19+	1987	*
Iowa	16-18	1992	*
Kansas	1-3	2001	Not Applicable
Maine	None	*	*
Minnesota	10-12	1995	19
Nebraska	4-6	*	*
Nevada	1-3	1998	*
New Hampshire	4-6	*	*
New York	*	*	*
North Carolina	4-6	1996	18
Oregon	13-15	1990	160
Virginia	7-9	1987	49
Wisconsin**	7-9	1993	19

\* Information was either unknown or unreported by respondent.

\*\* First team was formed in 1993 but did not begin functioning until 1994.

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Table A4

**Other Sources of Funding for Hazmat Response  
2001**

<u>State</u>	<u>Municipal</u>	<u>County</u>	<u>Federal</u>	<u>Responsible Party Charges Paid to Local Responders</u>	<u>Private*</u>	<u>Other**</u>	<u>None</u>
Alabama		X					
Arizona	X	X	X	X	X		
Arkansas	X	X					
Colorado	X	X		X			
Georgia	X	X	X				
Hawaii		X		X			
Idaho	X	X	X				
Illinois	X	X	X				
Indiana	X	X		X	X		
Iowa			X				
Kansas			X				
Maine				X			
Maryland	X	X	X	X			
Michigan	X	X		X	X		
Minnesota	X						
Nebraska			X				
Nevada		X	X	X			
New Hampshire			X				
New York	X	X	X	X	X		
North Carolina	X	X		X			
North Dakota	X	X					
Ohio		X	X				
Oklahoma	X				X		
Oregon							
Pennsylvania		X		X	X	X	
South Carolina		X		X		X	
South Dakota	X	X		X		X	
Utah							X
Vermont			X	X			
Virginia	X		X	X			
Washington			X				
Wisconsin		X	X	X			
Wyoming			X	X	X		

\* Includes support from local industries.

\*\* Includes fees on transporters and facilities collected by counties.

Table A5

**State Provision of Worker's Compensation and Liability Coverage  
for Hazmat Responders  
2001**

<u>State</u>	<u>Worker's Compensation</u>	<u>Liability Coverage</u>
Alabama	No	No
Arizona	Yes	Yes
Arkansas	Yes	Yes
Colorado	Yes	No
Georgia	No	Yes
Hawaii	Yes	No
Idaho	No	Yes
Illinois	Unreported	No
Indiana	No	No
Iowa	No	No
Kansas	No	Yes
Maine	Yes	Yes
Maryland	No	Yes
Michigan	No	Yes
Minnesota	Yes	Yes
Nebraska	Yes	Yes
Nevada	Yes	Yes
New Hampshire	No	No
New York	No	No
North Carolina	No	Yes
North Dakota	Yes	Yes
Ohio	No	No
Oklahoma	No	No
Oregon	No	Yes
Pennsylvania	No	Yes
South Carolina	Unknown	Unknown
South Dakota	No	Unreported
Utah	No	No
Vermont	No	Yes
Virginia	Yes	Yes
Washington	Yes	Yes
Wisconsin	Yes	Yes
Wyoming	Yes	Yes

Table A6

**States with Additional Hazmat Training Requirements  
2001**

<u>State</u>	<u>Required Hours*</u>	<u>State Certification of Responders</u>	<u>State Curriculum</u>
Arizona			X
Arkansas	X	X	X
Colorado	X	X	
Idaho			X
Illinois		X	X
Maryland	X		X
Nebraska	X		
New York		X	X
North Carolina		X	
Oregon			X
Pennsylvania		X	
Vermont	X	X	X
Virginia	X	X	X
Washington	X		

\* Beyond those required by federal standards.

Appendix 2

**Spills Reported to the Department of Natural Resources**  
1996 through 2000

<u>Year</u>	<u>Total Spills</u>
1996	1,190
1997	1,017
1998*	718
1999	695
2000	<u>604</u>
Total	4,224

\* In 1997, Department of Natural Resources spill reporting requirements changed and exempted small spills of gasoline and agricultural products. As a result, the number of reported spills decreased.



Appendix 3

**Health Effects of Hazmat Incidents**  
1996 through 2000

<u>Year</u>	<u>Total Incidents Reported</u>	<u>Incidents with Injuries</u>	<u>Incidents with Evacuations</u>
1996	331	21	38
1997	350	34	49
1998	424	32	56
1999	507	28	61
2000	<u>478</u>	<u>31</u>	<u>45</u>
Total	2,090	146	249

Source: Department of Health and Family Services





STATE OF WISCONSIN \ DEPARTMENT OF MILITARY AFFAIRS  
WISCONSIN EMERGENCY MANAGEMENT

2400 WRIGHT STREET  
P.O. BOX 7865  
MADISON, WISCONSIN 53707-7865

January 16, 2002

Janice L. Mueller, State Auditor  
Legislative Audit Bureau  
22 East Mifflin Street, Suite 500  
Madison, WI 53703-2512

Dear Ms. Mueller:

On behalf of the Wisconsin Division of Emergency Management (WEM) and the Department of Military Affairs, I would like to thank you and the staff of the Legislative Audit Bureau for the thorough, professional and comprehensive review of WEM's hazardous materials response system. We appreciate the time spent systematically reviewing a complex system involving a multitude of regulatory requirements and diverse interests.

The horrific events of September 11, 2001 have clearly emphasized the necessity for specially trained emergency responders at the state and local level. In partnership with municipal and county government, WEM's hazardous materials response system has been widely recognized throughout the country as providing reliable, highly trained, innovative and proficient emergency response capabilities to protect the citizens and environment throughout this state. WEM recognizes and acknowledges that the audit report reflects the integrity, professionalism and fiscal responsibility of the regional Level A and county Level B hazardous material response teams proudly serving Wisconsin.

The report contains only one recommendation to Wisconsin Emergency Management and we concur with that proposal. This recommendation provides that WEM establish standard rates for reimbursement of regional Level A and county Level B teams for their hazardous material emergency response costs and related administrative expenses. Given the potential shortfall in the emergency response supplement appropriation created under §20.465 (3) (dr) Wis. Stats., we will work to develop these uniform reimbursement rates with input from the regional and county hazardous material teams. These standardized rates may prolong the need to request funding from the Joint Finance Committee under §13.10, Stats.

In an era of tightening budgets, WEM will continue to refine the current funding model for the regional response team contracts. To the extent possible, we will look at risk and vulnerability indicators and factors within each team's primary response area as well as standardizing personnel costs for each team to ensure the equitable distribution of funds. In further

consideration of fiscal efficiency and accountability, WEM intends to contractually require that each regional team provide an annual report to the Division of its hazmat costs and expenditures.

We recognize that in certain types of hazardous material incidents the distinction between a Level A response and a Level B response may be difficult. This can be illustrated by the frustrating rash of anthrax hoaxes in recent months. WEM is in the process of developing a hazardous material incident response matrix, which will assist in making such a distinction. This matrix is intended for use by first responders as well as the county Level B and regional Level A response teams. In light of the current national situation, we are in the process of revising this matrix to address biological terrorism threats. We anticipate that this matrix will be in place for use by the emergency responder community no later than the summer of 2002.

Lastly, WEM acknowledges the inherent tensions in a dual and multi-layered hazardous material response team structure dividing responsibilities and state funding between the regional Level A response teams and the county Level B response teams. To the extent practicable, WEM will encourage a modified response structure that will incorporate and identify county response teams as local assessment teams contractually affiliated with the appropriate regional response team. Ultimately, this may provide for more efficient and quicker response times as well as further limiting potential damage to persons and the environment.

Thank you, again, for the opportunity to comment and for the extensive efforts of your staff in grappling with a highly technical and complicated program. We are very pleased that the report suggests that our hazmat program is reliable, effective and efficient in providing hazardous material emergency preparedness and emergency response to the citizens and environment of this great state.

Sincerely,



Edward J. Gleason  
Administrator

cc: MG James G. Blaney, The Adjutant General