

***Untapped Potential – An Analysis of
Online Newsrooms on State Emergency
Management Agency Web Sites***

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While events such as the nuclear power accident at Three Mile Island and the advent of 24/7 news media in the 1980s first sparked interest in crisis communications, the discipline has become a critical need during the first half of this decade. The lessons of the September 11, 2001, terror attacks and, more recently, Hurricane Katrina should not be lost on public officials or public relations practitioners. One of those lessons is the need for accurate and timely communication with key stakeholders. While responders received fairly good marks for their actions during the 9/11 crisis, the opposite was true during the Katrina response and recovery.

This heightened interest in crisis communications comes during a period of unprecedented change in mass communications. The Digital Revolution and the advent of social media are transforming interaction between people and their government. Emergency management officials – especially the public information officers who represent them – are caught in this vortex of change. It is a social, political and technological revolution that challenges them at almost every turn.

The focus of this paper is to peer into the world of emergency managers and get a sense of how they are addressing these changes. Specifically, it examines the online presence of Emergency Management Agencies (EMAs) in every state and the District of Columbia. In light of recent research suggesting that online corporate newsrooms fail to meet journalists' needs, the major research question was whether this pattern holds true for state EMA web sites. The question is particularly important when one remembers the overriding mission of all of these agencies, the protection of public safety through disaster mitigation, preparedness, recovery, and response.¹ These web sites are an extension of the public relations practitioner's boundary spanning role -- one that accrues heightened importance during crises.

This is also descriptive research, the first step in a broader effort to measure the role of emerging communication technologies in crises. It asks a critical question: Are

emergency managers tapping the full potential of the Internet and social media to fulfill their mission? That answer, as one may surmise from the title of this paper, is that they have not.

Literature Review

Hurricane Katrina changed the way people looked at government emergency management agencies. Up until the storm battered the U.S. Gulf Coast in the late summer of 2005, they had been largely immune from the criticism leveled at private sector companies, such as Exxon after the Alaskan oil spill in 1989, or government agencies, like NASA after the *Challenger* disaster in 1986. The public had little reason to question the competency and dedication of emergency management officials. However, with Katrina, that changed. It was much more than a public relations failure. It was a systems failure. “This country’s emergency operations, awesome in their potential, are also frighteningly interdependent,” *Time* reported in a post-storm analysis. “At every level of government, there was uncertainty about who was in charge at crucial moments.”²

For the purposes of this paper, public relations will be defined as “the values-driven management of relationships between an organization and the publics that can affect its success.”³ As any public relations practitioner can tell you, building and maintaining these relationships is difficult, even in the best of times. However, this is a period in which the public trust has been shaken by a series of traumatic events, including the Clinton impeachment, the disputed 2000 presidential election, 9/11, corporate crimes, pedophiles in the pulpit, the war in Iraq and Katrina. As a result, the management of critical relationships through the application of public relations strategies and tactics has become more difficult.

One gets a sense of the current environment from a June 2006 survey. The Gallup Organization asked 1,002 adults nationwide how much confidence they had in a number of “institutions in American society.” Only the military, police and organized religion enjoyed either “a great deal” or “quite a lot” of confidence from a majority the respondents -- 73 percent, 58 percent and 52 percent respectively. Those percentages

dropped to just 40 percent for the U.S. Supreme Court, 33 percent for the presidency, 19 percent for Congress and 18 percent for big business.⁴ Less than a year earlier, on the heels of the Katrina debacle, Gallup asked a nationwide sample of 921 adults whether they were satisfied with the work of the federal government in 17 areas. Only one respondent in three indicated satisfaction with government's ability to respond to natural disasters, good for only 13th place on the list.⁵

For more than a generation, Grunig and Hunt's two-way asymmetric model of public relations, one involving a free and flow of information between an organization and its stakeholders, has been hailed as the ideal model of professional practice.⁶ In the intervening years, the Grunig and Hunt models of public relations have been tested and refined by scholars. This includes Grunig, himself, who proposed "a new model of excellent, two-way public relations" which continues to stress the principles of two-way symmetric communication.⁷

However, when it comes to government public relations, the public information model, a one-way journalist-in-residence approach that focuses on dissemination of information, prevails. This is due in large measure to what Cutlip, Center and Broom have described as the four areas of conflict inherent to government public relations: the ongoing struggle for control of the information flow between the government and the press, the struggle for power between the government's legislative and executive branches, the competition between political parties, and efforts to protect vested interests from negative legislation or regulation.⁸ "Indeed, government agencies have many good stories to tell, but PIO (public information office) work seems to have devolved into the one-way public information model of communication," wrote Diana Knott Martinelli. "Highly decentralized, PIOs are often so busy with their predetermined, proscribed duties that they may give only passing thought to more proactive goodwill messages and to providing opportunities for constituent comment."⁹

State Emergency Management Agencies (EMAs)

"A crisis is a major, unpredictable event that has potentially negative results," wrote Laurence Barton. "The event and its aftermath may significantly damage an

organization and its employees, products, services, financial condition and reputation.”¹⁰ While Barton’s definition appears to focus on the for-profit private sector, it also is applicable to nonprofit organizations, as well as government and non-government agencies. The discipline of emergency management – sometimes known as crisis management, disaster management or contingency planning – has been called “the abysmal science” by disaster recovery consultant Kenneth Myers.¹¹ The process of emergency management involves four phases:

- Mitigation – an attempt to identify, minimize and (if possible) eliminate potential hazards.
- Preparedness – the planning phase, in which contingency plans are developed in anticipation of a variety of crisis scenarios.
- Response – the execution of the crisis plan with the mobilization of necessary resources.
- Recovery – the effort to return the situation to normalcy, to learn the lessons from the experience, and to mitigate future occurrences.¹²

These four phases closely parallel the four steps of the public relations process, research (mitigation), planning (preparedness), communication (response) and evaluation (recovery). This is not surprising, in that the essence of emergency management – as with public relations – is communication to preserve and enhance relationships.

Every U.S. state, territorial and tribal government has a department, office or agency responsible for coordinating its actions in the event of emergencies of natural or human origin. It is the author’s experience, based on 20 years of government emergency management and private crisis communications consulting experience, that while the specific structures of state emergency management agencies vary among jurisdictions, they have common attributes. State EMAs usually are affiliated with the state’s military apparatus (the National Guard) or state law enforcement agencies (such as the state police

or highway patrol). While some EMAs are stand-alone agencies reporting directly to the governor, others are divisions within the military or the law enforcement structures. Still others have equal standing with those and related agencies under an umbrella public safety department structure. The EMA's role is to manage each state's response to crises by coordinating resources and serving as an information clearinghouse for all responding entities. Crises are managed from an emergency operations center that hosts representatives from a variety of public and private agencies. For example, it is not unusual to see officials of the American Red Cross or the Salvation Army collaborating with representatives of county, state and federal agencies in a typical state emergency operations center. This is especially true when it comes to incidents involving nuclear power – the Nuclear Regulatory Commission has mandated public relations coordination between the utility, government officials (all levels) and private agencies since the Three Mile Island accident of 1979.

The structure and identities of many state EMAs have changed following the terror attacks of September 11, 2001. They have been influenced by the creation of the Department of Homeland Security in 2002, an effort to centralize the federal government's response to external threats. Homeland Security Presidential Directive-5, issued by President George W. Bush on February 28, 2003, required the Secretary of Homeland Security to develop a mechanism for coordinating the government and non-government responses to domestic incidents. This resulted in the creation of the National Incident Management System (NIMS). According to the Federal Emergency Management Agency web site, "NIMS was developed so responders from different jurisdictions and disciplines can work together to better respond to natural disasters and emergencies, including acts of terrorism."¹³ It also resulted in creation of the National Incident Management System Integration Center (NIC), "a multidisciplinary entity made up of federal stakeholders and over time, it will include representatives of state, local and tribal incident management and responder organizations."¹⁴ NIMS training of state, local and tribal officials was scheduled for completion during fall 2006.

Ironically, the creation of a new emergency management structure under the Department Homeland Security umbrella led to many of the problems that hampered the government's response to Hurricane Katrina. Many existing collaboration networks had

been uprooted by the DHS structure. In a blistering post-Katrina indictment released in April 2006, the Inspector General of DHS said public criticism of FEMA was “warranted.” The report said the federal government and the state of Louisiana had “great difficulty” coordinating with one another and “never fully achieved a unified command with FEMA.”¹⁵

Crisis Communications and the Internet

The introduction of the World Wide Web in 1990 opened new communication possibilities for EMAs. While the Internet as we know it was in its infancy and unknown to most, some within the emergency management community were quick to grasp its importance. Ronald E. Rice wrote in 1990 that a variety of computer-mediated communication and information systems such as e-mail and voice mail could prove useful in overcoming “temporal, geographical, retrieval [and] distribution” changes during crises.¹⁶ In addition to its communication possibilities, the Web allows EMAs to engage in issues management by scanning the environment for potential threats. “World Wide Web pages are being used to supply information as well as elicit commentary and problem solution advice from stakeholders and stakeseekers,” writes R.L. Heath.¹⁷

The role of the Internet during crises was dramatically demonstrated on September 11, 2001. According to the Pew Internet & American Life Project, the number of Americans going online significantly – and temporarily – dropped in the three weeks immediately following the attack. However, the number of site visits – a sign that people were surfing for information – increased 240 percent during the same period. Pew estimates that 50 percent of Internet users, approximately 53 million people, went online looking for information about the attacks and its aftermath during that period. More significant, the Pew report concluded, was “the outpouring of grief, prayerful communication and information dissemination through e-mail and political commentary. Nearly three-quarters of Internet users (72 percent) have used e-mail in some way related to the events – to display their patriotism, contact their family and friends to discuss events, reconnect with long-lost friends, discuss the fate of friends, and share news.” The Internet had become the town commons of the 21st century.¹⁸

“From a purely technical perspective, the system worked better than anyone might have anticipated,” wrote Henry Jenkins in *Technology Review*. “While the World Trade Center housed an important relay system for cell phones, and its destruction thus left many New Yorkers without telecommunications, there was no significant national disruption of computer networks.”¹⁹

Post-Katrina research suggests that Internet users facing crises prefer interactive information sources to those that are static. Three out of four dispersed New Orleans residents who went online during the crisis reported visiting an online discussion forum. More than half said they posted messages. “This level of interaction also appeared to contribute to another phenomenon: the emergence of the citizen reporter,” wrote researchers Claire and Steven Procopio. “Users seemed to value information from other users, with 30 percent labeling it their most informative online source in the week following the hurricane.”²⁰

It is without question that the Internet has proven to be a double-edged sword for organizations. Hill & Knowlton executive Boyd Neil took note of this two-sided nature of the web when he wrote that the Internet plays an integral role in crisis management in three ways: serving as a “trigger” to launch a crisis, as a strategy used by opponents to an organization’s initiatives, or as “a valuable weapon in a company’s arsenal for managing crises.”²¹ Because of these risks and benefits, practitioners have been forced to engage in what authors David Guth and Charles Marsh call “cyber-relations, the use of public relations strategies and tactics to deal with publics via the Internet and with issues related to the Internet.”²²

Unfortunately, many organizations do not appear to be taking full advantage of what the web offers. A content analysis of 2001 *Fortune* 500 company Web sites revealed that the majority did not have dedicated pressrooms where media content is centralized. In the press room, news releases, executive biographies and executive photographs were the most common elements. “The web has the potential to be a key public relations tool but is not currently being used to its full potential in media relations,” researcher Coy Callison wrote. “Journalists also report often note finding what they are looking for on company Web sites, and a few have even suggested that their

coverage of companies with poor Web presence is skewed negative, if they cover companies at all.”²³

A 2003 study by David Hachigian and Kirk Hallahan supported these findings. In a survey of computer industry journalists, they found that the respondents considered themselves to be “only moderately reliant upon web sites as sources.” This, despite strong agreement “about the time-savings that web sites bring to the newsgathering process.” The authors concluded that “while web sites have irreversibly taken a place in the media relations mix...they) have a long way to go before being fully accepted with confidence by journalists as newsgathering tools.”²⁴

A reason journalists may find many web sites less than satisfying is the absence of research and strategic planning in their creation. Following a series of interviews with “web decision makers,” Candace White and Niranjan Raman concluded that many web sites are the product of an urgency to establish a presence on Internet without a clear vision of why it is important. “Findings indicate that web site planning is done by trial and error, based on intuition, with little or no formal research,” White and Raman wrote. They also wrote that these same web decision makers believe that their web sites are perceived by their publics as “a mark of quality” for their organization without empirical evidence to support that supposition.²⁵

From the perspective of journalists, good web sites are those that contain information they want in an easy-to-find centralized location, such as an online newsroom. “In particular, journalists search corporate web pages looking for press releases, public relations personnel contact information, and general corporate facts,” wrote Callison. “Journalists also, weary from receiving mountains of unsolicited corporate material they neither request nor want, appreciate downloadable material that allows them control over what content they choose to view in addition to the fact that downloaded documents can be quickly edited and typeset while skipping the step of rekeying text.”²⁶ Guth and Marsh noted that because a single web site reaches multiple audiences simultaneously, strategic messages must be targeted to the different publics that are relevant to each and in a form that each finds useful. To encourage return visits, they add that web site content should be regularly updated.²⁷

Methodology

A content analysis of the web sites of the EMAs of the 50 states and the District of Columbia was conducted between October 20, 2006, and January 9, 2007. The web addresses (URLs) for these agencies were obtained from the FEMA web site (www.fema.gov). As noted in the literature review, web sites are often targeted toward multiple publics. Since EMAs are government organizations, it can be reasonably assumed that their sites target the media, voting constituents and EMA employees. Because the mission of EMAs is to coordinate state emergency actions with other government and non-government agencies, potential target audiences also include local elected/appointed officials, local public safety agencies (police and fire) and non-government responders, such as the American Red Cross.

The principal purpose of the analysis was to determine the degree to which these web sites are targeted toward and meet the needs journalists who go online seeking information. Each site was judged by criteria mentioned in the literature review. Specifically, sites were analyzed to determine whether there is an online newsroom – defined as a centralized location for news releases, media kits, and multimedia files. The analysis also measured the accessibility of these newsrooms – defined for the purposes of this research as being within one hyperlink (mouse click) from each site's home (index) page. A determination was also made concerning the presence of downloadable information and the presence of public relations contact information, including a direct e-mail link to the designated public information officer.

Newsrooms were characterized as being “active” if the most recent news release posting was less than three months old. There were three reasons for choosing this generous time frame. Because of the unpredictable ebb-and-flow of emergencies, it was felt that a quarter-year would provide a representative sampling period. Because political activity and the end-of-the-year holidays, it is not unusual for state agencies to experience lower-than-normal activity during the final quarter of the year. Finally, with 2006 being an election year, a turnover in a number of state gubernatorial administrations was anticipated. These changes often result in leadership changes at state EMAs, the new leadership desiring to place its stamp on the agency identity, and a subsequent redesign of

agency web sites. The decision was made to conclude data collection before the anticipated onset of wholesale EMA web site changes in January 2007.

To identify geographical factors that may exist in the design of EMA web sites, a cross tabulation on the basis of the 10 FEMA Regions (Table 1) was conducted. Beyond determining the degree to which these web sites are journalist-friendly, other elements common to these web sites were identified. The analysis took note of things such as the presence of the agency's mission statement, the director's picture and biography, weather information, training information, information targeting children and students, and indicators of the National Threat Level (as classified by the Department of Homeland Security). There was also an analysis of the potential hazards cited on each web site, such as terrorism, tornadoes, hurricanes, fires and floods. By creating an index based on the presence 15 web features and information about 11 specific hazards, one can determine which web sites are content-rich. However, the *presence* of content does not necessarily address the *quality* of that content.

Table 1: Federal Emergency Management Agency Regions

Region	States in the Region
I	Maine, New Hampshire, Vermont, Connecticut, Rhode Island and Massachusetts
II	New York and New Jersey
III	Pennsylvania, Maryland, Delaware, District of Columbia, West Virginia and Virginia
IV	Kentucky, Tennessee, North Carolina, South Carolina, Mississippi, Alabama, Georgia and Florida
V	Minnesota, Wisconsin, Michigan, Illinois, Indiana and Ohio
VI	New Mexico, Texas, Oklahoma, Arkansas and Louisiana
VII	Nebraska, Iowa, Kansas and Missouri
VIII	Montana, North Dakota, South Dakota, Wyoming, Utah and Colorado
IX	California, Nevada, Arizona and Hawaii
X	Alaska, Washington, Oregon and Idaho

Unfulfilled Potential

At first glance, state EMA web sites appear well suited for handling media relations. That's because 46 of the 51 web sites, 90.2 percent, have some form of

newsroom where journalists can seek out news releases, backgrounders and other forms of in-depth information. Links to these so-called newsrooms are identified in a variety ways, including *press releases, public information, media, news releases, news releases/public service announcements* and, in Massachusetts, *What's New*. One might suggest that this lack of uniformity is little more than a question of semantics. However, a deeper analysis leads to a conclusion that the wide array of names used to describe newsrooms on state EMA web sites is an indicator of much bigger problems – a lack of understanding of media relations by web designers and the failure to use a potentially powerful medium to fulfill these agencies' articulated mission of serving and protecting the people of their state.

A closer look at these newsrooms exposes these deficiencies. First, only 80.4 percent of these web sites have easily accessed newsrooms, ones reached within one hyperlink of the site's home page. Put another way, one in every five EMA sites either does not have a newsroom or has one that is not easily accessed. A lack of updated information within these newsrooms is another major deficiency. Fewer than three out of five of these web sites (58.8 percent) contained news releases or other public information that had been updated within the previous three months. A cross-tabulation found that only 28 of the 51 state EMA web sites, 54.9 percent, had newsrooms that were *both* easily accessible and contained recently updated public information.

An example of an underutilized online newsroom is the *news and archives* page of the South Carolina Emergency Management Division web site (www.scemd.org). To the agency's credit, the site is easily accessible from the home page. However, the most-recent news release at this location during the sampling period was dated August 28, 2006, with the headline "SCEMD Watching Ernesto Closely."²⁸ The hurricane skirted the coast September 1 and caused minor flooding. When one considers that a hurricane watch was subsequently posted and that Governor Mark Sanford felt it necessary to call for voluntary evacuations of two coastal counties, it is surprising that SCEMD's final online word on the matter was that it was watching the *approaching* storm.²⁹

At least the state of Washington's Emergency Management Division is candid about the non-availability of up-to-date online emergency information. On its web site (www.emd.wa.gov), the agency states, "This web site is not used for initial alert and

warning notifications of emergencies. It is intended solely for public education and preparedness measures.” It goes on to say “alert and warning messages are issued using the Emergency Alert System (EAS) and are relayed to the public by commercial radio and television broadcasters. Specialized outdoor and indoor warning systems are also used in high hazard areas (e.g., the Lahars Warning System and the Tsunami Warning System). Contact your local emergency management office for more information.”³⁰

In 41.2 percent of the surveyed sites, the name of the agency’s public information officer not listed. In many of the sites where it was listed, it was necessary to comb through a listing of agency personnel to identify the PIO. Also in 41.2 percent of the surveyed sites, there was not a direct e-mail link to the PIO. In some of these cases, telephone numbers were supplied. In others, a blind, all-purpose e-mail link to the agency was provided. A statement on the Texas Governor’s Division of Emergency Management web site (www.txdps.state.tx.us/dem), indicated that the automatic “mail to” function has been eliminated “to deter data miners.” Site visitors seeking additional information are asked to manually enter a generic e-mail address.³¹ In light of journalists’ expressed desire for Internet communication, this lack of direct online access to the agency PIO is disturbing.

A reason state EMA web sites are not as journalist-friendly as they should be may rest within their philosophical underpinnings, the agency mission statements. Less than one-half of the web sites, 49.02 percent, quote or paraphrase the agency’s mission statement. Among those that do, only six (11.8 percent) indicated that a part of their mission was to *inform, influence* or *educate* the public. That includes the web site of Kentucky Emergency Management (<http://kyem.ky.gov/about/contacts.htm>), where public information skews toward promotion. “We believe, as does Governor Fletcher, that the Commonwealth of Kentucky is one of the best places in the world to live,” the web site states. “It is our goal to do everything we can to influence others by our actions to share that belief as well.”³²

In fairness, many of the web sites use the language of “mitigation, preparedness, response and recovery” – the four phases of the emergency management process. One might argue that communication with important stakeholders is implicit in this process. However, it also suggests that, when it comes to online communication, state emergency

managers more often direct their focus to internal publics – other public and private responding agencies – than they do toward journalists. Supporting this hypothesis is the presence of emergency management training-related materials on 90.2 percent of the web sites. Also, a large percentage of the material in online newsrooms is “evergreen” generic information targeting a broad, non-segmented audience. It appears to support the supposition that emergency managers – or their web designers – view their *public information* responsibilities not as media relations, but in the broadest and most literal interpretation of the term. While this research does not “prove” this hypothesis – and certainly that claim is not made here – it does suggest a line of future inquiry.

Other EMA web site characteristics

Of the 51 web site elements coded, the presence of a newsroom – accessible or otherwise – and training information were most prevalent. They appeared on 90.2 percent of the web sites. Documents available for download were the third-most prevalent, appearing in 70.59 percent of the sites. These downloadable documents covered a wide range of subject matter, including news backgrounder, public information facts sheets about specific threats, state training calendars, emergency planning documents, and agency newsletters. The fourth-most prevalent web site element was the National Threat Level (62.75 percent), followed by local/regional weather conditions (60.78 percent), e-mail links to agency personnel (58.82 percent), the agency director’s picture (50.98 percent), the agency mission statement (49.02 percent), the agency director’s biography (43.14 percent), and a “kid’s link” page (41.18 percent). It is significant that the bottom five web elements prevalent were multimedia elements: a photo gallery (27.45 percent), video (11.76 percent), audio (3.92 percent), podcast (0 percent) and vodcast (0 percent). This may be the result of limited public information staff, the level of web skills within state EMAs, a lack of understanding of the potential value of the Internet in crisis communications, or some combination of these.

As one might expect, information about specific hazards varied. For example, there certainly isn’t much need for tsunami-related information in Nebraska. Nor does one expect to find winter-weather precautions on Hawaii’s web site. However, all states

Table II – National CRI Rankings of State EMA Web Sites

Ranking	State	CRI	Ranking	State	CRI
1	Maryland	18	25T	Missouri	10
2T	Alabama	17	25T	Nebraska	10
2T	Louisiana	17	29T	Arizona	9
2T	Pennsylvania	17	29T	Illinois	9
2T	Virginia	17	29T	Kentucky	9
6T	California	16	29T	North Carolina	9
6T	Georgia	16	29T	Oregon	9
6T	New Hampshire	16	29T	Rhode Island	9
6T	New York	16	29T	Vermont	9
6T	South Carolina	16	29T	Wisconsin	9
11T	Connecticut	15	37T	Idaho	8
11T	Florida	15	37T	Minnesota	8
11T	Montana	15	37T	Mississippi	8
14T	New Jersey	13	37T	Oklahoma	8
14T	Texas	13	41T	Hawaii	7
14T	Washington	13	41T	Iowa	7
17T	Colorado	12	41T	Massachusetts	7
17T	Indiana	12	44T	Maine	6
17T	Tennessee	12	44T	Michigan	6
17T	Utah	12	44T	Nevada	6
21T	Alaska	11	44T	New Mexico	6
21T	District of Columbia	11	44T	North Dakota	6
21T	Kansas	11	44T	Ohio	6
21T	Wyoming	11	50	South Dakota	4
25T	Arkansas	10	51	West Virginia	3
25T	Delaware	10			

are subject to flooding, which explains why floods were the most cited potential hazard, appearing on 62.75 percent of the sites. Fires, winter weather, and hazardous material accidents tied for second at 54.9 percent. Earthquakes came in sixth at 50.98 percent, with biological incidents and tornados tied for seventh at 49.02 percent. Information on

incidents at nuclear power plants was ninth at 39.22 percent, followed by hurricanes (37.35 percent), and tsunamis (13.73 percent).

In terms of their content richness, Maryland's EMA site had the highest content-richness index (CRI) with an index of 18 out of a possible 26 (Table II). Alabama, Louisiana, Pennsylvania and Virginia tied for second with an index of 17. Tied at sixth (and rounding out the top 10) were Georgia, New Hampshire, New York, and South Carolina with indices of 16. At the other end of the rankings, six states – Maine, Michigan, Nevada, New Mexico, North Dakota and Ohio – tied for 44th with indices of 6. South Dakota was 50th with an index of 4, and West Virginia was last with an index of 3.

When the mean CRI of state EMA web sites were ranked by FEMA regions, Region IV, comprised of eight southeastern states, ranked highest with a CRI mean, 12.75. Region III, the mid-Atlantic states and the District of Columbia, was a close second at 12.67. (Interestingly, this region has the state with the highest CRI, Maryland, and the lowest, West Virginia.) The FEMA region with the lowest average CRI was Region V, the Great Lakes region, at 8.33. Again, it should be noted that content richness does not necessarily equate to the quality of that content. That is the worthy subject of future research.

Table III – Ranking of Web Site CRI Means By FEMA Region

Ranking	Region	States	CRI	Ranking	Region	States	CRI
1	IV	AL, FL, GA, KY, MS, NC, SC, TN	12.75	6	X	AK, ID, OR, WA	10.28
2	III	DE, DC, MD, PA, VA, WV	12.67	7	XIII	CO, MT, ND, SD, UT, WY	10.00
3	II	NJ, NY	12.00	8T	VII	IA, KS, MO, NE	9.50
4	I	CT, MA, ME, NH, RI, VT	11.00	8T	IX	AR, CA, NV	9.50
5	VI	AR, LA, NM, OK, TX	10.80	10	V	IL, IN, MI, MN, OH, WI	8.33

Analysis, Limitations and Future Inquiry

The analysis of the 51 state EMA web sites leads to the inevitable conclusion that, at least when it comes to media relations, these agencies are not tapping into the Internet's full potential. While most of these sites serve a useful purpose, there is so much more that could be done. The results of this review appear to support the findings of White and Raman, whose research concluded that many web sites are created without a clearly defined purpose. It also parallels Callison's findings that most online newsrooms fall short of meeting journalists' needs. This analysis does not confirm Hachigian's and Hallahan's research that journalists find these online lacking in credibility – only because it did not measure journalist attitudes. However, additional research could confirm their conclusions.

Another line of future inquiry is why these web sites have evolved to their current status. There are several possible explanations. One hypothesis is that crisis managers do not see the Internet as a viable means of emergency communications. There's a hint of this in the state of Washington's explicit declaration that the Internet is not to be used for emergency notification. It may be that in the minds of EM officials, the Internet is an infrastructure-dependent technology subject to interruption during emergencies. However, they could learn from the Hurricane Katrina experience. In the region immediately outside of metropolitan New Orleans – an area still well with the disaster zone and where many of the city's residents took shelter – Internet cable access was largely unaffected. More than half the respondents in the Procopio study said telephone problems had no effect on their use of e-mail and that a quarter of them turned to e-mail when telephone systems faltered.³³

Emergency management officials may also feel that the web does not cast a broad enough net to quickly reach people in time-critical situations. Those assumptions may have been true 10 years ago. However, they do not stand close scrutiny today. The Pew Internet & American Life Project estimated that 70 percent of U.S. adults – about 141 million people -- go online.³⁴ Nearly two-thirds of the adult Internet users use the Internet daily.³⁵ And with the dramatic expansion of wireless devices, it can be argued that the Internet is no more infrastructure dependent than other mass communication media.

State officials should also consider that with the growth of social media, there is declining reliance upon traditional media. It is not argued here that emergency managers should abandon traditional channels. However, they should use the Internet to its full potential as a mean of complimenting traditional channels.

A third area of potential inquiry has already been briefly mentioned – they apparent lack of understanding of the meaning of the concepts of *public information* and *media relations*. Some state agencies excel in this area. However, when considering the entire body of work, it is apparent that many state EMAs do not fully embrace the concepts, at least not online. An analysis of these web sites suggests that many of these agencies follow what could be called the splatter theory of media relations. Rather than discriminate for the purposes of posting information targeted at clearly identified publics, many of these web sites indiscriminately splatter as much information on the web as possible in the belief that at least some of it will stick. Follow-up survey research could determine who controls the content of state EMA web sites, who is being targeting, and what the agencies see as these web sites' purpose.

There are several limitations to this research. A three-month sampling period may seem like a substantial time frame. However, it is not representative of the ebbs and flow of a typical year in emergency management. The last three months of 2006 marked the end of fall and the beginning of winter. It is also a time of year in which hurricane and tornado activity are low. With hindsight – as well as more time and resources – a systematic sampling of the calendar year would have been more representative. The time and resource issue also had an impact on the reliability of coding. To compensate for the absence of additional coders, each web site was visited a minimum of three times to ensure a degree of consistency. As was noted earlier, the CRI could, at best, measure the presence of certain elements within a web site. However, it does not measure quality. At best, the CRI can serve only as an indicator of web site quality. Future research can address this deficiency.

Despite the problems exposed by Hurricane Katrina and 9/11, there is little doubt that the overwhelming majority of the people working in state, local and federal EMAs are professionals dedicated to the preservation of public safety. Even with their flaws, each of the 51 state EMA web sites serves a useful purpose. It is hoped that the same can

be said for this research – that its purpose was not just to criticize these officials, but help shed some light on how they can fulfill the mission to which they have dedicated themselves.

Endnotes

¹ George D. Haddow and Jane A. Bullock, *Introduction to Emergency Management* (Amsterdam: Butterworth-Heinemann, 2004)

² James Carney, “Four Places Where the System Broke Down,” *Time*, 19 September 2005, 34-41.

³ David W. Guth and Charles Marsh, *Public Relations – A Values-Driven Approach* 3rd ed (Boston: Allyn & Bacon, 2006), 17.

⁴ Gallup Poll, 1-4 June 2006. Reported online: www.pollingreport.com/institut.htm.

⁵ Gallup Poll, 12-14 September 2005. Reported online: www.pollingreport.com/institut.htm.

⁶ James E. Grunig and Todd T. Hunt, *Managing Public Relations* (New York: Holt, Rinehart & Winston, 1984), 21-43.

⁷ James E. Grunig, “Two-way symmetrical public relations: past, present, and future,” *Handbook of Public Relations* (Thousand Oaks, CA: Sage, 2001), 26.

⁸ Scott M. Cutlip, Allen H. Center and Glen M. Broom, *Effective Public Relations* 6th ed. (Englewood Cliffs, NJ: Prentice-Hall, 1985), 569.

⁹ Diana Knott Martinelli, “Strategic public information: Engaging audiences in government agencies’ work,” *Public Relations Quarterly*, 51,1 (Spring 2006), 37-41.

¹⁰ Laurence Barton, *Crisis In Organizations: Managing and Communicating in the Heat of Chaos* (Cincinnati: South-Western Publishing, 1993), 2.

¹¹ Kenneth N. Myers, *Total Contingency Planning for Disasters* (New York: John Wiley & Sons, 1993), 2.

¹² Haddow and Bullock.

¹³ “Welcome to the National Incident Management System Integration Center,” Federal Emergency Management Agency Web site, www.fema.gov/emergency/nims/index.shtml.

¹⁴ Ibid.

¹⁵ *A Performance Review of FEMA’s Disaster Management Activities in Response to Hurricane Katrina*, Department of Homeland Security Office of the Inspector General, 14 April 2006.

¹⁶ Ronald E. Rice, “From adversity to diversity: Application of communication technology to crisis management,” cited in Danielle C. Perry, Maureen Taylor and Marya Doerfel, “Internet-Based Communication in Crisis Management,” *Management Communication Quarterly*, Vol. 17 No. 2 (November 2003), 206-232.

¹⁷ R.L. Health, *Strategic issues management* (Thousand Oaks, CA: Sage, 1997), 285-286, cited in Danielle C. Perry et. al.

¹⁸ “Commons of the Tragedy – How the Internet was used by millions after the terror attacks to grieve, console, share news, and debate the country’s response,” Pew Internet & American Life Project, 10 October 2001, online: www.pewinternet.org/

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- ¹⁹ Henry Jenkins, "A Safety Net," *Technology Review*, December 2001, 91.
- ²⁰ Claire H. Procopio and Steven T. Procopio, "Do You Know What It Means to Miss New Orleans? Internet Communication, Geographic Community, and Social Capital in Crisis," *Journal of Applied Communication Research*, Vol. 35 No. 1 (February 2007), 67-87.
- ²¹ Boyd Neil, "Crisis Management & the Internet," *Ivey Business Journal*, January/February 2000, republished on Hill & Knowlton Web site, www.hillandknowlton.ca/crisis/crisis_internet2000.htm.
- ²² David W. Guth and Charles Marsh, *Adventures in Public Relations – Case Studies and Critical Thinking* (Boston: Allyn & Bacon, 2005), 320.
- ²³ Coy Callison, "Media relations and the Internet: how *Fortune* 500 company Web sites assist journalists in news gathering," *Public Relations Review* Volume 29 (2003), 29-41.
- ²⁴ David Hachigian and Kirk Hallahan, "Perceptions of public relations Web sites by computer industry journalists," *Public Relations Review* Volume 29 (2003), 43-62.
- ²⁵ Candace White and Niranjan Raman, "The World Wide Web as a Public Relations Medium: The Use of Research, Planning and Evaluation in Web Site Development," *Public Relations Review* Volume 25 No. 4 (Winter 1999), 405-419.
- ²⁶ Callison, 30.
- ²⁷ Guth and Marsh, 326.
- ²⁸ "SCEMD Watching Ernesto Closely," News Release, South Carolina Emergency Management Division, 28 August 2006, online: www.scedm.org/
- ²⁹ Joey Hollerman, "Impact in S.C. minor in '06: Nine named storms a welcome break from activity of past hurricanes," *The State* (Columbia, S.C.), 30 November 2006, via LexisNexis.
- ³⁰ State of Washington Emergency Management Division Web Site, www.emd.wa.gov.
- ³¹ Texas Governor's Division of Emergency Management web site, www.txdps.state.tx.us/dem.
- ³² Kentucky Emergency Management web site, <http://kyem.ky.gov/about/contacts.htm>.
- ³³ Procopio and Procopio.
- ³⁴ "Demographics of Internet Users," Pew Internet & American Life Project, posted 11 January 2007, online: www.pewinternet.org/trends.
- ³⁵ "Daily Internet Activities," Pew Internet & American Life Project, posted 11 January 2007, online: www.pewinternet.org/trends.