3-1-2007

Campus Safety For Persons With Disabilities

Sara Gouveia
Worcester Polytechnic Institute

Eric Wilusz
Worcester Polytechnic Institute

Follow this and additional works at: https://digitalcommons.wpi.edu/atrc-projects

Part of the Biomechanical Engineering Commons, and the Biomedical Engineering and Bioengineering Commons

Suggested Citation
Retrieved from: https://digitalcommons.wpi.edu/atrc-projects/36

This Other is brought to you for free and open access by the Assistive Technology Resource Center at Digital WPI. It has been accepted for inclusion in Assistive Technology Resource Center Projects by an authorized administrator of Digital WPI. For more information, please contact digitalwpi@wpi.edu.
Abstract

The administration of Worcester Polytechnic Institute (WPI) has recognized the need to incorporate provisions for faculty, staff, and students with disabilities in the emergency policies and procedures of the university. A team of students has undertaken further research into the policies, procedures, and recommendations of government agencies, disability advocacy organizations, and other universities, and used the information gathered to make recommendations on the improvement of current WPI policies. Through comparative analysis, it was determined that many of the existing university policies compare well to the information found during research, but that there are improvements that could be made in the areas of academic buildings and residential hall evacuation during fire, and in overall campus safety during power outages, snowstorms, hurricanes and tornadoes. Among the recommendations that have been made are to place color-coded evacuation maps highlighting areas of refuge for fire, hurricanes, and tornadoes in the buildings on campus, to increase awareness of the resources and services offered by the Disability Services Office, and to have a packet of information that outlines current university policies and procedures, as well as individual preparedness measures, that can be distributed to faculty, staff, and students. It is recognized that the recommendations that have been developed are not a final solution to the problem, but may aid in the revision of current procedures, as well as in the creation of future procedures, to ensure the safety of all members of the WPI community in emergency situations.
Acknowledgements

The authors of this manual would like to thank:

**Project Advisors**

Professor Holly Ault, Mechanical Engineering Department

Professor Allen Hoffman, Mechanical Engineering Department

**Individuals who Provided Information and Interviews**

Ms. Naomi Carton, Director, Office of Residential Services

Ms. Cheryl Martunas, Chief, WPI Campus Police

Ms. Janet Richardson, Vice President, Office of Student Affairs and Campus Life

Mr. Christopher Salter, Associate Director of Technical Trades, Department of Plant Services

Ms. JoAnn Van Dyke, Coordinator, Disability Services Office

Mr. Robert Wilder, Manager, Dining Services

**Other Individuals Who Have Contributed to the Project**

Mr. Derek Duval

Mr. Sean Wright
Executive Summary

During the evaluation of the response to emergencies such as the terrorist attacks on the United States on September 11, 2001, and Hurricane Katrina in 2005, attention was brought to the fact that the emergency preparedness plans in several of the affected areas did not include persons with disabilities. As a result, the needs of individuals who required assistance during emergency situations of this nature went unmet, with grave consequences in some instances. Efforts were then made to correct these deficiencies, on federal, state, and local levels.

At the local level, the administration of Worcester Polytechnic Institute also recognized the need for the inclusion of policies in emergency planning materials to ensure the safety of the faculty, staff, and students of the university. Several offices, including the Disability Services Office, Office of Environmental and Occupational Safety, Office of Residential Services, and the Office of the Student Affairs and Campus Life have worked collectively to create and revise emergency planning policies and procedures for persons with disabilities. To further the ongoing development of these policies, a team of students, using information collected from these offices, the federal government, organizations for disability advocacy, and other universities, undertook a study in which the current WPI policies were evaluated with respect to the other resources. The goal, ultimately, was to recommend improvements that could be made to the existing WPI policies based on the information gathered from the sources listed above. A secondary goal of the study is to educate the WPI community on issues regarding the safety of individuals with disabilities on campus primarily in the areas of residential halls and
academic buildings, as these are the areas where individuals on campus spend the majority of their time.

Persons with disabilities cannot be treated as a homogeneous group, due to the different needs of each individual; therefore, this resource has been structured so that information is presented based on the type of disability an individual may have. Disabilities included in the resource are mobility impairments, both ambulatory and non-ambulatory, vision impairments, hearing impairments, temporary disabilities, and cognitive disabilities; wherever it is possible, the discussion of policies and recommendations made have been separated into individual sections for each disability. For localized emergencies, such as fire, there is also differentiation between emergencies occurring in a residence hall and emergencies occurring in an academic building, as the emergency response is different for each of these locations. For emergencies that have an impact on the entire campus, such as natural disasters, the response is structured to account for the needs of persons with disabilities at any location on the campus, regardless of which type of building they are in. At the highest level, the policies are grouped by emergency; the emergencies discussed are extended power outages, fire, snowstorm conditions, hurricanes, and tornadoes, as these represent the most likely emergencies that could occur on the WPI campus. Within each of the sections and sub-sections, the current WPI policies are presented, followed by policies from other organizations and other universities. The resources are then analyzed critically in the discussion sections, and a policy that is felt to best meet the needs of WPI is presented.
Many emergencies require advance planning, both on individual and administrative levels. In any emergency, general preparedness is of importance for all individuals, not only persons with disabilities. For persons with disabilities, many of whom require daily doses of medication or the use of assistive technologies, general preparedness is of utmost concern, as the individual’s level of preparedness before an event will have an impact on their well-being after the event. The American Red Cross has established a set of simple guidelines for persons with disabilities to follow when preparing for an emergency.\footnote{Disaster Preparedness for Persons with Disabilities, American Red Cross. http://www.redcross.org/services/disaster/beprepared/disability.pdf} In a college campus setting, however, responsibility for ensuring adequate levels of preparedness rests with both the individual and the university. Ultimately, the individual plays a large role in the preparedness of both themselves and the university, as a persons with a disability is the best advocate on their condition, and how their needs can be met. Recommendations including the dissemination of the previously mentioned Red Cross guidelines have been made in this report.

Power outages are included in the list of emergencies that may be encountered. Although many persons with disabilities may be unaffected by the loss of power, persons dependent on elevators and medication that must be refrigerated would require special assistance in this situation. WPI has made provisions for power outages on the Worcester campus, as several of the buildings on the campus have emergency generators that will sustain life safety systems after municipal power has been lost. Even in buildings with emergency generators, however, the elevators cease to function, resulting in inconveniences for persons with mobility impairments. The best course of action during a
power outage would be to move persons with disabilities to an accessible building with
heat and a generator, such as Harrington Auditorium, or if they choose to stay in place
supplies should be brought to the individual.

In 2005, fire killed more Americans than all natural disasters combined.\(^2\) For this reason,
the fire safety section follows the section on general preparedness and power outages, as
these emergencies have the highest likelihood of occurrence. Additionally, fire is the
emergency for which the largest amount of information is available concerning
evacuation procedures for persons with disabilities, so knowledge can be drawn from a
much larger base. Since students who live on campus spend a large percentage of their
time in their residence hall rooms, the emergency evacuation of residence halls with
considerations for persons with disabilities was an important area that needed to be
explored. The emergency evacuation of academic buildings is also of importance, as
faculty and staff who may be disabled are also affected, in addition to students with
disabilities.

In addition to localized emergencies such as fire or power outages, emergency planners
must also account for the needs of persons with disabilities when planning a response to a
natural emergency, such as a snowstorm, hurricane, or tornado. While these emergencies
pose a threat to each individual, the threat is greater for persons with disabilities, as they
may be unable to evacuate before the storm or seek shelter during the storm on their own.
Also, following the storm, the specialized needs of persons with disabilities must be met

by the staff of emergency shelters, many of whom may be untrained volunteers. With these concerns in mind, emergency preparedness plans for natural emergencies must include provisions for persons with disabilities, in situations occurring before, during, and after the storm. In this portion of the manual, attention is focused on snowstorms, hurricanes, and tornadoes, as there is the highest likelihood of one of these storms affecting the area surrounding WPI, due to its geographic location and climate.

Since WPI is located in the northeastern United States, it is subject to harsh winters and snowstorms. Although it is simply a nuisance to most people, significant accumulations of snow may have a large impact on the daily routine of persons with disabilities, as they may be unable to move about their surroundings as they normally would. Through the expanded use of the dining service’s “sick tray” program, and extra care taken in ensuring walkways remain clear of snow, the impact of a snowstorm on a person with a disability can be minimized.

In the event that the WPI campus and surrounding community should experience a hurricane, there are steps that both an individual with a disability and the campus emergency planners should take to ensure the safety of the person with a disability. Although the occurrences of hurricanes affecting Worcester are separated by large periods of time, a plan should be created in the event a hurricane does affect central Massachusetts. One item of note is that, in most cases, a considerable amount of advance warning is given before a hurricane hits, allowing pre-planning and evacuation to occur.
Similar to hurricanes, the history of tornado activity in the greater Worcester area is sparse. Unlike hurricanes, however, there is a very limited amount of planning that can be done before a tornado hits. Whereas information gained using modern meteorological techniques can be used to track a hurricane for days and predict the path the storm will follow, only a few minutes’ warning is available before a tornado strikes. With this in mind, emergency planners must then focus on the aftermath of the storm and the affected areas, which may not include the entirety of the WPI campus.

WPI, recognizing the importance of best practices, has undertaken an effort to revise and create policies to fill voids present in the current versions. To fill these voids, it has been recommended that campus maps highlighted with the location of areas of refuge for use in different emergency situations should be placed in residence halls and academic buildings. Also, through the Office of Student Affairs and Campus Life, a packet with information describing the current WPI emergency policies, individual emergency preparedness measures, and forms from the Office of Disability Services to collect information about the student’s specific needs in the event of an emergency should be given to each student. While some would question the rationale of distributing such information to each student, some individuals who would benefit from such information are not aware of the resources provided by the Disability Services Office, and, thus, their needs would not be met. Although persons with disabilities are often their own best advocate on the services they require, dissemination of the information would also allow persons who would not consider themselves to be disabled to get assistance they require in an emergency.
Regardless of the policies, emergency planners must remember that the underlying goal of emergency planning is to ensure the safety of all persons they are charged with protecting, and that the policies and procedures that result from this goal are a means of accomplishing the goal quickly and efficiently. Putting effort into researching and creating the policies, however, ensures that the safety of the persons involved in the emergency will be the top priority when the emergency occurs, and that no individual will be left behind or forgotten.
## Table of Contents

Abstract ................................................................................................................................. i  
Acknowledgements ............................................................................................................ ii  
Table of Contents ................................................................................................................ x  
1: Introduction .................................................................................................................... 1  
2: Definitions ....................................................................................................................... 5  
  2.1: Disabilities .................................................................................................................. 5  
    2.1.1: Mobility Impairment ............................................................................................. 5  
    2.1.2: Hearing Impairment ............................................................................................ 6  
    2.1.3: Visual Impairment ............................................................................................... 6  
    2.1.4: Cognitive Impairment .......................................................................................... 6  
    2.1.5: Temporary Disabilities ....................................................................................... 7  
  2.2: Area of Refuge .......................................................................................................... 8  
  2.3: Life Safety or Life Safety Egress System ................................................................. 8  
  2.4: Locations .................................................................................................................. 9  
    2.4.1: Academic Buildings .......................................................................................... 9  
    2.4.2: Residence Halls ................................................................................................. 9  
3: General Preparedness ..................................................................................................... 10  
  3.1: Individual Responsibility ...................................................................................... 12  
  3.2: WPI Responsibility ................................................................................................. 16  
    3.2.1: Disability Services – JoAnn Van Dyke (interview APPENDIX A-1) .............. 16  
    3.2.2: Dining Services – Robert Wilder (interview APPENDIX A-2) ...................... 16  
    3.2.3: Plant Services – Christopher Salter (interview APPENDIX A-3) ................. 18  
    3.2.4: Emergency Preparedness Team – Janet Richardson (interview APPENDIX A- 4) ............................................................................................................................... 18  
  3.3: Recommendation .................................................................................................... 20  
  3.4: Emergency Preparedness Team ............................................................................. 21  
  3.5: Cognitive Disabilities ............................................................................................. 22  
  3.6: Temporary Disabilities ........................................................................................... 22  
  3.7: Power Outages ....................................................................................................... 23  
    3.7.1: Academic Buildings ........................................................................................ 23  
    3.7.2: Residence Halls ............................................................................................... 24  
    3.7.3: Fire Alarms and Card Access ......................................................................... 25  
    3.7.4: Other Emergency Power ............................................................................... 26  
4: Fire Safety ....................................................................................................................... 30  
  4.1: Residence Halls ........................................................................................................ 30  
    4.1.1: Mobility Impairment ....................................................................................... 31  
    4.1.2: Visual Impairment ............................................................................................ 53  
    4.1.3: Hearing Impairment .......................................................................................... 57  
  4.2: Academic Buildings ............................................................................................... 61  
    4.2.1: Current WPI Policy .......................................................................................... 61  
    4.2.2: Current Policies at Other Universities ............................................................. 63  
    4.2.3: Discussion ....................................................................................................... 67  
    4.2.4: Recommendations .......................................................................................... 69
5: Natural Emergencies..................................................................................................... 71
  5.1: Snow Storms .......................................................................................................... 71
    5.1.1: Snow Storm with Power ................................................................................. 74
    5.1.2: Snow Storm without Power ............................................................................ 75
  5.2: Hurricane ............................................................................................................... 76
    5.2.1: Current WPI Policy ......................................................................................... 76
    5.2.2: Government Policies ....................................................................................... 79
    5.2.3: Discussion ....................................................................................................... 80
  5.3: Tornado .................................................................................................................. 85
    5.3.1: Current WPI Policy ......................................................................................... 85
    5.3.2: Government Policies ....................................................................................... 87
    5.3.3: Discussion/Recommendations ........................................................................ 88
6: Recommendations......................................................................................................... 92
  General Preparedness .................................................................................................... 92
    Individual .................................................................................................................. 92
    WPI ........................................................................................................................... 94
    Temporary Disabilities ............................................................................................ 95
    Power Outage ............................................................................................................ 95
  Fire Safety .................................................................................................................... 96
    Residence Halls .......................................................................................................... 96
    Academic Buildings .................................................................................................. 98
  Natural Emergencies ..................................................................................................... 99
    Snowstorms ............................................................................................................... 99
    Hurricanes/Tornadoes ............................................................................................. 100
7: Conclusions................................................................................................................. 101
8: References................................................................................................................... 104
Appendix A: Interviews.................................................................................................. 109
  Appendix A-1: Interview Summary – JoAnn Van Dyke ............................................ 109
  Appendix A-2: Interview Summary – Robert Wilder ................................................ 110
  Appendix A-3: Interview Summary – Christopher Salter ....................................... 112
  Appendix A-4: Interview Summary – Janet Richardson ........................................... 114
  Appendix A-5: Interview Summary – Cheryl Martunas ............................................ 116
  Appendix A-6: Interview Summary – Naomi Carton ............................................... 119
Appendix B: United States Department of Education Letter (Arizona State University) ......................................................... 122
Appendix C: Campus Map .............................................................................................. 130
1: Introduction

During the evaluation of the response to emergencies such as the terrorist attacks on the United States on September 11, 2001, and Hurricane Katrina in 2005, attention was brought to the fact that the emergency preparedness plans in several of the affected areas did not include persons with disabilities. As a result, the needs of individuals who required assistance during emergency situations of this nature went unmet, with grave consequences in some instances. Efforts were then made to correct these deficiencies, on federal, state, and local levels. At the federal level, President George W. Bush signed Executive Order 13347 on July 22, 2004, the goal of which is to “strengthen emergency preparedness with respect to individuals with disabilities.”

Other organizations, including the Federal Emergency Management Administration (FEMA), the American Red Cross, and the National Organization on Disability (NOD), also began or continued efforts to make the public aware that persons with disabilities should not only be included in emergency plans, but should have a role in creating these plans.

At the local level, the administration of Worcester Polytechnic Institute also recognized the need for the inclusion of policies in emergency planning materials to ensure the safety of the staff, faculty, and students of the university. Several offices, including the Disability Services Office, Office of Environmental and Occupational Safety, Office of Residential Services, and the office of the Vice President of Student Affairs and Campus Life have worked collectively to create and revise emergency planning policies and

---

procedures for persons with disabilities. To further the ongoing development of these policies, a team of students, using information collected from these offices, the federal government, organizations for disability advocacy, and other universities, undertook a study in which the current WPI policies were evaluated with respect to the other resources. The goal, ultimately, was to recommend improvements that could be made to the existing WPI policies based on the information gathered from the sources listed above. A secondary goal of the study is to educate the WPI community on issues regarding the safety of individuals with disabilities on campus primarily in the areas of residential halls and academic buildings, as these are the areas where individuals on campus spend the majority of their time.

Persons with disabilities cannot be treated as a homogeneous group, due to the different needs of each individual; therefore, this resource has been structured so that information is presented based on the type of disability an individual may have. Disabilities included in the resource are mobility impairments, both ambulatory and non-ambulatory, vision impairments, hearing impairments, temporary disabilities, and cognitive disabilities; wherever it is possible, the discussion of policies and recommendations made has been separated into individual sections for each disability. For localized emergencies, such as fire, there is also differentiation between emergencies occurring in a residence hall and emergencies occurring in an academic building, as the emergency response is different for each of these locations. For emergencies that have an impact on the entire campus, such as natural disasters, the response is structured to account for the needs of persons with disabilities at any point on the campus, regardless of which type of building they are
in. At the highest level, the policies are grouped by emergency; the emergencies discussed are extended power outages, fire, snowstorm conditions, hurricanes, and tornadoes, as these represent the most likely emergencies that could occur on the WPI campus. Within each of the sections and sub-sections, the current WPI policies are presented, followed by policies from other organizations and other universities. The resources are then analyzed critically in the discussion sections, and a policy that is felt to best meet the needs of WPI is presented after the previous two items.

In addition to the information previously mentioned, a list of definitions for terms used throughout the report is provided, as the definitions of some terms within the report may differ from other organizations’ definitions of the same terms. A brief overview of the role of the WPI Emergency Preparedness Team is also presented, as they are the persons charged with handling emergencies from beginning to end.

Through this document, and the awareness that it will raise amongst university offices when it is published and distributed, it is hoped that the WPI emergency preparedness plans for persons with disabilities can be strengthened even further, and that the safety of no member of the WPI campus community will be jeopardized by the lack of an emergency plan that takes their needs into consideration before, during, and after an emergency.
Figure 1: Emergency Scenarios Presented in This Manual

- EMERGENCIES
  - General Preparedness
    - Responsibility
    - WPI Emergency Preparedness Manual
    - Cognitive/Temporary Disabilities
    - Power Outage
  - Fire
  - Natural Emergencies
    - Snowstorms
    - Hurricane/Tornado
      - With Power
      - Without Power
2: Definitions

The following list of definitions for terms used throughout the report is provided, as the definitions of some terms within the report may differ from other definitions of the same terms.

2.1: Disabilities

A disability is defined as a physical or mental impairment that substantially limits or restricts the condition, manner, or duration under which an average person in the population can perform a major life activity, such as walking, seeing, hearing, speaking, breathing, learning, working, or taking care of oneself.4

2.1.1: Mobility Impairment

A condition limiting physical ability; generally considered to include lack of a limb or loss of limb use due to disease, amputation, paralysis, injury, or developmental condition; or limitation of movement due to cardiovascular or other disease. Although visual or hearing impairments and cognitive disabilities can hamper ease of travel, people with sensory or cognitive impairments are not termed people with mobility impairments in this report.5

---

2.1.2: Hearing Impairment

The scale of hearing impairment ranges from mild hearing loss to profound deafness, the point at which the individual receives no benefit from aural input. Many hard-of-hearing persons are able to use residual hearing effectively with the assistance of hearing aids (HA) or other sound amplification devices, often augmented by lip reading. Hearing aids amplify background noises as well as voices, so noise caused by emergency conditions (alarm bells, people shouting, sirens, etc.) may rise to an uncomfortable level for the person with the hearing impairment.\(^6\)

2.1.3: Visual Impairment

A person with vision impairment may be totally or legally blind. Legally blind implies that a person may be able to differentiate between light and dark or see very large objects, but may not be able to see anything clearly enough to depend on their vision in an emergency situation. This can also include persons with low vision who can see well enough to walk but cannot read without magnification.\(^7\)

2.1.4: Cognitive Impairment

A cognitive impairment is defined as the deterioration of conscious intellectual activity. Symptoms may include short- or long-term memory impairment, impaired judgment,


difficulty managing routine tasks, disorientation to time and place, fearfulness or paranoia, wandering, and repetitive actions. ⁸

### 2.1.5: Temporary Disabilities

For this investigation, it has been assumed that any temporary disability would fall under one of the other previously-discussed categories.

---

2.2: Area of Refuge

An area of refuge is a location that has direct access to an exit, where people who are unable to use stairs may remain temporarily in safety to await further instructions or assistance during emergency evacuation.  

2.3: Life Safety or Life Safety Egress System

The components of a pathway required to obtain access out of a building in an emergency comprise a life safety egress system. Components may include exit doors, corridors and aisle ways, stairways, emergency lighting, and emergency signage.  

---


2.4: Locations

The Worcester campus of WPI is comprised of both academic buildings and residence halls. Both types of buildings are included in this study, as they collectively represent the locations where the campus population spends the largest percentage of their time, and are the locations that would be most affected in an emergency situation.

2.4.1: Academic Buildings

Atwater Kent Laboratories
Boynton Hall
Campus Center
Fuller Laboratories
George C. Gordon Library
Goddard Hall
Higgins Laboratories
Kaven Hall
Olin Hall
Project Center
Salisbury Laboratories
Stratton Hall
Washburn Shops and Stoddard Laboratories

2.4.2: Residence Halls

Daniels Hall
Ellsworth Apartments
Founders Hall
Fuller Apartments
Institute Hall
Morgan Hall
Sanford Riley Hall
Stoddard Complex
3: General Preparedness

There are many emergencies that require planning and, in most cases, include warning of the impending event. General preparedness for these instances is pertinent to all individuals, but more so for persons with disabilities. Many persons with disabilities require medications or special apparatus on a daily basis. These needs have to be recognized during and after an emergency situation.

The Red Cross advises that persons with disabilities following these simple guidelines:11

1. Make an emergency information list. Include—
   • Medical and emergency contact information.
   • Emergency out-of-town contacts.
   • Names and numbers of everyone in your network.
   • Name and number of a relative or friend who lives more than 100 miles away from you.
   If you have a communication disability, make sure your emergency information list notes the best way to communicate with you.

2. Fill out a medical information list. Include information about—
   • Medical providers.
   • Medications you use.
   • Adaptive equipment and/or body system support equipment you use.
   • Allergies and sensitivities.
   • Communication or cognitive difficulties.

3. Attach copies of health insurance cards and related information to your medical information list.

4. Keep at least a seven-day supply of essential medications with you at all times.

5. Have extra copies of prescriptions.

6. Talk with your doctor or pharmacist about what you should do if you do not have enough medicine after a disaster. Also, find out the shelf life of your medication and the storage temperature it needs.

---

7. Determine how often you should replace stored medication.

8. Identify safe places to go to during an—
   • Earthquake.
   • Tornado.
   • Hurricane.
   • Flood.
   • Fire.

9. Install at least one smoke detector on each level of your home, outside sleeping areas.

10. Find the location of utility cutoff valves and switches. Become familiar with how to operate them.

11. Identify as many exits as possible (but at least two) from each room and from the building you are in.

12. Make a floor plan of your home. You may want your network to help you do this. Include your primary escape routes.

13. Practice using different ways out of a building, especially if you are above the first floor in a building with many stories.

14. Decide what type of equipment you will need for assistance during an evacuation.

15. Be ready to give brief, clear, specific instructions and directions to rescue personnel.

16. If you do not drive, talk with your network about how you will leave the area if authorities advise an evacuation.

17. Ask your local emergency management office if transportation services are available to persons with your disability during an emergency evacuation. Find out how to arrange to get this service.

18. Become familiar with the emergency or disaster evacuation plan for your office, school, or any other location where you spend a lot of time.

19. Choose an alternate place to stay.

20. Have a care plan for your pet.

21. Have a care plan for your service animal.

22. There are six basics you should stock for your home: 1) water, 2) food, 3) first aid supplies, 4) clothing and bedding, 5) tools and emergency supplies, and 6) special items.
Keep the items that you would most likely need during an evacuation in an easy-to-carry container.

3.1: Individual Responsibility

Many of the above mentioned items are the responsibility of persons with disabilities. WPI may assist with many of these items, but it is ultimately the responsibility of the individual, as they are the best advocate for their condition.

Item 1
- An emergency information list is a key item. This list includes emergency contacts and important information about communication. Keeping this information readily available will help both the individual and the persons in charge evacuate safely and disseminate information.

Items 2 and 3
- It is important for the individual to supply medical information such as medications, allergies, and special assistive equipment. All students supply this information when filling out the health form upon arrival to WPI at the beginning of their freshman year. Although this health form is completed, there is no guarantee that a new or temporary condition will be reported to WPI, as it is the individual’s prerogative to disseminate that information.  

Items 4, 5, 6, and 7
- It is the responsibility of the individual to keep a seven-day supply of needed medication in case of an emergency. Additionally, WPI Health Services may be able to provide assistance in the form of refrigeration and space. It must be noted,

---

12 Van Dyke, JoAnn. Personal Interview. 8 Feb 2007.
however, that an added supply should be kept on hand by the individual, in case access to Health Services during an emergency is not an option.\textsuperscript{13}

Items 8, 11, 12, and 13

- Every individual should be aware of the areas of refuge and common meeting areas for an emergency. Because every situation is different, these areas may change frequently. It is best to be aware of your surroundings and know multiple ways of egress from all buildings on campus, but most importantly the buildings you frequent the most. It is also important to practice evacuating in order to be ready if and when an emergency may occur.

Item 14

- Although the campus may have emergency equipment to assist persons with disabilities during an emergency situation, it is pertinent that the individual who may need this assistance knows the best way to be assisted in egress. By advocating for themselves, the Disability Services Office, Campus Police, and the Office of Residential Services may become aware that different equipment is needed to evacuate. If the individual does not taking the initiative in providing this information, the emergency personnel on campus may not know how best to provide assistance during an emergency.

Item 15

- It is important for the individual to know the best way to evacuate, and be ready to explain this to someone in an emergency. In some instances, emergency personnel may be unable to reach a person with a disability, and peers may need to help. It is

\textsuperscript{13} Van Dyke, JoAnn. Personal Interview. 8 Feb 2007.
important to be able to explain the best way to help these individuals in various circumstances to persons who have limited knowledge of emergency egress procedures for persons with disabilities.

Items 16 and 17
• In the event of an evacuation it is pertinent for the person with the disability to know where and how to evacuate. It is the responsibility of the individual to find out from WPI if there are any provisions for such an evacuation. If a person is unable to evacuate, it is also their responsibility to find the correct place to seek refuge during an evacuation. Information on areas of refuge for various emergencies should be provided by WPI.

Item 18
• If a disaster were to occur on the WPI campus, it is important for everyone, not just persons with disabilities, to know what actions to take and where to seek shelter. Both before and during the disaster, WPI should make this information readily available.

Item 19
• It is important to identify a possible secondary shelter or place to stay if an emergency should occur. If warned in advance, the individual may choose to stay at this secondary location if they can reach it safely. During the aftermath of an emergency, it may or may not be viable to relocate. If possible, individuals may want to relocate to a facility with better accommodations for persons with disabilities.
Items 20 and 21
- Pets are not allowed to reside on the WPI campus, but many faculty, staff, and students may bring their pets to campus. It is the owner’s responsibility to handle their pets during an emergency situation. If the animal is a guide dog or other assistive animal that may live on campus, the individual will need to have an emergency evacuation plan for these animals.

Item 22
- It is in everyone’s best interest to have some kind of emergency pack ready in case of an emergency. If there was an emergency, and an individual was trapped in their room, or a had to made a quick exit, having an emergency pack with items such as food, water, and medication would be very handy and possibly sustain someone if they were immovable for an extended amount of time.
3.2: WPI Responsibility

3.2.1: Disability Services – JoAnn Van Dyke (interview APPENDIX A-1)

Disability Services keeps records of all reported disabilities and any special needs. It is important to note that it is the individual’s responsibility and choice to report their disability or use of medication, and advise Disability Services of special needs. Disability Services will work with any student to help them with an emergency plan or other accommodations, including refrigeration for medications.

3.2.2: Dining Services – Robert Wilder (interview APPENDIX A-2)

Dining Services can sustain the campus during many types of emergencies. If there is a power outage, Founders Dining Hall has emergency generator power and all dining facilities on campus can prepare meals using steam and natural gas. There will be a variation of service that will affect baked foods such as desserts, but this modified service will not greatly affect individuals on campus, as there are a variety of foods that can be steamed and cooked using gas. Generators could also be brought in, as they have in the past, to power refrigerators.

Dining Services has between three and five days’ worth of food on hand at any given time. If there was a long-term emergency, such as a flood or a snowstorm, the dining facilities would be able to cancel catered events and use that food for general dining. There are also a variety of different food service companies in the Worcester area that could be contacted for assistance. The current contract dining service also supplies food
to surrounding schools, such as Worcester State College and other public elementary and high schools. In an emergency, WPI would be able to obtain food from these sources to sustain the campus.

Food and other dining supplies are delivered to campus on a daily basis. The major vendor out of Springfield, Massachusetts, which delivers about eighty percent of the campus’ food, delivers three times a week. The produce vendor delivers everyday. This vendor deals with a variety of products and foodstuffs, and could be asked to deliver other supplies if needed. Dining Services also uses Hood to supply dairy products, through a distributor in Holyoke, Massachusetts, who delivers six days a week. Also, the bread distributor delivers on a daily basis. If this distributor could not make it to campus, Dining Services would use alternate plans, such as not serving sandwiches or making their own bread if possible.

Currently Dining Services runs a “Sick Tray” program in which a student who is ill and cannot make it to a dining facility can have someone bring their WPI ID to the dining hall and have a tray prepared. The tray is then brought to the individual who is ill. In an emergency situation, this plan could be modified to bring food and other supplies to all persons in need that could not make it to a dining facility. For example, if a student with a mobility impairment was in their residence hall room in Sanford Riley Hall during a blizzard and could not make it to the dining facilities, another student or residential advisor could go to the dining hall and get food and also pick up medication and other needed medical supplies from Health Services if need be.
3.2.3: Plant Services – Christopher Salter (interview APPENDIX A-3)

Plant Services is in charge of installing and maintaining all types of fire and smoke alarms on campus, including any specialized alarms for persons with vision or hearing impairments, such as strobe lights or bed shakers. Plant Services also installs and maintains handicap accessible entrances and any other permanent accommodations that an individual may need.

Plant Services is also in charge of maintaining the emergency generators, which will be discussed further in the Power Outage section. These generators are mostly used for Life Safety, but some, including one that Harrington Auditorium has access to, are used for maintaining utilities such as lighting and refrigeration. Plant Services is also in charge of snow removal, which will be discussed further in the Snowstorm section.

3.2.4: Emergency Preparedness Team – Janet Richardson (interview APPENDIX A-4)

The Emergency Preparedness Team, formerly the Crisis Management Team, has identified Harrington Auditorium as a possible area of assembly during or after an emergency. This facility has lights supplied by an emergency generator. Also the building can house many people, and offers access to showers and other locker room facilities.

If an emergency is confined to one building, such as a fire, and there is still power on the campus, people may be relocated to the Campus Center, where there are large rooms for setting up cots and other stations, food service within the building, and recreational areas.
If a long-term loss of power is the only emergency, students with disabilities could be moved to Founders Hall for residence, as there is emergency power as well as refrigeration within the building. They would still, however, not have access to accessible entrances and elevators, as these both do not run on emergency power or generators.

Persons with disabilities can be assigned personal care attendants or other students depending on needs in both emergency and non-emergency situations. The Emergency Preparedness Team cannot force persons with disabilities to provide information about themselves, but they are given the option to keep information with Campus Police for emergency situations.
**3.3: Recommendation**

A possible course of action to facilitate an individual’s responsibility for general preparedness would be to disseminate the Red Cross list above to persons who have reported a disability. This could be done through e-mail or printed copies. Another solution for persons who may have a disability, but do not disclose it to Disability Services would be to post this information on the Disability Services website. This information could also be put into a packet and disseminated at the beginning of each academic year through new student orientation and in campus mailboxes by the Office of Student Affairs and Campus Life. Information from several campus offices, such as Residential Services, Disability Services, Campus Police, and Student Affairs would likely be amongst the materials included in the packet.
3.4: Emergency Preparedness Team

To aid in the planning for and response to emergencies that occur on the WPI campus,

WPI has an Emergency Preparedness Team (EPT) that responds promptly and effectively in the case of a natural disaster or other emergency occurring on or affecting the WPI campus and its community. The EPT is made up of senior administrators and an Emergency Preparedness Team that work together to manage the crisis from beginning to end, making determinations about the scope and nature of the response as well as coordinating communications about the crisis to all internal and external constituencies.¹⁴

In the manual used by the Emergency Preparedness Team, there is a section devoted to evacuating students with disabilities. This section states,

When responding to an emergency that requires evacuation, the emergency responders must consider the possibility (sic) that a disabled student needs to be evacuated from the facility. This possibility must be communicated to the emergency facilitator, the Worcester Fire Department, and any other responder.

Once is it determined that a disabled student is within the facility, a staff member should be assigned to make sure that the student’s needs are met, both during the evacuation and afterward.

The importance of someone voluntarily assisting the student during an evacuation is very important. Two people are preferred, since one can stay with the student while another summons help from the responders. Disabled students should take the initiative to inform their resident advisor, instructor, or another community member of their need for assistance if an evacuation is necessary. However, during the early phase of an incident, Campus Police and other first and secondary responders must recognize the potential that a disabled student resides in the facility and needs assistance with evacuation. This information must be communicated to the Worcester Fire Department with appropriate follow-up by the emergency facilitator or other on-site staff.¹⁵

3.5: Cognitive Disabilities

Although there are faculty, staff, and students who may have cognitive disabilities, this type of impairment is not prevalent within the WPI campus community. Thus, it has been chosen to focus more of the information and discussion provided on disabilities that affect a larger percentage of the campus population.

3.6: Temporary Disabilities

For this investigation, it has been assumed that any temporary disability would fall under one of the other previously-discussed categories, and would, thus, follow a similar evacuation procedure. The underlying problem with temporary disabilities is notification; while individuals with chronic disabilities tend to provide information to several university offices about their needs, persons with temporary or new disabilities tend only to seek help if they cannot function with the disability. Disability Services keeps records of any type of disability, but only if the individual reports it. 16 Many temporary disabilities consist of simple injuries, such as a broken arm or a sprained ankle, which many people can live with on a daily basis without having to change their routines, but these disabilities could present a problem during an emergency situation. A recommendation concerning temporary disabilities could be to make information regarding who to contact regarding a temporary disability more widely available to the WPI community through pamphlets, provided to freshmen during New Student Orientation and through annual distribution to upperclassmen through their on-campus mailboxes.

16 Van Dyke, JoAnn. Personal Interview. 8 Feb 2007.
3.7: Power Outages

WPI has provisions in place for power outages on the Worcester campus. These provisions start with the buildings themselves. During an interview with Christopher Salter, the Associate Director of Technical Trades for Plant Services, we found pertinent information regarding life safety systems, emergency generators, etc. for academic and residential buildings on the WPI campus, which follows.\textsuperscript{17}

3.7.1: Academic Buildings

All of the Academic Buildings on the WPI campus have emergency battery units for “Life Safety”. These battery units consist of either several different units with their own individual battery packs or several units connected to a central power source. The battery units only last for about ninety minutes, and should only be used for emergency egress.

A few of the buildings (Salisbury Laboratories, Fuller Laboratories, Harrington Auditorium) also have emergency generators. In Salisbury Laboratories, the generator is only used to keep scientific research safe and secure. In Fuller Laboratories, the generator powers lights and computers. In Harrington Auditorium the generator keeps lights and other facilities running.

It is also important to note that all academic buildings will have heat during a power outage because the on-campus heating system is run on steam from the Power House.

\textsuperscript{17} Salter, Christopher. Personal Interview. 9 Feb 2007.
3.7.2: Residence Halls

Every residence hall on the WPI campus uses emergency battery units for life safety. Founders Hall also has an emergency generator that powers Founders Dining Hall and other lights on the premises.

Two different scenarios exist for power outages, due to the fact that different sections of the campus are on different power grids. Everything on the main campus – within Boynton Street, Institute Road, Salisbury Street, and Park Avenue – is connected to one Worcester grid. (See APPENDIX B for Campus Map) This means that if only this grid lost power, only these residence halls would be affected. The rest of the residence halls (Founders Hall, Institute Hall, Stoddard Complex, Ellsworth Apartments, Fuller Apartments) run off of another city grid and would therefore be unaffected. Because heat to these residence halls is not supplied by the Power House, they have electric heat and will therefore be further affected by a non-WPI power outage.
3.7.3: Fire Alarms and Card Access

It is important to note that although the WPI fire alarm systems are connected to electricity, they do have battery backup power in case of a power outage. By law, “the secondary power supply shall have sufficient capacity to operate the fire alarm system under quiescent load (system operating in a nonalarm condition) for a minimum of 24 hours and, at the end of that period, shall be capable of operating all alarm notification appliances used for evacuation or to direct aid to the location of an emergency for 5 minutes.” Similarly, the card access systems, which control the entrances and exits of almost every building on campus, have a battery backup system, which lasts for an undetermined time. The card access systems could last for anywhere from two hours to two weeks depending on the frequency of use.

---

3.7.4: Other Emergency Power

Certain places on campus need emergency power and cannot last on backup power. One section of campus that needs this emergency power is Network Operations, which receives power from an emergency generator near Daniels Hall.

If WPI loses power during or after an emergency, Plant Services has access to the emergency generator at Daniels Hall to power some important facilities, including lights and communications within their office. Because Campus Police is outside of the main part of campus, it runs on municipal electricity, and can therefore function if the main campus is the only area affected.

It is also important to note that although some of the buildings on campus do have emergency power supplied by battery backup or generators, none of the elevators or handicap entrances will be in service if there is a power outage.
Discussion

A power outage on the WPI campus will greatly affect everyone, including persons with disabilities. Persons with mobility impairments may have the most trouble moving around because the elevators will not be powered. Persons with minimal vision impairments may also have problems with the lower levels of light provided by the emergency battery units.

A major concern is the restriction of mobility. If someone who usually uses the elevator cannot do so because of a power outage, they may be able to wait it out if the power is returned in a short period of time. If the power outage lasts longer than a few hours, that person may need to find a way to get down the stairs; walking if ambulatory or only mildly disabled, being helped by another student or staff member, or by emergency carry if necessary. If the student chooses stay in place for an extended amount of time, the current “Sick Tray” Program by Dining Services could be modified to bring other supplies to stranded individuals. Also, the student should have an emergency pack prepared, as outlined in the general preparedness section.
Recommendations

An easy solution would be to have all information regarding all individuals with disabilities in one easy and accessible resource. The problem with this is that WPI cannot force individuals to disclose personal information. If an individual chooses to tell Disability Services or Residential Services that they are disabled or may need assistance in an emergency situation, both offices will be available and willing to help that person. If the individual decides not to disclose such information, they may be stranded in an emergency situation.

Responsibility should rest on the person with the disability in most, if not all, emergency preparedness and emergency situations. The individual must contact Disability Services for proper accommodations or be more than ready to evacuate on their own or stay in place. To prepare it is recommended that everyone follow the previously stated Red Cross guidelines.

WPI must be prepared to accommodate persons with disabilities in any situation when it is brought to their attention. The Institute should also follow the Red Cross guidelines in any facet that they may deem necessary.

When a power outage occurs it should be dealt with as soon as possible by Plant Services or the City of Worcester. If an individual is stranded, they should contact Campus Police or other emergency personnel immediately for assistance. The first step in any emergency
situation must be to notify someone that help is needed. The WPI Emergency Preparedness Manual states:

When responding to an emergency that requires evacuation, the emergency responders must consider the possibility (sic) that a disabled student needs to be evacuated from the facility. This possibility must be communicated to the emergency facilitator, the Worcester Fire Department, and any other responder. 19

Thus, the Emergency Preparedness Team considers the possibility that persons with disabilities may be in the building, but by letting them know for sure, the emergency responders can assist that person more promptly.

As stated previously in the General Preparedness section, the dining halls can prepare meals without power, there is also the ability to run the Founders Dining Facility off of an emergency generator. Three to five days’ worth of food is kept on hand, and refrigeration can be provided by the freezers in the Founders Hall dining hall.

Without power, the elevators do not work. Another recommendation could be to install automatic lowering or battery-operated elevators for life safety. These would allow persons with disabilities who cannot navigate stairs to descend to the ground floor of the building. This would be very useful in almost all emergency situations besides fire; as elevators should never be used in a fire.

4: Fire Safety

In 2005, fire killed more Americans than all natural disasters combined.\(^{20}\) For this reason, it was chosen to begin the sections of this manual dealing with individual emergencies with this topic. In addition, fire is the emergency for which the largest amount of information is available concerning evacuation procedures for persons with disabilities.

At the highest level, a distinction is made between residence halls and academic buildings, as each presents a different set of circumstances for fire evacuation. Within each of these sub-sections, information is presented by disability where appropriate. For each disability, the current WPI fire safety policy is presented first, followed by the fire safety policies of other universities and recommendations from government offices and disability advocacy organizations. A discussion of the strengths and weaknesses of each policy follows the presentation of the policies, and from this discussion, recommendations are made to improve the current WPI fire safety policy.

4.1: Residence Halls

Since students who live on campus spend a large percentage of their time in their residence hall rooms, it was decided that the emergency evacuation of residence halls with considerations for persons with disabilities was an important area that needed to be explored. Information pertinent to fire safety is presented first in this manual, as it is believed that fire is the most common emergency that most residents may face in a residence hall environment.

4.1.1: Mobility Impairment

Current WPI Policy

It was decided that research should begin with the current policy at WPI, as this is the policy that will ultimately be modified or replaced, depending on the outcome of this project. The current WPI policy appears on the website of the Office of Residential Services, and states that,

Even if a disability is temporary, learn about fire safety, plan ahead for fire emergencies, and know your own capabilities and/or limitations. In case of fire drill/fire or other emergencies limiting elevator use, a person using a wheelchair/scooter should go to the nearest, safe stairwell to await assistance and two people should accompany them. One person should stay with them in the stairwell, while the other should leave to inform the proper authorities (Campus Police, emergency, or fire fighting personnel) of the location of the individual. Campus Police, emergency, or fire fighting personnel will immediately come and assist the individual out of the building.

The two person rule helps to insure that the authorities will find the person quickly and not have them left alone in the stairwell wondering whether the emergency is real or not and whether someone will find them.

Students with disabilities are advised to prepare for an emergency ahead of time.

It their responsibility to do the following at the beginning of each term:

1. Fill out and sign the Release of Information and Special Assistance forms, available in the WPI Student Disability Services Office, Daniels 1st floor.
2. Give a copy of your class schedule to the Student Disability Services Coordinator.
3. Inform your instructors.
4. Your classroom/residential locations will be given to the Residential Services, Campus Police and the Crisis Team. In the event of an evacuation, Campus Police will give the Fire Department the list to help them locate students who may need assistance with evacuation.
5. Know the safest method to use to assist you.
6. Know how many people would be needed to provide you with assistance.
7. Be prepared to explain how and where a person(s) should support you.

8. Know the location of and move to the closest stairwell on each floor. Fire Department personnel will be directed to check those stairwells first to locate individuals who need to be transported to the ground floor.

9. Participate in fire drills. Drills are used to familiarize yourself with the building's alarm and the emergency exits that will be available during an evacuation.\

Shortly after the beginning of each academic year, each student living in a WPI residence hall is also given a printed copy of the “Guide to Residence Hall Living.” While the policy above is readily available on the Office of Residential Services’ website, the same policy appears in reduced form in the Guide, which states,

Even if a disability is temporary, learn about fire safety, plan ahead for fire emergencies, and know your own capabilities/limitations. Any student with a physical disability should discuss their needs with their RA and floor mates so that they will know how to help in an emergency situation.

For the purposes of this investigation, it was decided to use the more complete version of the WPI policy that appears on the website, as it is believed to represent the most current version of the policy. It is worth noting that this policy solely mentions persons with mobility impairments; no mention of visual impairments, hearing impairments, cognitive disabilities, or temporary disabilities is made elsewhere in the policy.

Once the first responders have arrived on the scene of the emergency, there still remain questions as to how persons with disabilities are best located and evacuated from the building. In an interview with the Chief of the WPI Campus Police (interview APPENDIX A-5), it was learned that all Campus Police officers are trained in basic

---

23 Martunas, Cheryl. Personal Interview. 30 November 2006.
rescue maneuvers and emergency carries; it is unclear if they are trained in the more specialized procedures for evacuating persons with mobility impairments. It is the stated goal of the Campus Police, however, to “remove all persons from the threat,” which presents a “tough balance” when persons with disabilities are involved. Since there are a limited number of Campus Police officers on duty at a given time, they cannot all be committed to evacuating persons with disabilities who may need assistance; in an emergency, they must also aid with the evacuation of able-bodied persons, as well as ensure the safety of persons who have already left the building. This may mean disabled persons that need assistance to evacuate may have to wait for the Worcester Fire Department to arrive, as they also have the breathing apparatus necessary to remain in a smoke-filled environment for long periods of time, whereas Campus Police do not.

According to Chief Martunas, any information that is shared with the Worcester Fire Department concerning an individual’s disabilities is first released by the student to the Disability Services Office, who then provides the information to Campus Police. This information is kept in electronic form in the Campus Police database, and a printed copy is kept next to the dispatcher’s console at the Campus Police station and relayed to officers. It should also be noted that when the fire alarm sounds in a WPI residence hall, the alarm goes straight to Campus Police, who then notify the Worcester Fire Department of the emergency.
Current Policies at Other Universities

With the WPI policy above established as the baseline against which other policies would be compared, further research was conducted into the policies and procedures of other colleges and universities, ranging in size, location, and discipline. One of the first policies evaluated was that of Ball State University, located in Muncie, Indiana. While the WPI policy does not differentiate between persons who are ambulatory and those who are not, the policies of Ball State do. For persons who are ambulatory, persons with mobility impairments who are able to walk independently, either with or without the use of crutches or a cane, may be able to negotiate stairs in an emergency situation with minor assistance. Even some persons who customarily use a wheelchair or scooter for long distance travel may be able to walk independently in an emergency situation. If danger is imminent and the person is able to walk down stairs with some assistance, it is advisable that they wait until the heavy traffic has cleared before they attempt to evacuate. Someone should walk beside them to provide assistance, if needed. If it is apparent that there is no immediate danger (obvious smoke or fire), the person may choose to stay in the building until emergency personnel arrive and determine the necessity to evacuate. In situations of false alarm or a small, isolated fire, evacuation of persons with mobility impairments may not be necessary at all; however, this decision should be made only by qualified emergency personnel. If emergency personnel determine there is a need to evacuate a person, trained rescue workers will assist in the evacuation. Someone should alert emergency personnel as to the location of the individual if that person chooses to wait in the building.  

For non-ambulatory persons, Ball State has the following policy:

In keeping with current philosophy and preference to "stay in place," the most recent advice from fire and campus safety experts is that unless danger is imminent, a wheelchair user should remain in a room until emergency rescue personnel arrive and determine the necessity for their evacuation. A specific person should be designated to go outside and inform emergency personnel of the location of the person with the

disability. Whenever possible, someone should remain in the facility with
the person with the disability. However, if a non-ambulatory person
chooses to evacuate (and if appropriate assistance is available) then the
person should be assisted from the building. Again, in case of a false
alarm or a small, isolated fire, it may not be necessary to risk a
complicated evacuation - but only qualified emergency personnel should
make such a decision.)

In the event of immediate danger (e.g. fire, smoke, etc.) it is advisable for
the wheelchair user to move horizontally within the facility to a safer area.
Go to a room with an exterior window and telephone, and wait (with the
doors closed) for the rescue personnel to arrive. Only in situations of
extreme danger should untrained people attempt to manually evacuate
wheelchair users. Doing so may involve dangers of its own, especially if
there is limited assistance or if multiple floors are involved. It is never safe
to move someone by lifting a wheelchair down the stairs. Wheelchairs can
be extremely heavy, and have many moveable parts and vulnerable points
that are not constructed to withstand the stress of lifting. Again, while it is
best to let professional emergency personnel (firefighters with oxygen
equipment) conduct the evacuation, a person with a mobility limitation
can be carried by two people who have interlocked their arms to form a
"chair", or by carrying the person in a sturdy office chair in the case of
extreme emergency. NOTE: THE PERSON WITH THE DISABILITY IS
THE BEST AUTHORITY ABOUT HOW TO BE MOVED.25

At Brown University, in Providence, Rhode Island, the policy again makes no distinction
between persons who are ambulatory and non-ambulatory, but does make the distinction
between students who are in their rooms, and students who are not. For persons who are
in their room within the residence hall,

If you are in your room and unable to evacuate without assistance, Brown
Public safety should know you are in the building:

1. Call Public Safety (x4111). If there is no answer, leave a message about
the alarm, telling them who you are, where you are, and that you need
assistance. If the line is busy, proceed to step 2 and call 911.
2. If you think no one is aware of your presence, don’t hesitate to call
the Fire Department (dial 9-1-1). Tell them:
   o A fire alarm is sounding in your Brown residence hall
   o That you have a disability and need assistance

The name of your building and your room number

3. If it is necessary for you to get out of the building, the fire personnel will carry you right from your room or bed. Be prepared to explain the quickest way to disengage any equipment to facilitate the evacuation and give any other necessary instructions. Evacuation will occur only if necessary.26

For persons who are not in their rooms, however, the policy is slightly different, and states,

If you are not in your room and use a wheelchair or another mobility vehicle or device:

- If you cannot safely reach a ground floor and exit, go to the nearest outside stairwell. Stay on the landing, off to the side.
- As a last resort, go to the nearest interior stairwell.
- If a fire alarm is sounding, NEVER use the elevators.
- Establish a "buddy system" for your residence hall and each of your classes. Your "buddy" can assist you in evacuating quickly or notify emergency personnel of your location in the event that you cannot leave the building without additional assistance.27

The policy that appears on the Department of Safety and Transportation website at Missouri State University, located in Springfield, Missouri, is very brief, and, for unknown reasons, does not go into the specific detail that policies from other universities do. The Missouri State policy states,

Physically-Disabled individuals shall inform administrators, instructors, building coordinators, and/or supervisors of any physical disability, as well as their assigned work station, classroom, or place of normal occupancy in the building. In the event of an emergency evacuation, persons with disabilities should request the aid of someone physically capable of assisting them out of the building or to a place of safety until

---


response personnel arrive (as long as this assistance does not involve placing anyone in danger).²⁸

At Stony Brook University, on Long Island, persons with disabilities are to prepare an individualized plan for their evacuation before an emergency occurs. Once this plan has been created with assistance from the person with the mobility impairment, the person can be evacuated according to the plan. Thus, though this policy would be considered a singular response, it is not a singular response based on a pre-determined policy; rather, the policy is developed by the disabled person, so that it best fits their needs in the event of an emergency. The policy reads:

**Planning Steps**

- Identify primary and secondary routes to exits, stairwells or other safe 'areas of refuge' that can provide protection from smoke or fire.
- Locate building phones, fire alarm pull stations, police call boxes or cell phones that can be used to call University Police in the event of an emergency.
- Establish a Buddy System with a coworker or other colleague who can assist you during an evacuation.
- Train your Buddy on the best way that they can assist you during an evacuation.
- Contact the Department of Environmental Health & Safety. The Fire Safety group will assist you in your planning efforts and notify emergency responders of specific needs that you may have.²⁹

With the plan in place, when an emergency occurs, the policy at Stony Brook is,

**During an Evacuation**

- When the alarm sounds you should immediately prepare to evacuate the building.
- Obtain assistance from your Buddy and exit the building using the primary or secondary exit routes identified in your pre-plan.

---

• If you are unable to exit the building, seek refuge in the safe 'area of refuge' identified in your pre-plan.
• Call University Police at x911 (632-3333) and let them know that you are proceeding to the stairwell or area of refuge designated in your pre-plan.
• Advise your Buddy or others who may be assisting you to continue to evacuate once you have reached your area of refuge. They should summon and advise emergency responders of your location.
• While you are waiting, position yourself so that your body is as close to the floor as possible.\(^\text{30}\)

At the University of Pennsylvania in Philadelphia, the policy is slightly different, due to the fact that the residence halls have reception areas and are staffed. The policy, however, does distinguish between persons who can reach areas of safety by themselves, and those who may require assistance:

In residence halls, your name is kept on file at the front desk so that emergency personnel are informed of your location upon arrival. (This information is furnished to the front desk by the SDS after consultation with the student who is registering.)

Wherever you are in the residence hall, proceed immediately to the nearest fire-exit stair and wait in the area for University police officers or members of the Philadelphia Fire Department to assist you from the building.

If you are in your room and require assistance to the nearest fire-exit stair, an advisor and/or classmate identified in advance will assist you to the nearest fire tower and stay with you.

If you are alone and require assistance, notify the front desk of your location and the assistance you need.

If the number at the front desk is busy, call extension 511 for assistance.\(^\text{31}\)


While the policies presented so far have presented a singular approach to how a person with a disability should deal with an emergency situation, other universities have policies that are more conditional, offering the individual several options to reach safety. As described by Rutgers,

**Evacuation Options During a Fire Alarm**

Use of the “Buddy System,” along with the following evacuation options, will help to assure the prompt evacuation of any person with disability.

- **Horizontal Evacuation:**
  
  Move away from the area of imminent danger to a safe distance (i.e., another wing, an adjoining building, opposite end of the corridor, or outside if on the ground level).

- **Vertical (Stairway) Evacuation:**
  
  Stairways can be used by those who are able to evacuate with or without assistance. Persons with sight disability may require the assistance of a sighted person. Persons who must use crutches or other devices as walking aids will need to use their own discretion, especially where several flights of stairs are concerned.

- **Stay-in-Place**
  
  Unless danger is imminent, remain in a room with an exterior window and a telephone, closing the door if possible. Call Rutgers Police (obtain an outside line and dial 911) and give your name, location and reason you are calling. The dispatcher will relay the information to on-scene emergency personnel. Phone lines normally remain in service during most building emergencies. If the phone lines fail, the individual can signal from the window by waving a cloth or other visible object.

- **Area of Refuge**
  
  If the person with disability cannot get far enough away from the danger by using Horizontal Evacuation, then that person should seek an Area of Refuge. Such an area should have the following: 1) telephone communication, 2) a sprinkler system, and 3) one-hour fire-rated assembly (i.e., fire-rated door, walls, ceiling). Note: Residence Hall rooms qualify as
areas of refuge. You should identify an area of refuge in your building within the first weeks of your classes or employment.\(^{32}\)

The policy at Rutgers also makes a distinction between persons who use a wheelchair and persons who do not, stating,

- **Mobility Impaired (Wheelchair)**

  Persons using wheelchairs should Stay-in-Place, or move to an Area-of-Refuge with their assistant when the alarm sounds. The evacuation assistant should then proceed to the evacuation assembly point outside the building and tell emergency personnel the location of the person with disability. If the person with disability is alone, he/she should phone the Rutgers Police (obtain an outside line and dial 911.) He/she should give their present location and need of assistance or the Area-of-Refuge to which they are headed.\(^{33}\)

- **Mobility Impaired (Non-Wheelchair)**

  Persons with mobility impairments, who are able to walk independently, may be able to negotiate stairs in an emergency with minor assistance. If danger is imminent, the individual should wait until the heavy traffic has cleared before attempting the stairs. If there is no immediate danger (detectable smoke, fire or unusual odor), the person with disability may choose to stay in the building, proceeding to an area of refuge, until emergency personnel arrive.\(^{34}\)

The University of Washington, located in Seattle, has a policy that is largely identical to that of Rutgers shown above; some portions, except for changes in the names of emergency organizations and telephone numbers, are nearly verbatim. In the portion on persons in wheelchairs, however, the University of Washington has added:


If the stair landing is chosen as the area of refuge, please note that many campus buildings have relatively small stair landings, and wheelchair users are advised to wait until the heavy traffic has passed before entering the stairway.

Stairway evacuation of wheelchair users should be conducted by trained professionals. (SFD) Only in situations of extreme danger should untrained people attempt to evacuate wheelchair users. Moving a wheelchair down stairs is never safe.35

Gallaudet University, located near Washington, D.C., has a similar policy to the last two, with the exception being that no mention of an “evacuation assistant” is made. As stated in the Emergency Preparedness Guide for Students, Faculty, Teachers, and Staff,

**People who are Mobility Impaired (those who use a wheelchair)**
When the alarm sounds, people using wheelchairs should either stay in place or move to an Area of Refuge and wait for assistance from a member of the D.C. Fire Department or other trained emergency personnel. Emergency personnel are trained to go to Areas of Refuge to assist people with disabilities. If the person with a disability is alone, he/she should contact DPS. He/she should give the present location or Area of Refuge to which he/she is going.36

**People who are Mobility Impaired (those who do not use a wheelchair)**
People with mobility impairments who are able to walk independently may be able to negotiate stairs in an emergency with minor assistance. In an actual evacuation, these individuals may choose to wait until heavy traffic has cleared before attempting the stairs. If there is no imminent danger, the person with a disability may choose to stay in the building or move to an Area of Refuge until emergency personnel arrive.37

Government Policies

The United States Fire Administration (USFA), a division of the Federal Emergency Management Administration (FEMA), has prepared a manual for emergency personnel, indicating best practices to move persons from danger effectively and safely. Interestingly, the *Orientation Manual for First Responders on the Evacuation of Persons with Disabilities*\(^{38}\) contains an entire section on how to evacuate persons in their wheelchairs, as “The wheelchair user is anxious to be returned to his or her wheelchair after the rescue; therefore, the in-chair evacuation is desirable when feasible.” Alternative evacuation techniques mentioned are the single-person cradle-carry, as well as the multiple-person swing- or chair-carry, in addition to the previously-mentioned in-chair carry. While the in-chair carry procedure contrasts sharply with many of the university policies, this manual does have the approval of the National Organization on Disability. One possible hypothesis for this disparity is that in-chair carry is discouraged due to lack of training amongst university faculty, staff, and students, while first responders may have the necessary skills to accomplish in-chair transport safely. Another notable section of the FEMA manual is on the purchase and use of “emergency evacuation chairs,” which are often stored in stairwells, as they are collapsible, and able to be used in staircases, due to their smaller size; notable incidents in which these devices were used effectively were the 1993 bombing of the World Trade Center, as well as the September 11, 2001 attacks on the same buildings.

---

Discussion

It is apparent from the wording of the WPI policy that the responsibility of ensuring the safety of a disabled student in the event of an emergency rests primarily with the student, as well as the two other people mentioned in the policy. A serious issue may arise with this policy, however; under Massachusetts General Law, Chapter 268, Section 32A, requiring a person to remain in the building during an emergency constitutes “interfering with fire fighting operations,” and is thus against the law.\textsuperscript{39} If the able-bodied person chooses to stay with the disabled person, though, it is not illegal, with the distinction being that the person has chosen to stay, and was not forced to do so. Another potential problem with the WPI policy is the disparity between the electronic and paper copies of the policy. Whereas the electronic copy states that students must provide pertinent information, such as their class schedule and residence hall room assignment, to the Student Disability Services Office, the paper copy simply states that students should discuss their needs with their residential advisor and other students on their floor. If the student follows the procedure printed in the Guide, it is possible that the rest of the procedure in place may not be followed, as the Disability Services Office may not be provided information they would otherwise receive. Also, although some of the procedures from other universities contain provisions that disabled students wait until a majority of the able-bodied students have evacuated to move to the designated rescue areas, the WPI policy does not. Since the landings in the stairwells of the WPI residence halls are not very large, further congestion may occur from having persons with

disabilities waiting for first responders in the stairwells, which is of concern for all students, not only those who have mobility impairments.

The Ball State policy, by making the distinction between ambulatory and non-ambulatory persons with mobility impairments, may allow first responders to focus on the non-ambulatory persons, as time is critical in fire emergencies. The WPI policy, by comparison, does not make this distinction; although it is not in the policy, one is led to wonder if a student who is ambulatory would attempt to evacuate as described in the Ball State policy, or if they would wait for first responders in the stairwell, as described in the WPI policy. As discussed in the policy itself, the current consensus among some safety experts is to have students wait in their residence hall rooms for first responders, rather than in the stairwell; this may be problematic at WPI, as the room doors in many of the residence halls are self-locking, and opening them may present a problem for first responders unless they are provided a master key, or physically break the door down. Having disabled students wait in their rooms, however, may be beneficial in that first responders would know to look in the those rooms for the students, rather than trying to determine if they have safely made it to the stairwells. The Ball State and WPI policies do share the similarity that an able-bodied person should wait with the disabled student, while another able-bodied student informs first responders as to the location of the student needing assistance to evacuate, presumably for the reasons specified in the WPI policy.
At Brown, the mobility-impaired student is instructed to notify first responders of their location by calling either the Department of Public Safety or the fire department. Of concern with this policy is a phone outage that may occur concurrently with a fire; it is unclear from the policy if information on the student’s room assignment is kept on file by any university department, or if evacuation assistance is based solely on the phone calls made by disabled students when there is an emergency. Although many students have cellular phones, they are not connected with the campus telephone network, and having service is not guaranteed, either. The remainder of the first portion of the policy takes a stay-in-place approach, indicating that first responders will rescue the disabled student from their room. The second portion of the policy is similar to the WPI policy, where the student with the mobility impairment is to evacuate to a stairwell, and an able-bodied student is to notify the first responders as to the location of the disabled student; unlike the WPI policy, an able-bodied person is not asked to wait in the stairwell with the disabled person. It is possible that students who are not in their rooms are instructed to wait for first responders in the stairwell because the stairwells would be the first area of the building searched by emergency personnel; for students who are in their rooms, however, the task of locating the person that needs assistance is accomplished by calling the appropriate authorities, as mentioned above.

In comparison with both the WPI policy and several of the other policies presented, the Missouri State policy is vague. It states that persons with mobility impairments should make their locations at different times during the day known to the appropriate personnel, and that disabled persons should ask for help in evacuating the building or reaching an
area of refuge in the event of an emergency. It is unclear, however, what type of help should be provided, whether it is assistance in evacuation, telling first responders the location of the person in the building, or the best method by which the disabled person can be evacuated. Also unclear is how information about the disabled student’s whereabouts and condition are given to first responders; there is no mention of a department of the university that keeps such records, so the proactivity of the student in telling the appropriate people may be a large factor in how quickly they can be evacuated from a dangerous situation. Another issue may be in the last sentence of the policy; although there may be several people who would be physically able to evacuate a disabled person from a building, if they are not trained in proper emergency procedures for persons who have mobility impairments, they may cause more injury to the person who needs assistance than if the person had waited for first responders, and they may injure themselves.

The two-step approach taken by Stony Brook, though it has advantages, may also have drawbacks. Although the plan created is shared with the “buddy” and the university’s Department of Environmental Health and Safety, from the wording of the policy, it appears only the buddy receives training on how to best evacuate the disabled person. Serious issues may arise if the buddy is absent during the emergency, however; while the student may still receive some assistance, it would not be the same assistance that can be provided by the previously-trained buddy. As with some of the other policies, the person with a mobility impairment relies on another person to relay their location to first
responders, rather than having to make phone calls to the appropriate rescue organizations.

From the wording of the University of Pennsylvania policy, it is clear that the residence halls have lobbies that are staffed by security personnel, and this is where the information on disabled students residing in the building is kept. Since none of the WPI residence halls have this configuration, the information is kept at the Campus Police station, as described previously. Like the WPI policy, persons needing assistance to evacuate should proceed to the nearest stairwell, and wait for emergency personnel. A notable deviation from the WPI policy, however, is that a previously-identified able-bodied person is to wait with the disabled person, but another able-bodied person is not specifically instructed to relay the location of the others to first responders. It is possible that this information would be relayed by students as they evacuate, but it is equally likely that such information may be lost in the confusion that accompanies some evacuations. This may further complicate the situation, as the first responders may need to evacuate the able-bodied person, in addition to the person with the mobility impairment, provided that the emergency personnel can locate both people. Since the policy indicates that the people should wait in the stairwell, the likelihood of being found by rescuers is higher than if the people were to wait in a residence hall room with the door closed, but, without any provisions in the policy to specifically locate the individuals, rescuers may have to rely on the information kept at the desk. While this information most likely includes the room assignment of the person with a disability, if the person is in the stairwell, time may be wasted while rescuers check an empty residence hall room. As previously discussed,
reliance on any pre-selected individual, as described in the policy, requires that the individual has to be present during the emergency to be of assistance. Also, as with the Brown policy, the student is to call for help if they are alone and cannot evacuate without assistance, which may lead to further problems.

The policies discussed thus far have presented a largely singular response to emergency evacuation for persons with disabilities. The policies of Rutgers, the University of Washington, and Gallaudet present conditional responses; it is up to the student to assess the situation, and then determine the appropriate action that should be taken to ensure their safety. The Rutgers policy for non-ambulatory persons, for example, states that persons with disabilities should either stay-in-place, or seek an area of refuge. To accurately determine the person’s location, an able-bodied assistant is instructed to help the disabled person to a safe location, and then relay that information to first responders. As with other policies, the disabled student can provide this information by calling the appropriate authorities if they are alone during the emergency.

The policy for ambulatory persons is very similar to that of Ball State; once a majority of the able-bodied persons have evacuated the building, persons with mobility impairments who are ambulatory may choose to evacuate with assistance. If the person does not perceive imminent danger, they may also remain in the building, or seek an area of refuge. With the variety of options available to ambulatory persons, however, it may be difficult to determine the location of persons who need assistance in evacuating, as the
section on persons with mobility impairments who are ambulatory makes no mention of an assistant or a phone call to give the location of the person to emergency personnel. The University of Washington has adopted a policy that is nearly identical to that of Rutgers, but additional information has been added in the section on evacuation for non-ambulatory persons. As discussed in the analysis of the WPI policy, stairwells in some residence halls may be rather small, and congestion may result if they are designated as the place where disabled persons are to wait for first responders. Accordingly, persons with mobility impairments are instructed to move to these locations once a majority of the other persons have evacuated, to alleviate the problem. Also added was a provision that persons in wheelchairs should be moved by trained fire department personnel only, although untrained personnel can attempt to move persons with mobility impairments in “situations of extreme danger.” It is unclear what constitutes a situation of extreme danger, as the judgment of untrained students may be very different than that of trained firefighting personnel.

At Gallaudet University in Washington, D.C., the policy is again very similar to Rutgers’; in the Gallaudet policy, however, there is no mention of the assistant who notifies emergency personnel of the location of the disabled student, although students who need assistance and are alone are instructed to call the appropriate authorities.
Recommendations

While the existing WPI policy compares well with the policies presented, it could be improved by incorporating the distinction between ambulatory and non-ambulatory persons made in the Ball State policy. As previously mentioned, persons who are ambulatory and could evacuate with assistance from another resident may prefer to leave the building, rather than wait in the stairwell for first responders. Removing these people from the stairwell landing may also be beneficial, as there will be less congestion as people try to evacuate the building. Although the conditional response policies of Rutgers and others have many advantages, adoption of those policies at WPI may not be beneficial, as students may stay-in-place or seek an area of refuge behind a locked door, which would hamper rescue efforts. Also, legality issues aside, the two-person rule seems to be optimal; although a case could be made for having an able-bodied person help the disabled person to the stairwell and then notify first responders, in cases of extreme emergency, the able-bodied person may have to evacuate the person with the mobility impairment by themselves. If the mobility-impaired person was left alone, this would not be possible, and, as mentioned in the current WPI policy, they may feel they have been forgotten, and move away from the designated area in the stairwell, which may increase the amount of time it takes first responders to reach the individual and evacuate them from the building. Thus, a revised WPI policy should state,

Students with disabilities are advised to prepare for an emergency ahead of time.

It their responsibility to do the following at the beginning of each term:

1. Fill out and sign the Release of Information and Special Assistance forms, available in the WPI Student Disability Services Office, Daniels 1st floor.
2. Give a copy of your class schedule to the Student Disability Services Coordinator.

3. Inform your instructors.

4. Your classroom/residential locations will be given to the Residential Services, Campus Police and the Crisis Team. In the event of an evacuation, Campus Police will give the Fire Department the list to help them locate students who may need assistance with evacuation.

5. Know the safest method to use to assist you.

6. Know how many people would be needed to provide you with assistance.

7. Be prepared to explain how and where a person(s) should support you.

8. Know the location of and move to the closest stairwell on each floor. Fire Department personnel will be directed to check those stairwells first to locate individuals who need to be transported to the ground floor.

9. Participate in fire drills. Drills are used to familiarize yourself with the building's alarm and the emergency exits that will be available during an evacuation.

For non-ambulatory persons: Even if a disability is temporary, learn about fire safety, plan ahead for fire emergencies, and know your own capabilities and/or limitations. In case of fire drill/fire or other emergencies limiting elevator use, a person using a wheelchair/scooter should go to the nearest, safe stairwell to await assistance after the heaviest traffic has passed, and two people should accompany them. One person should stay with them in the stairwell, while the other should leave to inform the proper authorities (Campus Police, emergency, or fire fighting personnel) of the location of the individual. Campus Police, emergency, or fire fighting personnel will immediately come and assist the individual out of the building.

The two person rule helps to insure that the authorities will find the person quickly and not have them left alone in the stairwell wondering whether the emergency is real or not and whether someone will find them.

For ambulatory persons: Persons with mobility impairments who are able to walk independently, either with or without the use of crutches or a cane, may be able to negotiate stairs in an emergency situation with minor assistance. Even some persons who customarily use a wheelchair or scooter for long distance travel may be able to walk independently in an emergency situation. If danger is imminent and the person is able to walk down stairs with some assistance, it is advisable that they wait until the
heavy traffic has cleared before they attempt to evacuate. Someone should walk beside them to provide assistance, if needed.
4.1.2: Visual Impairment

Current WPI Policy, Current Policies at Other Universities

As previously mentioned, the current WPI policy makes no mention of students who may be visually impaired. In an interview with the current Director of Residential Services, Ms. Naomi Carton, (interview APPENDIX A-6) it was indicated that procedures for students who are visually impaired are created on a case-by-case basis.\textsuperscript{40} Several other universities, whose policies for the evacuation of persons with mobility impairments have been examined in the previous section, have general policies for the evacuation of visually impaired students in place. For example, Ball State has a policy in place that states,

Most persons with vision impairments should be familiar with their immediate surroundings. In the event of an emergency, tell the person with a vision impairment the nature of the emergency and offer to guide the person to the nearest emergency exit. Have the person take your elbow and escort him or her out of the building. As you walk, tell the person where you are and advise of any obstacles. When you reach safety, orient the person to where he or she is and ask if any further assistance is needed.\textsuperscript{41}

Thus, evacuation of persons with visual impairments also employs the “buddy system,” where a person who is not visually impaired assists the other student out of the building.

The Rutgers procedure suggests a similar procedure:

Most people with a visual impairment will be familiar with their immediate surroundings and frequently-traveled routes. Since the emergency evacuation route is likely different from the commonly traveled route, persons who are visually impaired may need assistance in

\textsuperscript{40} Carton, Naomi. Personal Interview. 9 October 2006.
evacuating. The assistant should offer assistance to the individual with visual impairment and guide him or her through the evacuation route.42

As with the procedures for persons with mobility impairments, the University of Washington has a policy that is literally identical to that of Rutgers, as does Gallaudet. Comparatively, Missouri State University has a very brief procedure:

Visually-Impaired but mobile persons should wait out the rush of traffic until assistance arrives to escort them to the nearest exit.43

It should be noted that the other institutions mentioned in the section on evacuation of students with mobility impairments did not have procedures available for the evacuation of the visually impaired.

**Discussion**

A comparison of the available procedures reveals that the preferred procedure for students with vision impairments is one in which a person who is not impaired should offer assistance to the impaired student, both physically and verbally. It may also be preferable for visually impaired students to exit after able-bodied students, to facilitate a quicker exit for able-bodied persons, as well as reduce congestion in stairways. Because there are not a large number of exits in the WPI residence halls, the emergency evacuation route may be the same route normally used to exit the building, unless the exit is blocked by smoke or fire. If the visually-impaired student is being helped by another able-bodied student, however, the able-bodied student should be able to determine which exit is the best, given the situation. The sighted person will also be able to see smoke or other visible signs of danger that the visually impaired person cannot.
Recommendation

Since there is no current general policy for the evacuation of persons with visual impairments at WPI, it is recommended that WPI adopt a policy similar to that of Ball State, but the portion on waiting until the majority of students have exited from the Missouri State policy should be added. Thus, the final policy should read,

Most persons with vision impairments should be familiar with their immediate surroundings. In the event of an emergency, tell the person with a vision impairment the nature of the emergency and offer to guide the person to the nearest emergency exit. Have the person take your elbow and escort him or her out of the building. It may be beneficial to all parties involved if the visually-impaired student and their assistant wait until the majority of people have exited the building, especially if evacuation requires descending several flights of stairs. As you walk, tell the person where you are and advise of any obstacles. When you reach safety, orient the person to where he or she is and ask if any further assistance is needed.

It should be noted that the “buddy” mentioned in the policy above can be any able-bodied person, although it may be beneficial for the buddy to be familiar with the visually impaired person and their needs. Since there are only three policies from which information can be drawn, the above policy, though composed mainly of the Ball State policy, represents the best elements of the three: the majority of the Ball State policy, as it offers the most explicit instructions and the largest amount of detail, and the portion of the Missouri State policy that instructs persons with visual impairments to wait until after the majority of people have evacuated before they attempt to evacuate.
4.1.3: Hearing Impairment

Current WPI Policy, Current Policies of Other Universities

As with visual impairment, WPI has no published policy on the evacuation of students with hearing impairment; these instances are also handled on a case-by-case basis, although bed shakers have previously been used to alert persons with hearing impairments to an emergency. As before, several universities have published general procedures; for hearing impaired students, it is also assumed that the student has been awoken by the alarm. The procedure at Ball State is as follows:

Most buildings on campus are not yet equipped with visual alarms. Some persons with hearing impairments may not perceive audio emergency alarms and will need to be alerted to the situation by gestures or by turning the light switch off and on. Emergency instructions can be given by verbalizing or mouthing, or by a short, explicit note. Example: Fire alarm - go out south doors - now! It is appropriate to offer assistance to a Deaf or hard of hearing person as you leave the building.

Similarly, the Rutgers policy for persons with hearing impairment states:

Most buildings on campus are equipped with fire alarm horns/strobes that sound the alarm and flash strobe lights. The strobe lights are for hearing-impaired persons. Persons with hearing impairments may not notice or hear emergency alarms and will need to be alerted of emergency situations. The Emergency Services Department in cooperation with Housing and Facilities is continuously upgrading the fire alarm systems in campus facilities to meet ADA requirements.

As with previous policies, the University of Washington policy is very close to that of Rutgers, although Gallaudet, with its largely hearing-impaired student population, has a slightly different policy:

44 Carton, Naomi. Personal Interview. 9 October 2006.
Most areas and rooms in University buildings are equipped with fire bells and strobe lights that simultaneously sound an alarm (auditory) and flash strobe lights (visual). Although this system is intended to alert deaf and hard of hearing individuals, they may not notice or hear emergency alarms and may need to be alerted to emergency situations.\footnote{“Emergency Preparedness Guide for Students, Faculty, Teachers, and Staff.” 2002. Gallaudet University. Accessed 5 November 2006. \texttt{<http://academic.affairs.gallaudet.edu/resources/EPG.pdf>}.}

The Missouri State policy, similar to others from the university, is very short:

Hearing-Impaired but mobile persons may be unaware of the need to evacuate and should be advised that an emergency evacuation is in progress. They should use the nearest exit to leave the building.\footnote{“Evacuation of Persons with Physical Impairments.” \textit{Safety and Transportation}_ 2006. Missouri State University. Accessed 1 November 2006. \texttt{<http://www.missouristate.edu/safetran/10473.htm>}.}
Discussion

It is interesting to note that both the Ball State and Rutgers policies make mention of alerting persons who have hearing impairments to the alarm, as the Americans with Disabilities Act (ADA) requires that,

Visual alarm signal appliances shall be integrated into the building or facility alarm system. If single station audible alarms are provided then single station visual alarm signals shall be provided.48

While it is very possible that many campuses have buildings that have not yet been brought into compliance with ADA standards, it is believed that all WPI residence halls that are handicapped-accessible do comply with the ADA requirements, and, thus, have the required visual alarms. Similarly, the Rutgers and Missouri State policies deal chiefly with alerting persons who are hearing impaired to the fact that there is an emergency; little attention is paid to any assistance that may be needed in the actual evacuation of the residence hall. As discussed earlier, through the use of bed shakers, WPI may have anticipated the need to inform hearing impaired persons that there is an emergency, which may indeed be the most crucial part of the evacuation. A “best practice” may be that of Gallaudet University, where the majority of the student body is hearing impaired. Thus, the best evacuation procedure for hearing impaired persons is a one in which the person is alerted to the emergency, whether it is a mechanical device or another person; once the person has been informed of the emergency, evacuation would occur in the same manner as it does for persons who are not hearing impaired.

Recommendation

To create a general policy on the evacuation of persons with hearing impairment, elements of the Ball State policy and the Gallaudet policy should be combined into a single cohesive policy that reads,

Most areas and rooms in university buildings are equipped with fire bells and strobe lights that simultaneously sound an alarm (auditory) and flash strobe lights (visual). Although this system is intended to alert deaf and hard of hearing individuals, they may not notice or hear emergency alarms and may need to be alerted to emergency situations by gestures or by turning the light switch off and on. Emergency instructions can be given by verbalizing or mouthing, or by a short, explicit note. Example: Fire alarm - go out south doors - now! It is appropriate to offer assistance to a deaf or hard of hearing person as you leave the building.

Another individual should be assigned to ensure that the hearing impaired person has been alerted to the situation, and to assist them in exiting the building, as the hearing impaired person may not notice that the alarm is going off. In the WPI residence halls, due to the self-locking room doors, this person should be the resident advisor, as they have the master key that would allow them entry into the hearing impaired student’s room to provide assistance.

Although the Gallaudet policy may serve as a “best practice,” it is unclear how individuals should be alerted to emergency situations if the alarm has not previously alerted them. The addition of that information from the Ball State policy improves the Gallaudet policy, as it is then clear to persons assisting the hearing-impaired person what appropriate actions should be taken to alert the hearing-impaired person to the emergency. As with the policies on visual impairment, it is difficult to analyze and make recommendations on policies when there are only a handful to compare; the recommended policy, however, incorporates the best parts of the information that has been found.
4.2: Academic Buildings

Since individuals on campus tend to spend a large percentage of their time in the academic buildings, it was decided that the emergency evacuation of these buildings with considerations for persons with disabilities was an important area that needed to be explored.

4.2.1: Current WPI Policy

Due to the fact that the majority of any collegiate community can be found in academic buildings, as faculty and staff do not frequent the residential halls, one would think that any university would have at least a general policy for emergency evacuation from these buildings. Contrary to that belief, WPI currently has no policy regarding evacuation from academic buildings. During an interview with the current Director of Residential Services, Ms. Naomi Carton, it was indicated that although the institute does not currently have a policy for emergency evacuation from academic buildings, WPI is looking to extend the Residential Hall policies to cover the academic buildings on campus.\footnote{Carton, Naomi. Personal Interview. 9 October 2006.} Details of the residence hall policies are presented in the previous section of this paper.

Fires in academic buildings affect more than just students; they also affect faculty, staff, and visitors. The WPI Campus Police and the Emergency Preparedness Team have recognized this fact and created an abbreviated guide to campus emergencies which has
been hung on the walls in all major areas of campus. This guide includes general information about fire and fire evacuation, snowstorms, tornadoes, and hurricanes as well as other safety procedures such as how to call Campus Police.

---

50 Martunas, Cheryl. Personal Interview. 30 November 2006.
4.2.2: Current Policies at Other Universities

Persons with disabilities can be found on almost all collegiate campuses throughout the county. Because of this, many institutions have put much thought into their safety and well-being, especially during emergency situations such as fires. It is important to note that many universities do not specify types of disabilities within their emergency procedures for academic buildings.

New York University has a handbook for faculty, staff, and teaching assistants which can be found in PDF format on their website. This handbook states:

“You are requested to assist a person with disabilities. The person should either remain in the area or be relocated to an area of rescue assistance (designated rooms in the Silver Center (Main Building) or preferably a room with an exterior window and a telephone in other University buildings). A Fire Warden should be consulted to determine the best course of action. The Protection Department should be called immediately and advised of the exact location of the person(s). If a telephone is not readily available, someone should go to the building entrance and notify the Protection Officer on duty of the exact location of the person(s). The Protection Department will inform the Fire Department of the location and a determination will be made if an evacuation is warranted. Only the Fire Department will attempt to evacuate the person(s) requiring assistance.”

Similarly, Vanderbilt University’s policy states persons with a disability should find a room with an exterior window, a telephone, and a solid fire-resistant door. From there the person should contact the fire department and advise them of their location. Also they must seek out colleagues who are willing to assist them in evacuation. Another area of refuge for a person with a disability is near a stairwell landing where they can wait for

---

assistance, but this area may not be protected from smoke and other hazards. This policy does differ from that of New York University in that it states that helping someone with a disability is optional and, also, that a secondary area of refuge is near a stairwell landing. They do, however, share many similarities, including finding a room with an exterior window and phone and alerting someone to your location.

The fire evacuation procedure for the University of North Texas basically follows the procedures of the institutions mentioned above, but with some differences:

“The elevator is not to be used. Persons in wheelchairs should be placed in Fire Safety Stairwells. After placing the person in stairwell you have the option to stay with the person or leave. If you decide to leave that person, please inform the Police Department that someone is still inside the building. Once you leave the building, do not re-enter for any reason.”

This policy clearly states that the elevators should not be used and that one must help a person with a disability to the stairwell, and nowhere else.

Winona State University, located in Minnesota, suggests the same basic principles as New York University and Vanderbilt University, but it also requires more responsibility from the person with the disability and it stresses the importance of training:

“All Winona State University personnel with disabilities will be responsible for knowing appropriate emergency information for their work areas (as stated above).

Each department or supervisory area, employing a person with a disability, will work with the campus Safety Officer to develop an evacuation plan

(including an alternate plan), specific to the needs and requirements of the employee. This will include training of co-workers to assist with the evacuation of the employee, if necessary, and participation of the employee and those co-workers in evacuation drills.

Because of the difficulty in identifying and locating, on a class by class basis, all students with disabilities, it will be the responsibility of those students to identify themselves and plan, where necessary, proper evacuation methods. To assist these students, informational training sessions, covering evacuation methods, will also be held periodically for faculty and staff.”  

This policy states that it is the responsibility of the person with the disability to be aware of the proper evacuation methods, including where to go and what to do, although Winona State University does not provide this information on its website.

Salem State College, located in Salem, Massachusetts, has their evacuation plans and building floor plans, which indicate the proper “Evacuation Assembly Areas,” clearly marked on their website, giving access not just to faculty, staff, and students, but also to their visitors.

The University of Melbourne, located in Australia, is the only university found that has specifically mentioned a type of disability, in this case mobility impairment, in its evacuation procedures:

“Responsibility of floor warden:

1. An able bodied person should be assigned to stay with that person until they reach the Assembly Point.

2. The mobility-impaired person should wait at the door of fire isolated stairs until most stair traffic has passed that level, and then be assisted inside the fire isolated stairwell, on the landing, to wait until assistance is available to enable the person to be carried down the stairs.

3. The Floor Warden is responsible for informing the Building Emergency Controller, who will be at the Main Emergency Control Point or Fire Board, that a mobility impaired person needs assistance.

4. Unless there is obvious danger at that location, the person should wait on the stair landing for assistance from emergency personnel. Fire-isolated stairs are rated at a minimum of two hours fire and smoke protection; (Fire isolated stairs can be identified by (i) entry and exit via solid self closing fire doors; (ii) fire separation from the rest of the building; i.e. not open stairways). (Smoke doors operate in the new building).

5. Where it is known that mobility impaired persons are regular occupants of a building, it is prudent for the Floor Warden to bring this evacuation procedure to the persons notice.”

This policy also differs greatly in the fact that it says that it is the Floor Warden’s responsibility to make the person with the disability aware of the procedures, instead of asking the disabled person to figure it out on their own.

---

4.2.3: Discussion

The evacuation plans mentioned above are quite similar to each other. Many procedures, including the policies of New York University, University of North Texas, and the University of Melbourne, mention either assigning an able-bodied person or advising that someone stay with persons with disabilities in an emergency situation. This course of action is not feasible for WPI because under Massachusetts General Law, Chapter 268, Section 32A, remaining in the building during an emergency may constitute “interfering with fire fighting operations,” and is thus against the law.\(^{57}\)

It seems that the most important fact, as it is mentioned in all but one of the evacuation procedures included in this section, is to relocate persons with disabilities to areas of refuge or a place where the appropriate authorities will be told to look for persons to evacuate and to advise someone of their location. Both New York University and Vanderbilt University mentioned a room with a phone and an outside window as being an appropriate area of refuge. Vanderbilt also mentioned that a stairwell was another option, as did the University of North Texas, and the University of Melbourne. This option is currently being used in the WPI residence hall evacuation plan, which could very well be used as a model for the academic building evacuation plan in the future.

Both Vanderbilt University and Winona University expect persons with disabilities to take it upon themselves to determine the best way to facilitate their evacuation. Winona

University does offer training and states that most evacuation plans will conform to each individual case, but it still puts the sole responsibility on the person with the disability to start the process. On the other hand, University of Melbourne states that it is the Floor Warden’s responsibility to make persons with disabilities aware of the policies.

During an interview with JoAnn Van Dyke of the WPI Office of Disability Services it was mentioned that WPI cannot and will not force anyone to disclose their disabilities.\footnote{Van Dyke, JoAnn. Personal Interview. 2 October 2006.} It is solely the responsibility of the person with the disability to contact the Office of Disability Services with their information. To protect the individual’s privacy, it is up to them to disclose their information and to form their own evacuation procedure. JoAnn Van Dyke also mentioned that the person with the disability is the best advocate for their condition, and would know what is best for them.
4.2.4: Recommendations

Because WPI lacks an evacuation plan for academic buildings this project could greatly influence the new policy. By taking the most common and most used sections of other institutions’ evacuation plans a clear and concise academic building evacuation plan could be formulated for the WPI campus.

In order to follow the laws of the Commonwealth of Massachusetts certain sections of the above cited policies would need to be changed. The policy could not ask for someone to assist or stay with persons with disabilities during an evacuation, but they could choose to stay as long as they did not hinder the rescue personnel’s duties.

The floor plans and size of our academic buildings also need to be taken into consideration. For example, the landings in the stairwell of Olin Hall may not be large enough to hold someone in a wheelchair while able-bodied individuals evacuated using the same staircase. Other buildings on campus are not handicap accessible, but someone with a cognitive disability or a temporary disability could still be in those buildings during an emergency.

Combining the evacuation procedures from Winona University, New York University, and the University of Melbourne into one clear and concise procedure for evacuating an academic building on the WPI campus, a policy could be written which states:

Each department or supervisory area, employing a person with a disability, will work with the Campus Safety Officer and Disability Services to
develop an evacuation plan (including an alternate plan), specific to the needs and requirements of the employee. This will include training of co-workers to assist with the evacuation of the employee, if necessary, and participation of the employee and those co-workers in evacuation drills.

Because of the difficulty in identifying and locating, on a class by class basis, all students with disabilities, it will be the responsibility of those students to identify themselves and plan, where necessary, proper evacuation methods. To assist these students, informational training sessions, covering evacuation methods, will also be held periodically for faculty and staff.

Persons with disabilities should wait at the door of fire isolated stairs until most stair traffic has passed that level, and then make their way into the fire isolated stairwell, on the landing, to wait until assistance is available. The person should either remain in the area or relocate (whether by choice or because of impending danger) to an area of rescue assistance or preferably a room with an exterior window and a telephone. The Campus Police should be called immediately either by the person with the disability or anyone who knows of a person still in the building and be advised of the exact location of the person(s). If anyone knows of any person who may need assistance, the campus police or the Worcester Fire Department should be notified of the person’s location.

Only the Fire Department or Campus Police will attempt to evacuate the person(s) requiring assistance.

This policy utilizes the most common procedures found in the evacuation procedures mentioned in this section as well as conforming to the laws of the Commonwealth of Massachusetts.
5: Natural Emergencies

In addition to localized emergencies such as fire or power outages, emergency planners must also account for the needs of persons with disabilities when planning a response to a natural emergency, such as a snow storm, hurricane, or tornado. While these emergencies pose a threat to each individual, the threat is greater for persons with disabilities, as they may be unable to evacuate before the storm or seek shelter during the storm on their own. Also, following the storm, the specialized needs of persons with disabilities must be met by the staff of emergency shelters, many of whom may be untrained volunteers. With these concerns in mind, emergency preparedness plans for natural emergencies must include provisions for persons with disabilities, in situations occurring before, during, and after the storm. In this portion of the manual, attention is focused on snowstorms, hurricanes, and tornadoes, as there is the highest likelihood of one of these storms affecting the area surrounding WPI, due to its geographic location and climate.

5.1: Snow Storms

Because WPI is in the Northeast, it is subject to harsh winters which could include snow storms. A snow storm is a nuisance to most able-bodied persons as snow piles up on walkways and the temperature drops to below freezing. An able-bodied person can shovel or simply step over or around the snow, but persons with disabilities can be disoriented or blocked by snow on walkways.
In an interview with Christopher Salter of Plant Services\textsuperscript{59} we found that it is Plant Services’ job to clear the WPI campus during and after a snowstorm. The plan of action is to clear areas that students frequent the most (around residence halls) and continue to the academic buildings when finished. A staff member is assigned to each building or area regardless of a storm, and these people are in charge of shoveling their building or area.

Depending on the time and day, certain areas will be cleared before others. In the morning and afternoon on a weekday, residence halls, academic buildings, and common areas with high traffic will be shoveled first. At night, no matter what day, the residence halls will be shoveled first as students will be more likely to be in their rooms. Plant Services will also shovel areas that persons with disabilities frequent in order to help them make their way across campus.

Mobility impairments are not the only disabilities that are affected by the snow. If a person with a visual impairment counts steps or feels for landmarks to navigate campus, they may become lost easily or confused because these landmarks and their usual paths may be covered in snow. If a person with a cognitive disability, such as obsessive-compulsive disorder, is unable to follow their usual path, they may become disoriented and perhaps very upset that they cannot finish their routine.

\footnotesize{\textsuperscript{59} Salter, Christopher. Personal Interview. 9 Feb 2007.}
It is also important that individuals have an emergency pack ready in case they need to be evacuated. Persons may also be asked to evacuate before the storm to reduce the number of people on campus, and therefore make any upcoming conditions easier to handle.
5.1.1: Snow Storm with Power

If a building is within the main part of campus, heat will be supplied by steam from the Power House. If the building is not within the main part of campus, electric heat will be supplied. If the campus has power there is no need to worry about heat or food, as Dining Services will have full facilities.

One worry is if there is such an excess amount of snow that persons with a disability could not get to a dining hall or other needed facility, perhaps for medication. In this case the current “Sick Tray” policy could be changed to include medical services.
5.1.2: Snow Storm without Power

If there is no power on the WPI campus it is important that all individuals be moved to a building where heat is supplied. This would be any building on the main part of campus, as these buildings receive heat from steam which is supplied by the Power House. There will still be hot meals offered by Dining Services, as they can cook using steam and natural gas. Another feasible and possibly necessary accommodation will be to move everyone to Harrington Auditorium. This building receives power from an emergency generator and also has access to showers and other locker room facilities. Because elevators will not be in service during a power outage, moving persons with mobility impairments to a central location such as Harrington Auditorium should include evacuation plans that are specific to the person in need.
5.2: Hurricane

In the event that the WPI campus and surrounding community should experience a hurricane, there are steps that both an individual with a disability and the campus emergency planners should take to ensure the safety of the person with a disability. Although the occurrences of hurricanes affecting Worcester are separated by large periods of time, a plan should be created in the event a hurricane does affect central Massachusetts. One item of note is that, in most cases, a considerable amount of advance warning is given before a hurricane hits, allowing pre-planning to occur.

5.2.1: Current WPI Policy

It is difficult to pre-plan in detail for an event such as a hurricane, as each storm presents its own set of circumstances, and the response would have to be adjusted and modified to fit those specific circumstances. On a more general level, however, advance planning can be accomplished. The current WPI policy is:

Incident: Natural Disaster (flood, hurricane, blizzard)

In the event of a natural disaster such as a hurricane, blizzard, or flood, the primary criteria is preparedness.

Action plan:

Stage One:

1. The Director of Plant Services or the Chief of Campus Police will call a meeting of the Emergency Management Team.

2. The team receives updated information from all reliable sources possible.
3. The communications team prepares notification to the campus community and broadcasts it to the campus. The notification includes the current status of the weather emergency and instructions about how to prepare during Stage One.

4. Food and Residential Services are asked to check and replenish supplies as needed.

Stage Two:

1. Staff are advised to continue surveying food and water supplies and to replenish as necessary.

2. Plant Services staff are directed to remove all movable objects from the grounds and patios and prepare buildings for the emergency.

3. Campus Communications continues to update community and to remind persons with medical conditions to maintain an adequate supply of required medications to last through the storm.

4. Director of Health Center coordinates the moving of medical supplies to pre-determined locations.

5. All non-essential personnel will be directed to leave campus.

6. All buildings will be locked down except those that will serve as shelters.

7. Students will be encouraged to contact their families to indicate where they will be during the storm.

8. Residential students will be further directed to inform their Resident Advisor if they will be leaving their building before or during the storm and report their destination.

Stage Three: Six hours before onset.

1. All non-essential personnel will be cleared from campus; those individuals without alternative plans may be required to report to a pre-determined location.

2. Procedures for food and water dissemination will be established and announced.

3. Notification of the college cancelling classes and operations will be prepared and disseminated.
Stage Four: Onset of the hurricane, blizzard, flood

1. Normal operations of the college will be suspended until the emergency passes.

Stage Five: Aftermath

1. After the emergency passes, an assessment of injuries, hazards and property will be conducted.

2. The community will be informed to avoid any hazards or downed lines using whatever avenues are available for communication.

3. The Emergency Preparedness Team will reconvene to determine when the college will be ready to resume operations.⁶⁰

5.2.2: Government Policies

Although the guidelines are not focused on persons with disabilities, the Federal Emergency Management Administration (FEMA) has these recommendations in the event of a hurricane:

**You should evacuate under the following conditions:**

- If you are directed by local authorities to do so. Be sure to follow their instructions.
- If you feel you are in danger.

**If you are unable to evacuate, go to your safe room. If you do not have one, follow these guidelines:**

- Stay indoors during the hurricane and away from windows and glass doors.
- Close all interior doors—secure and brace external doors.
- Keep curtains and blinds closed. Do not be fooled if there is a lull; it could be the eye of the storm - winds will pick up again.
- Take refuge in a small interior room, closet, or hallway on the lowest level.
- Lie on the floor under a table or another sturdy object.\(^{61}\)

Additionally, in a Red Cross publication entitled “Disaster Preparedness for Persons with Disabilities,” the following guidelines are listed:

*Hurricane or flood:* If local officials have not told you to leave the area, stay upstairs and in the middle of the building, away from windows. Avoid going to the lowest floor because hurricanes often cause flooding. If you are Blind or visually impaired, use a long cane in areas where debris may

---

have fallen or furniture may have shifted. This is recommended even if you do not usually use a cane indoors.\textsuperscript{62}

5.2.3: Discussion

Individuals

An individual with a disability should make sure that their emergency information on file with the Disability Services Office, who can then distribute it to the appropriate authorities during the emergency. Also, they should prepare for an evacuation, either to return to their permanent residence, or to a location that has been designated a shelter on campus. Many of the preparations that fall under this category were included in the discussion of the kit of supplies that each individual should have with them in the event of an emergency.

Persons with mobility impairments should be prepared to evacuate to their permanent residences well before the storm, while there is electricity to power the elevators. In all of the buildings on the WPI campus, when power is lost, the elevator ceases to function.\textsuperscript{63} For persons with vision, hearing, or cognitive impairments, evacuation may be possible using the normal route of egress, although they may require assistance. Persons who require assistance to evacuate should seek aid from either persons they live with, or from the authority in charge of handling the emergency preparations. Persons with disabilities who cannot return to their permanent residences should be prepared to evacuate to the designated on-campus shelter, as described in the current WPI policy.


\textsuperscript{63} Salter, Christopher. Personal Interview. 9 February 2007.
If the individual cannot evacuate to either location, for whatever reason, and they find themselves alone when the storm hits, they should attempt to shelter in place as described in the FEMA and Red Cross procedures. In most of the residence halls and academic buildings on campus, the safest place on any floor is the hallway, as it is most near the center of the building, and does not have outside windows. In a hurricane situation, it is inadvisable to attempt to get to the lowest floor due to the possibility of flooding, despite the risks posed by being on the upper floor of a building in hurricane-force winds. If possible, a person in situation should attempt to contact the Emergency Preparedness Team or Campus Police, to apprise them of their situation, and to determine if rescuers can be sent to evacuate the individual.
WPI Administration

As seen in the current WPI policy, at Stage Two of the hurricane emergency, all non-essential personnel are directed to evacuate to their permanent residences in a timely fashion, while travel is still possible. This notice should be issued in several formats for persons with disabilities; for example, e-mails can be used for persons with hearing impairment, telephone calls for persons with visual impairment, and, in the most general case, having personnel locate and notify the individual in person. For persons who cannot evacuate to their permanent residence, for whatever reason, there should be a shelter provided on campus. Both Founders Hall and Harrington Auditorium have emergency generators that can provide life support power (e.g., lights) for a period of time after municipal utilities are lost.\(^\text{64}\)

Advantages that Founders Hall possesses are the dining hall within the building, where food could be prepared for those who have been evacuated, as well as refrigeration capabilities for medicine or other disability-specific items that may need to be kept cold. Also, with the pending construction of a new residence hall adjacent to Founders Hall, the Campus Police department will be moving into the basement of Founders, and also establishing an incident command center there, with a meeting room and communications equipment.\(^\text{65}\) By evacuating to that location, information could be collected from the evacuees and passed along to their family members more rapidly than from other possible evacuation locations. Among the disadvantages, however, are that the heating system in

\(^{64}\) Salter, Christopher. Personal Interview. 9 February 2007.
\(^{65}\) Salter, Christopher. Personal Interview. 9 February 2007.
Founders Hall requires utility power, and would not function in the event of a power outage accompanying the hurricane.

Advantages to Harrington Auditorium would be that the heat is provided by the WPI Power House, which itself has a generator to keep it operational in the event of the loss of municipal power. Should the Power House be damaged in the storm, however, the capability to provide heat may be lost, putting buildings that utilize steam heat at a disadvantage. Unlike Founders Hall, however, Harrington does not have any provisions for making food; food would have to be prepared in another kitchen facility on campus, and brought to the shelter. Also of concern is that the facility has limited or no refrigeration capability.

A third option is the Campus Center; while it does possess food preparation and refrigeration capabilities, it does not have a generator, and would be an appropriate choice for an evacuation site only if the municipal utilities remained functioning throughout the emergency. It does, however, receive steam heat from the Power House.

During the evacuation, individuals should be assigned to assist persons with disabilities. Depending on the anticipated severity of the storm and the level of personnel available, these evacuation assistants may take the form of Campus Police officers, or other faculty, staff, and students. These assistants would be charged with ensuring the person is transferred to the care of someone who can assist with the evacuation of the individual to their permanent residence, or ensuring that the person makes it safely to the on-campus
evacuation shelter. Shelter staff would need to be apprised of the special needs of anyone seeking refuge at the shelter, and how to accommodate persons with special needs.

Also, if someone should be trapped in a building other than the shelter when the storm hits, appropriate action would need to be taken to rescue that person, when trained personnel have deemed it feasible without unnecessarily risking the lives of the rescuers. People may also be needed to assist persons with mobility impairments out of damaged buildings in the event that they have not evacuated, and that the municipal power has gone out, resulting in the loss of the elevators. It would be preferable for this last group of personnel to be trained in how to properly evacuate persons with disabilities, to prevent causing further injury, but the severity of the storm and the window during which the evacuation is feasible may not permit waiting for trained personnel.
5.3: Tornado

Similar to hurricanes, the history of tornado activity in the greater Worcester area is sparse. Unlike hurricanes, however, there is a very limited amount of planning that can be done before a tornado hits. Whereas information gained using modern meteorological techniques can be used to track a hurricane for days and predict the path the storm will follow, only a few minutes’ warning is available before a tornado strikes. With this in mind, emergency planners must then focus on the aftermath of the storm and the affected areas, which may not include the entirety of the WPI campus.

5.3.1: Current WPI Policy

Since there a very limited planning window after a tornado has been sighted and touched down, it makes emergency response nearly impossible to plan for before the storm. A tornado, unlike a hurricane, may not be a campus-wide emergency; based on the path of the storm, certain sections may be devastated while others are untouched. The current WPI policy for tornado preparedness is:

Incident: Natural Disaster (Tornado)

Due to the nature of tornados, there is very little advanced warning. Upon receiving the National Weather Service advisory for a tornado watch or tornado warning, the WPI Campus Police should do the following:

Initial Contacts:

1. Notify the Vice President for Student Affairs or the Chief Financial Officer, Co-chairs of the Emergency Preparedness Team and provide updated weather information.

2. Activate departmental phone trees and contact team members.
3. Alert campus community using all forms of communication including email, bull-horn or cruiser PA system.

4. Refer community to the Emergency Preparedness website http://www.wpi.edu/Pubs/Policies/Crisis/ if time allows regarding safety measures to observe during a tornado.

5. Maintain communication with the utility companies and be prepared to disconnect utilities to affected buildings.

6. Provide shelter within buildings by moving to the center hallways and avoid Harrington Gym, Alumni Gym and Alden Hall.

7. After the threat is over, assess injuries and damaged property.

8. Report findings to the President.

9. Together with the President, communicate all-clear signal to the community.

10. Alert department heads and custodial managers that premise is or is not to be re-occupied depending on damage.66

5.3.2: Government Policies

As with many natural disasters, FEMA has a set of guidelines for use by the general public in the event of a tornado. Although there are not specific instructions for persons with disabilities presented, the guidelines below can be adapted to assist persons with special needs:

Go to a pre-designated shelter area such as a safe room, basement, storm cellar, or the lowest building level. If there is no basement, go to the center of an interior room on the lowest level (closet, interior hallway) away from corners, windows, doors, and outside walls. Put as many walls as possible between you and the outside. Get under a sturdy table and use your arms to protect your head and neck. Do not open windows.67

In addition, in a Red Cross publication that focuses on preparedness for persons with disabilities, they recommend that:

Tornado: The lowest floor or below-ground area of your home or workplace is safest. If there is no basement or you cannot get there, choose a room without windows, such as a bathroom or closet. Identify where this safe place is and how you would get there.68

In addition, FEMA provides clarification concerning terms used by meteorologists and forecasters, as the general public is often unaware of the differences between and the implications of tornado watches and warnings:

Tornado Watch
Tornadoes are possible. Remain alert for approaching storms. Watch the sky and stay tuned to NOAA Weather Radio, commercial radio, or television for information.

**Tornado Warning**
A tornado has been sighted or indicated by weather radar. Take shelter immediately. 69

### 5.3.3: Discussion/Recommendations

**Individuals**

An individual with a disability should make sure that their emergency information on file with the Disability Services Office, who can then distribute it to the appropriate authorities during the emergency. Also, they should be prepared to evacuate, to either the basement of the building they are in, or, after the storm has passed, to a location that has been designated a shelter on campus. Many of the preparations that fall under this category were included in the discussion of the kit of supplies that each individual should have with them in the event of an emergency.

Persons with mobility impairments should be prepared to move to the lowest floor of the building while the area is under a tornado watch, as there is a higher likelihood of having municipal power, on which the elevators are dependent; as mentioned in the section regarding hurricanes, when municipal utilities are lost, any elevator on the WPI campus will not operate. 70 Persons with vision, hearing, or cognitive impairments, may also wish to move to the lowest floor of the building as soon as possible, to allow additional time to go down staircases and through hallways before the other persons in the building attempt to reach the same areas of refuge. Persons who would require assistance under this type of evacuation should seek assistance from either persons they live with, or from the

---


authority in charge of handling the emergency as soon as they feel the need to evacuate; once the area is under a tornado warning, it may be too late, as the tornado may be only moments from impacting the campus.

If the individual cannot reach the lower floors of the building or a central hallway on any floor, for whatever reason, and they find themselves alone when the storm hits, they should attempt to shelter in place as described in the FEMA and Red Cross procedures. In most of the residence halls and academic buildings on campus, the safest place on any floor is the hallway, as it is most near the center of the building, and does not have outside windows. If possible, a person in this situation should attempt to contact the Emergency Preparedness Team or Campus Police, to apprise them of their situation; since tornadoes often pass through an area at a rapid pace, the individual will most likely be unable to be evacuated until after the storm passes, but communicating that information to the authority in charge may allow search and rescue teams to locate the person sooner after the storm has passed.
WPI Administration

The main responsibilities of the administration in a tornado emergency are to notify the individuals on campus, so that appropriate precautions can be taken, and to provide a shelter for persons who work or reside in a building that has been damaged. As mentioned in the current WPI policy, the notifications are issued in a variety of formats; if time permits, telephone calls to individuals with visual impairments should be added, as they may not hear the warnings issued over loudspeakers, and would be unable to read the e-mails.

Following the passage of the tornado, a shelter should be established at an undamaged building on campus. As mentioned in the policy, individuals should not seek shelter in Harrington Auditorium, due to the large, open area above the basketball court, as well as the amount of glass in the front of the building. Thus, Harrington Auditorium would most likely be excluded from the list of possible shelter locations, as other tornadoes resulting from the same storm system may also affect the campus. Since provisions have been made in the current policy to shut off power to damaged buildings, depending on how the campus power grid is structured, these measures may result in power outages in other buildings as well. Since the Campus Center does not have an emergency generator, it would not be an ideal shelter without municipal power. Also, the back wall of the Campus Center on the first and second floors is made entirely of glass, which would be dangerous in a storm system that has wind speeds high enough to generate tornadoes. Thus, the most likely shelter location following a tornado would be Founders Hall, assuming it was undamaged by the storm.
During the evacuation, personnel should be assigned to assist persons with disabilities. Due to the short amount of time preceding the storm, these evacuation assistants would most likely be persons that live or work in close proximity to the person needing assistance, as sending other personnel may require more time than is available before the tornado hits. These assistants would be charged with ensuring that the person makes it safely to a shelter location within the building, and then to the on-campus evacuation shelter afterwards, if necessary. Shelter staff would need to be apprised of the special needs of anyone seeking refuge at the shelter, and how to accommodate persons with special needs.

Depending on the severity of the damage to the affected buildings, and the possibility of collapse, appropriate action would need to be taken to rescue persons within the structures, after trained personnel have deemed it feasible without unnecessarily risking the lives of the rescuers. This is of utmost concern, as the ideal location for sheltering in place is in the basement, and the upper stories of the building may collapse into the basement and onto the persons sheltering there. People may also be needed to assist persons with mobility impairments out of buildings that have suffered lesser damage, as the loss of municipal power results in the loss of the elevators. It would be preferable for this last set of personnel to be trained in how to properly evacuate persons with disabilities, to prevent causing further injury, but the severity of the storm and the window during which the evacuation is feasible may not permit waiting for trained personnel.
6: Recommendations

General Preparedness

Individual

The Red Cross advises that persons with disabilities following these simple guidelines:71

1. Make an emergency information list. Include—
   • Medical and emergency contact information.
   • Emergency out-of-town contacts.
   • Names and numbers of everyone in your network.
   • Name and number of a relative or friend who lives more than 100 miles away from you.
   If you have a communication disability, make sure your emergency information list notes the best way to communicate with you.

2. Fill out a medical information list. Include information about—
   • Medical providers.
   • Medications you use.
   • Adaptive equipment and/or body system support equipment you use.
   • Allergies and sensitivities.
   • Communication or cognitive difficulties.

3. Attach copies of health insurance cards and related information to your medical information list.

4. Keep at least a seven-day supply of essential medications with you at all times.

5. Have extra copies of prescriptions.

6. Talk with your doctor or pharmacist about what you should do if you do not have enough medicine after a disaster. Also, find out the shelf life of your medication and the storage temperature it needs.

7. Determine how often you should replace stored medication.

8. Identify safe places to go to during an—
   • Earthquake.
   • Tornado.

• Hurricane.
• Flood.
• Fire.

9. Install at least one smoke detector on each level of your home, outside sleeping areas.

10. Find the location of utility cutoff valves and switches. Become familiar with how to operate them.

11. Identify as many exits as possible (but at least two) from each room and from the building you are in.

12. Make a floor plan of your home. You may want your network to help you do this. Include your primary escape routes.

13. Practice using different ways out of a building, especially if you are above the first floor in a building with many stories.

14. Decide what type of equipment you will need for assistance during an evacuation.

15. Be ready to give brief, clear, specific instructions and directions to rescue personnel.

16. If you do not drive, talk with your network about how you will leave the area if authorities advise an evacuation.

17. Ask your local emergency management office if transportation services are available to persons with your disability during an emergency evacuation. Find out how to arrange to get this service.

18. Become familiar with the emergency or disaster evacuation plan for your office, school, or any other location where you spend a lot of time.

19. Choose an alternate place to stay.

20. Have a care plan for your pet.

21. Have a care plan for your service animal.

22. There are six basics you should stock for your home: 1) water, 2) food, 3) first aid supplies, 4) clothing and bedding, 5) tools and emergency supplies, and 6) special items. Keep the items that you would most likely need during an evacuation in an easy-to-carry container.
WPI

The above Red Cross list should be disseminated to persons who have reported a disability. This could be done through e-mail or printed copies distributed by the Office of Disability Services. Another solution for persons who may have a disability, but do not disclose it to Disability Services, would be to post this information on the Disability Services website. This information could also be put in pamphlet form and disseminated at the beginning of each academic year through new student orientation and in campus mailboxes to all students. Also, WPI should help to fulfill these guidelines by supplying food, refrigeration, and an emergency shelter.

WPI should also invest in emergency maps which will be hung in all buildings. These maps should include areas of refuge for all emergencies including hurricanes, tornadoes, and fire. Because the areas of refuge will be different for all of these circumstances, they should be clearly color coded on each map, with a clear and concise legend.
Temporary Disabilities

Information regarding whom to contact should be made available to persons who have temporary disabilities through various media, including printed pamphlets and the Office of Disability Services website. This information should be distributed during to incoming freshmen at New Student Orientation and to all students at the beginning of each academic year through materials placed in the students’ on-campus mailboxes.

Power Outage

- When a power outage occurs it should be dealt with as soon as possible by Plant Services or the City of Worcester.
- If someone is stranded they should contact Campus Police or other emergency personnel immediately for assistance. If another individual knows of a stranded person with a disability he or she should contact campus police.
- WPI must be prepared to accommodate persons with disabilities in any situation when it is brought to their attention. The Institute should also follow the Red Cross guidelines in any facet that they may deem necessary, including refrigeration and emergency power.
- Install automatic lowering or battery-operated elevators for life safety to be used in the event of a power outage.
**Fire Safety**

**Residence Halls**

Students with disabilities are advised to prepare for an emergency ahead of time.

It their responsibility to do the following at the beginning of each term:

10. Fill out and sign the Release of Information and Special Assistance forms, available in the WPI Student Disability Services Office, Daniels 1st floor.

11. Give a copy of your class schedule to the Student Disability Services Coordinator.

12. Inform your instructors.

13. Your classroom/residential locations will be given to the Residential Services, Campus Police and the Crisis Team. In the event of an evacuation, Campus Police will give the Fire Department the list to help them locate students who may need assistance with evacuation.

14. Know the safest method to use to assist you.

15. Know how many people would be needed to provide you with assistance.

16. Be prepared to explain how and where a person(s) should support you.

17. Know the location of and move to the closest stairwell on each floor. Fire Department personnel will be directed to check those stairwells first to locate individuals who need to be transported to the ground floor.

18. Participate in fire drills. Drills are used to familiarize yourself with the building's alarm and the emergency exits that will be available during an evacuation.

For non-ambulatory persons: Even if a disability is temporary, learn about fire safety, plan ahead for fire emergencies, and know your own capabilities and/or limitations. In case of fire drill/fire or other emergencies limiting elevator use, a person using a wheelchair/scooter should go to the nearest, safe stairwell to await assistance after the heaviest traffic has passed, and two people should accompany them. One person should stay with them in the stairwell, while the other should leave to inform the proper authorities (Campus Police, emergency, or fire fighting personnel) of the location of the individual. Campus Police,
emergency, or fire fighting personnel will immediately come and assist the individual out of the building.

The two person rule helps to insure that the authorities will find the person quickly and not have them left alone in the stairwell wondering whether the emergency is real or not and whether someone will find them.

For ambulatory persons: Persons with mobility impairments who are able to walk independently, either with or without the use of crutches or a cane, may be able to negotiate stairs in an emergency situation with minor assistance. Even some persons who customarily use a wheelchair or scooter for long distance travel may be able to walk independently in an emergency situation. If danger is imminent and the person is able to walk down stairs with some assistance, it is advisable that they wait until the heavy traffic has cleared before they attempt to evacuate. Someone should walk beside them to provide assistance, if needed.

Vision Impairments: Most persons with vision impairments should be familiar with their immediate surroundings. In the event of an emergency, tell the person with a vision impairment the nature of the emergency and offer to guide the person to the nearest emergency exit. Have the person take your elbow and escort him or her out of the building. It may be beneficial to all parties involved if the visually-impaired student and their assistant wait until the majority of people have exited the building, especially if evacuation requires descending several flights of stairs. As you walk, tell the person where you are and advise of any obstacles. When you reach safety, orient the person to where he or she is and ask if any further assistance is needed.

Hearing Impaired: Most areas and rooms in university buildings are equipped with fire bells and strobe lights that simultaneously sound an alarm (auditory) and flash strobe lights (visual). Although this system is intended to alert deaf and hard of hearing individuals, they may not notice or hear emergency alarms and may need to be alerted to emergency situations by gestures or by turning the light switch off and on. Emergency instructions can be given by verbalizing or mouthing, or by a short, explicit note. Example: Fire alarm - go out south doors - now! It is appropriate to offer assistance to a deaf or hard of hearing person as you leave the building.
Academic Buildings

Each department or supervisory area, employing a person with a disability, will work with the campus Safety Officer and Disability Services to develop an evacuation plan (including an alternate plan), specific to the needs and requirements of the employee. This will include training of co-workers to assist with the evacuation of the employee, if necessary, and participation of the employee and those co-workers in evacuation drills.

Because of the difficulty in identifying and locating all students with disabilities on a class-by-class basis, it will be the responsibility of those students to identify themselves and plan, where necessary, proper evacuation methods. To assist these students, informational training sessions, covering evacuation methods, will also be held periodically for faculty and staff.

Persons with disabilities should wait at the door of fire-isolated stairs until most stair traffic has passed that level, and then make their way into the fire-isolated stairwell, on the landing, to wait until assistance is available. The person should either remain in the area or relocate (whether by choice or because of impending danger) to an area of rescue assistance or preferably a room with an exterior window and a telephone. The Campus Police should be called immediately either by the person with the disability or anyone who knows of a person still in the building and be advised of the exact location of the person(s). If anyone knows of any person who may need assistance, the campus police or the Worcester Fire Department should be notified of the person’s location.

Only the Fire Department or Campus Police will attempt to evacuate the person(s) requiring assistance.
**Natural Emergencies**

**Snowstorms**

- Regardless of whether there is power on the WPI campus, walkways and other common areas should be cleared and deiced as soon as possible.
- If a person with a disability cannot navigate campus because of snow or ice, the current “Sick Tray” policy provided by Dining Services should be changed to include medical services.

**Specific to Snowstorms without Power**

All individuals should be moved to a building where heat is supplied. This would be any building on the main part of campus as these buildings receive heat from steam which is supplied by the Power House. A possible shelter is Harrington Auditorium.
Hurricanes/Tornadoes

- Persons with disabilities should be prepared to evacuate, to either the basement of the building they are in, or, after the storm has passed, to a location that has been designated a shelter on campus.
- Persons with mobility impairments should be prepared to evacuate while the area is under a storm watch, as there is a higher likelihood of having municipal power, on which the elevators are dependent.
- Persons who require assistance to evacuate should seek assistance from either persons they live with, or from the authority in charge of handling the emergency as soon as they feel the need to evacuate.
- The administration should send warning to the entire campus when a storm watch is in effect.
7: Conclusions

As seen previously, there are many differing views on which emergency preparedness and emergency evacuation policies and procedures are regarded as the best in any emergency scenario. Thus, the solutions provided are most appropriate for Worcester Polytechnic Institute (WPI), based on the information provided during interviews with several members of the university staff and faculty. If situations and conditions that now exist on the WPI campus are changed in the future, the policies and procedures should be updated to reflect the changes that have been made.

To that end, it is recognized that while this document may be a milestone for emergency preparedness and emergency evacuation planning within the WPI community, such policies should be continually updated based on the needs of the persons they affect and the newest information from sources such as the government or organizations for persons with disabilities. With several studies of the emergency response to Hurricane Katrina, as well as other large-scale disasters, still forthcoming, lessons learned in these instances may lead to the creation of policies that are deemed optimal when compared to the current policies, and should thus replace them. As discovered during the research portion of this study, the best practices with regards to the emergency evacuation of persons with disabilities are continuously changing as a result of the lessons learned and the information gained from the use of the policies and procedures during actual emergency situations. Also apparent was the impact a best practice had upon the policies of other
institutions; in more than one instance, several universities had policies that were nearly verbatim when compared to each other.

WPI, recognizing the importance of best practices, has undertaken an effort to revise and create policies to fill voids present in the current versions. To fill these voids, it has been recommended that campus maps highlighted with the location of areas of refuge for use in different emergency situations should be placed in residence halls and academic buildings. Also, through the Office of Student Affairs and Campus Life, a packet with information describing the current WPI emergency policies, individual emergency preparedness measures, and forms from the Office of Disability Services to collect information about the student’s specific needs in the event of an emergency should be given to each student. While some would question the rationale of distributing such information to each student, some individuals who would benefit from such information are not aware of the resources provided by the Disability Services Office, and, thus, their needs would not be met. Although persons with disabilities are often their own best advocate on the services they require, dissemination of the information would also allow persons who would not consider themselves to be disabled to get assistance they require in an emergency. This is especially important for persons who have a temporary disability, or may develop one, as they may not be aware of the resources that exist, due to the fact that they may not consider themselves to be disabled. Distributing the information to all students would also allow them to have the information before any instance occurs in which it would be necessary, and would allow the student to access needed resources in a timely fashion. With the implementation of the recommendations
explained in this document, WPI will have elevated its status to that of a leader with respect to best practices.

Regardless of the policies, emergency planners must remember that the underlying goal of emergency planning is to ensure the safety of all persons they are charged with protecting, and that the policies and procedures that result from this goal are a means of accomplishing the goal quickly and efficiently. Putting effort into researching and creating the policies, however, ensures that the safety of the persons involved in the emergency will be the top priority when the emergency occurs, and that no individual will be left behind or forgotten.
8: References


American Fire Sprinkler Association. <www.firesprinkler.org>


Carton, Naomi. Personal Interview. 9 October 2006.

Martunas, Cheryl. Personal Interview. 30 November 2006.


Van Dyke, JoAnn. Personal Interview. 8 Feb 2007.


Appendix A: Interviews

Appendix A-1: Interview Summary – JoAnn Van Dyke

Interview Information:
Name: JoAnn Van Dyke
Title: Director, Disability Services Office
Department: Academic Advising
E-mail: jvandyke@WPI.EDU
Telephone: (508) 831-5235
Date & Time: Thursday, February 8, 2007, 2:00 PM

1. Who is contacted in the event of a temporary disability?
   - It is the students’ choice to report any disability – whether it be long term/preexisting or temporary
   - If the student reports a disability, JoAnn will have the information in her office – master list – updated whenever new information is provided
   - Health Services may be contacted

2. What information is currently given to the campus or made available regarding the protocol for temporary disabilities?
   - There is no information disseminated regarding temporary disabilities

3. What provisions are made for students with disabilities?
   - Depending on the disability and timing, it could range from moving a class to having someone transcribe a test

4. Are there any provisions made for students who need medication? Ex. Diabetes
   - Health services may know, but it is up to the student to be ready for an emergency
Appendix A-2: Interview Summary – Robert Wilder

Interview Information:
Name: Robert A Wilder
Department: Dining Services
E-mail: rawilder@wpi.edu
Telephone: (508) 831-5970
(508) 831-5253
Date & Time: Tuesday, February 13, 2007, 2:30 PM

1. Does Founders Dining Hall receive emergency power from the generator located at Founders Residence Hall?
   • Yes. The kitchen will receive some power.
   • Regardless of power, both Founders and Morgan kitchens have equipment running on gas (city) and steam (Power House) – food could be prepared

2. In the event of an emergency, are the WPI dining facilities able to sustain the campus? If so, for how long?
   • As stated above, kitchens have gas and steam powered equipment
   • Anything baked – deserts, etc. – would be affected – (electric stoves)
   • Modified service
     - Ration food if need be
     - Staggered/assigned dining times
     - Fewer people working
     - Less variety
   • Estimated 3 – 5 days of food depending on how many people were on campus
   • If more food was needed
     - Catered events would be canceled and food would be used
     - Contract food service also works Elderly Feeding Program and some public schools in the area – WPI would tap into those supplies
       - Business and industry accounts
       - Other food services in Worcester area
   • Refrigerators could be on generators (no power) – has been before (short period of time)
     - Outside companies could be called in for help

3. How often is food delivered to the campus?
   • Someone delivers every day
   • Major Vendor (Springfield) – 80% of food – 3 times a week
   • Produce vendor – everyday (will also do other products and foods)
   • Hood (Holyoke) – 6 days a week
   • Bread distributor – everyday
4. If there was an emergency are there extra dining staff available?
   - In an emergency, modified service would be provided and less staff would be needed
   - If more staff was needed, there are many employees within walking distance
     - System set up with employees within a 5 mile radius – could be called in
     - 75% of staff is within the 5 mile radius
   - In case of a pandemic, staff could live on campus

5. In case of an “emergency” who would be in charge of bringing food to people who cannot make it to the dining facilities?
   - Currently, there is a “Sick Tray” program
     - A student who cannot make it down to a dining facility can have someone bring their WPI ID to the dining hall and have a tray made up
     - They then bring it back to the person who cannot make it to the facility
   - If need be the Sick Tray program could be modified for any emergency situation
   - We’d hope that the students, faculty, and staff at WPI would be willing to help a friend in need and bring them food if necessary
Appendix A-3: Interview Summary – Christopher Salter

Interview Information:
Name: Chris Salter
Title: Associate Director of Technical Trades
Department: Plant Services
E-mail: csalter@WPI.EDU
Telephone: (508) 831-6060
Date & Time: Friday, February 9, 2007, 2:00 PM

1. Is there emergency power on the campus of WPI? If so, where?
   - Emergency battery units – only stay on for about 90 minutes
     - Used for “life safety” – getting out of the building, etc.
     - Lighting, emergency exit signs
   - Elevators and handicap accessible entrances will not run on emergency
     power or generators
   - Residence Halls
     - Stoddard/Ellsworth/Fuller/Institute
       - battery units only
     - Founders
       - emergency generator
       - kitchen has power??
     - Riley/Daniels/Morgan
       - battery units only
   - Academic Buildings
     - All have only emergency battery units except:
       - Salisbury Labs – battery units + generator (only for research
         protection)
       - Fuller – battery units + generator
       - Harrington – battery units + generator that can be used for lighting
   - Higgins House – battery units
   - Bartlett Center – battery units
   - Boynton – battery units
   - Alden Memorial – battery units
   - Harrington – emergency generator – lights
   - Alumni – battery units
   - New residence hall will have an emergency generator
   - Gateway Park – generator for life safety
   - Morgan Dining Hall does not have power
   - Net Ops – Generator outside Daniels
   - Emergency Power in Plant Services – full lights, etc. – for emergency
     situations
2. When on emergency power, do the fire alarms and card access work?
   - Fire alarms – battery powered or generator (where available)
     - Law: should last 60 hours
   - Card Access – will stay on for unknown time – depends on frequency of use
     - Morgan/Daniels/Riley/Founders – emergency generator
     - All other buildings – battery backup

3. Will the campus still have heat?
   - Stoddard/Ellsworth/Fuller – no heat – electric
     - Could use small generators if needed
   - Founders – heat – boilers
   - All other buildings on campus – should have heat

4. Does all of campus get their power from the Power House?
   - Everything on the main campus – within Boynton Street, Institute Road, Salisbury Street, and Park Ave – works off of the power house
   - Anything outside of this area – Stoddard, Ellsworth, Fuller, Founders, Institute, etc. – works off of city grid

5. What is the protocol for clearing the walkways, etc. during a snowstorm?
   - Clear student affected areas first
   - Staff is assigned to certain buildings or areas regardless of storm – they would be in charge of their building or area
   - Where they clear depends on what time of day and what day
     - Morning/Afternoon – Residence Halls, Academic Buildings, common areas with high traffic
     - Night – focus on residence halls

6. What does Plant Services do if there is an “emergency” and you are understaffed?
   - Call system – who comes in depends on who answers their phone that day
   - Plan of action – clear more important areas first

7. If there was a major emergency, is there anywhere on the WPI campus where everyone could assemble?
   - Harrington – general assembly and refuge

8. Does Plant Services have any duties specific to persons with disabilities? If so, how do they change in an emergency situation?
   - Install bed shakers and strobe lights where needed in residence halls
   - Any other duties – on a case by case basis
Appendix A-4: Interview Summary – Janet Richardson

Interview Information:
Name: Janet Begin Richardson
Title: Vice President, Student Affairs & Campus Life
Department: Student Affairs
E-mail: jbrich@WPI.EDU
Telephone: (508) 831-5201
(508) 831-5060
Date & Time: Wednesday, February 14, 2007, 1:00 PM

1. What large scale “emergencies” or “situations” has WPI encountered and how were they handled, with emphasis on persons with disabilities?
   - There is nothing that comes to mind, but it will be a learning experience when/if something does happen. Until then you just have to hope that the plan that is in place will work

2. Is there anything currently in the Crisis Manual regarding persons with disabilities in an emergency situation?
   - Yes, Section VIII: Evacuating Students with Disabilities
     - Updated December 2006
     - Copy given to us
     - Requests that someone volunteer to assist persons with disabilities in an evacuation

3. What resources does the Crisis Management Team use to create/update the Crisis Manual?
   - Research from other schools/institutions
   - Personal Experience – when something happens at WPI
   - Experience from faculty and staff – JoAnn Van Dyke, Dave Messier, Naomi Carton, Chief Martunas
   - Training Sessions
   - Tabletop talks
   - Sometimes proactive by Crisis Management Team, some times proactive by individual on campus
   - Constantly being revised as new information surfaces

4. What is the chain of command for the Crisis Management Team in an emergency?
   - Follows the “Incident Command System” (federal, state, local)
     - Copy given to us
     - Different members of the Crisis Management Team take on different roles
     - WPI currently ordering vests for identification and radio units for communications
5. What would the Crisis Management Team do in the following situations with respect to persons with disabilities?
   - Power outage lasting up to 72 hours
     - Move disabled persons to Founders to be near food and emergency power
     - Refrigeration at Founders
   - Hurricane
     - Advanced warning
     - Plan ahead as much as possible – try to make sure that everyone, including persons with disabilities, is safe and secure
   - Tornado
     - No warning
     - Cannot plan ahead for tornadoes – must work with aftermath

6. Is there any other information that you would like to share with us?
   - One of the hardest things to manage during an emergency is communications – both within the situation and to the “outside world”
   - In an emergency, the Crisis Management Team must assume that everyone (all faculty, staff, and students) is around unless confirmed otherwise
   - “Major Area of Refuge” – Depending on situation
     - Harrington
       - Large space with access to lighting, showers, locker rooms, etc.
     - Campus Center
       - Large spaces and rooms with available space to set up cots, recreation, and food
     - Only feasible if there is power and for short term situations
   - Persons with Disabilities can be assigned personal care attendants or other students depending on needs – both emergency and non emergency situations
   - Persons with disabilities must provide information themselves
     - Also given option to keep information with Campus Police for emergencies
   - There are three levels of emergency and stages within those levels
     - Natural Disasters are kept under Level 3 (worst)
   - Crisis Management Team is trying to stay away from the word “Crisis”
     - Would prefer “Emergency Preparedness”
Appendix A-5: Interview Summary – Cheryl Martunas

Interview Information:
Name: Cheryl A. Martunas
Title: Director of Public Safety & Chief of Police
Department: Campus Police
Email: cam@wpi.edu
Telephone: (508) 831-5798
Date & Time: Thursday, November 30, 2006, 10:00 AM

1. How is the information regarding persons with disabilities distributed to, from, and within your office?
   a. What information is shared with the Worcester Fire Department?

   - A document is generated within the Disability Services Office which details special needs for a student, and this document is given to Campus Police after permission to disclose the information has been obtained from the individual.
   - Provisions are in place to pass the information along to emergency personnel on the scene via the Campus Police dispatcher; the student’s location and information from the Disability Services Office is kept at the dispatcher’s console and relayed to officers.
   - Evacuation of persons with disabilities creates a “tough balance” for the Campus Police because their job is to remove all persons from the threat, both persons with disabilities and persons without disabilities.

2. During an interview with Residential Services, we were told that the Campus Police has a wheelchair. If so, is it an emergency or regular model? Is there any other specialized equipment Campus Police for the evacuation of persons with disabilities?

   - Campus Police does not have a wheelchair (contrasts with information from Office of Residential Services given during interview)
   - Additional equipment purchased includes additional radios for all persons on scene and vests to identify Emergency Preparedness Team.
   - Campus Police has participated in emergency response training.
   - Campus Police has also participated in avian flu training.
   - Approximately 200 reference manuals, called the “WPI Campus Emergency Guide,” will be located throughout the campus in common areas (near telephones, in high-traffic areas). This manual was created with help from David Messier, the Manager of the Department of Environmental and Occupational Safety, and Regina Roberto, Director of Health Services, but does not address persons with disabilities.
3. What is the role of the Emergency Preparedness (formerly Crisis Management) Team? How do they interact with Campus Police and the Worcester Fire Department in emergencies?

There are three crisis levels – Minor, Major, and Catastrophic.

- To solve the problem, the crisis is assessed, and department leaders are contacted for assistance; which departments are contacted depends on the emergency.
- Overseers of the team include Janet Richardson (Vice President of Student Affairs and Campus Life) and Jeffrey Solomon (Vice President for Finance and Chief Financial Officer). There are other persons not mentioned by name, however, that may oversee the team.
- The Chief of Campus Police, Cheryl Martunas, reports directly to Janet Richardson.
- An example given was a bomb threat last year; if the need for evacuation had arisen, the logistics would have become more complex than standard (fire) evacuation, as well as previous evacuations. “Fire alarms aren’t quite as simple anymore since 9-11.”

4. Are officers trained on specific evacuation procedures for persons with disabilities? What is included/covered in their general training that would have application to persons with disabilities?

- First responder training is mandatory for Campus Police officers.
- Officers are also trained in emergency carries and fireman’s carries.
- Primary goal of the Campus Police is “to remove all people from the threat”

5. What is the Campus Police’s jurisdiction over the Greek houses?

- Campus Police has jurisdiction over property owned, leased and used by WPI.
- The residents of the houses are students of WPI and the Campus Police is there to assist them. They will respond to fraternity and sorority emergency calls but cannot enter the houses unless they are invited to.
- However, if a fraternity or sorority calls the Worcester Police Department, and then Worcester Police, in turn, calls the WPI Campus Police to handle the call, then a “transfer of authority” takes place and Campus Police has all of the rights that the Worcester Police would, and can enter without permission.
6. Who is contacted in first in the event of a fire in the residence halls, the academic buildings, and the Greek houses?

- Fire alarms are routed to Campus Police. Alarms are Simplex. ([http://www.simplexgrinnell.com/](http://www.simplexgrinnell.com/))
- Residence Halls – Alarms go directly to the Worcester Fire Department, and Campus Police is notified.
- Academic buildings – Alarms are routed to Campus Police, and the Campus Police contact the Worcester Fire Department.
- Greek Houses – completely depends on which agency is called by the person reporting the emergency.
- EMS – UMass Ambulance are primary responders, or a private company ambulance can be commandeered.
- WPI has looked into a private agency to provide ambulance service, but it was decided to be too expensive. WPI is also very pleased with the service that UMass has provided.
- If an ambulance call is placed, the Worcester Fire Department also responds; if the Worcester Fire Department is called, an ambulance does not necessarily respond.

7. Who are the first responders in case of an emergency (i.e. fire) on campus? Is it the same for fraternities and sororities?

- Covered during previous questioning.
- Ultimately, the first responders are determined based on which agency/agencies are called, and what the emergency is.

8. In the event of a non-fire emergency (floods, power outages, and blizzards), what is the role of the Campus Police?

- The role of Campus Police is to remove all persons from any threat to personal safety.

9. How is Campus Police made aware of potential dangerous situations in emergencies (i.e. fire) that occur in a laboratory on campus? Is there a list available of hazardous materials on campus to assist police and fire personnel that arrive to assist WPI?

- The Campus Police dispatcher has a list created by David Messier which identifies all hazardous material in buildings and areas throughout campus.
- When the emergency call is received, the location of the emergency and the hazardous materials information are cross-referenced so information can be relayed to officers and personnel on scene.
Appendix A-6: Interview Summary – Naomi Carton

Interview Information:
Name: Naomi Carton
Title: Director of Residential Services
Department: Residential Services
E-mail: letendre@wpi.edu
Telephone: (508) 831-5645
Date & Time: Monday, October 9, 2006, 3:00 PM

1. What are the policies and procedures that Residential Services has in place concerning persons with disabilities? How are faculty and students apprised of them?
   - Students are apprised of the policies and procedures through the Office of Residential Services website, as well as the housing form that must be completed, and information provided by JoAnn Van Dyke.
   - Staff are apprised of the policies and procedures through the Crisis Manual.

2. Do the safety procedures address evacuation and means of egress for persons with disabilities – mobility impairments as well as cognitive and/or sensory impairments?
   - Most situations are handled on a case-by-case basis
   - Mobility Impairment – stairwell evacuation (as described on office’s website)
   - Blindness/Deafness – bed shakers, students are taken through process with others present to familiarize them with the course of action.

3. How does Residential Services gather information to establish the WPI safety policies and procedures for persons with disabilities? What resources do the policy makers rely on?
   - The Campus Safety Committee and JoAnn Van Dyke are consulted when policies are written; information on which these policies are based is gathered from other campuses, as well as individual meetings with students to best determine how their needs can be met.

4. Who is responsible for identifying the need for and implementing the safety policies?
   - A committee is responsible for the policies; amongst the committee members may be Janet Richardson (the Vice President of Student Affairs), JoAnn Van Dyke, Dave Messier, the Office of Residential Services, and Campus Police.

5. Is there a regularly scheduled review process to update procedures, or are they reviewed as needs/problems arise?
   - Procedures are reviewed on a case-by-case, need-by-need basis.
6. What types of emergency situations have been addressed by Residential Services regarding persons with disabilities?
   - An extra wheelchair has been purchased by Campus Police, and is kept at the station to be put into a cruiser in the event of an emergency.

7. Who is contacted if there is going to be a person(s) with a disability living in a residence hall? How is this information distributed to/from your office?
   - Information is shared between JoAnn Van Dyke and Naomi Carton, and is then passed on to the professional staff at Residential Services, and is documented in a release form.
   - Notebooks are kept at personal residences of staff in the event of an emergency; should there be an emergency, administrators are on call, with a rotating schedule.
   - This year, a pilot program for students with disabilities was tried; on the Saturday before the residence halls opened in August, disabled students were invited to move in, and to familiarize themselves with their surroundings. Five students participated, and the program was deemed a success; Residential Services intends to continue and improve this program in the future.

8. What factors are used to decide room assignments for persons with disabilities?
   - Room assignments are dependent on the student’s disability. As a general rule, no females are housed on the first floor of any residence hall.

9. Is there special training given to Resident Advisors and other faculty and staff who work in residence halls regarding individuals with disabilities?
   - All 38 resident advisors go through a seven-day training program, and are given training on crisis management; JoAnn Van Dyke is also involved with this training. At this point, faculty are not trained for these situations.

10. Is training made available to just those people who know that they will be working with someone with a disability, or to everyone? Why/why not?
    - See Question 9

11. Is there any specific training set up for people with disabilities who will be living in the residence halls?
    - Students are given a flyer with responsibilities in the event of an emergency; in an emergency, it is the responsibility of the student to obtain what they need to ensure their safety.
Also:

Similar procedures are needed for academic buildings, and are being created; these policies are to be based on the residence hall policies.

Campus Police is compiling an emergency manual to be placed in classrooms and other locations in academic buildings; it does not, however, cover procedures for students with disabilities.
Dear President Coor:

On December 17, 2001, the U.S. Department of Education, Office for Civil Rights (OCR), notified you that our Office received a complaint of discrimination against Arizona State University (University). The complaint is a class action that alleges the University's emergency evacuation procedures discriminated against students with disabilities residing in University residence halls. Specifically the complainant alleges that the University excludes disabled students from mandatory fire drills and fails to adopt effective evacuation procedures.

OCR has jurisdiction over these allegations pursuant to Section 504 of the Rehabilitation Act of 1973 (Section 504) and its implementing regulation found at Title 34 Code of Federal Regulations (CFR) Part 104, which prohibit discrimination on the basis of disability by recipients of Federal financial assistance. OCR also has jurisdiction as a designated agency under Title II of the Americans with Disabilities Act of 1990 (Title II) and its implementing regulation at 28 CFR Part 35, which prohibit public entities from discriminating on the basis of disability. The University is a recipient of Federal financial assistance and is a public entity; therefore, OCR has jurisdiction to investigate this complaint under both Section 504 and Title II.

In OCR's investigation of the complainant's allegations, our Office reviewed and analyzed materials and interviews provided by the University and counsel to the complainants.

Legal Standard

The ADA does not specifically require recipients to develop formal emergency plans or to include disability-specific provisions. The ADA Accessibility Guidelines and Uniform Federal Accessibility Standards issued by the Architectural and Transportation Barriers Compliance Board do not provide guidance on this issue. However, the University's emergency evacuation plan for residence halls is a program within the meaning of
Section 504 and Title II. A program or activity means all of the operations of a university, 34 C.F.R. §104.3(k)(2)(i). Regulations found at 34 CFR §104.4 and 28 CFR §35.130(b)(1)(iii) provide that individuals with disabilities must be provided with opportunity to obtain the same results, gain the same benefit and reach the same level of achievement as that provided to others. Also the program accessibility requirements of 28 CFR §§35.149 and 150 and 34 CFR §§ 104.21 and 104.22 provide that no qualified disabled person shall be denied the benefits of, be excluded from participation in, or otherwise be subjected to discrimination under any program or activity of the University. We conclude the University is required to provide residence hall students with disabilities access to an effective emergency evacuation plan.

Background

The University provided written documentation concerning its Emergency Evacuation Procedures for Residence Halls and provided additional information through interviews.

The University has 13 residence halls located on its Tempe, Arizona campus. The buildings are built from noncombustible or fire resistant materials. All have been installed with automatic fire alarm systems and fire sprinkler systems. A number of the rooms are equipped with strobe lights in addition to sounding an alarm and are available for students who are deaf or hearing impaired. The University has a contract with an outside vendor to test and maintain all these systems. In addition University staff performs additional testing and minor repairs. The University's staff conducts building and fire safety inspections of each residence hall every six months, as does the State Fire Marshal.

The University provided CAD drawings of each residence hall's physical layout to the Tempe Fire Department. These drawings are kept on the fire trucks that respond to alarms at the University. The Tempe Fire Department participates in one drill per semester. All rooms modified for students with disabilities are located on the first floor of each residence hall. All rooms have a live telephone jack for local service. Each residence hall has a Knox box mounted on its exterior by or near the front entrance. The Knox Box is accessible by keys in the possession of the Tempe Fire Department and limited University personnel. Each Knox box contains a list of the residents with disabilities residing in the hall and their room location. Inclusion on the list is voluntary.

Each hall has one full-time Resident Hall Coordinator who is paid a salary. There are approximately 50 additional University students who work in each dormitory as Resident Assistants (RA's) and Desk Assistants (DA's). New RA's must go through mandatory training throughout the year that includes emergency evacuation procedures for the residence halls. The RA's are required to cover the emergency evacuation procedures with hall residents during a floor meeting at the start of each semester. These procedures are practiced every three months by drill.

Each hall has a Desk Assistant Manual located at the front desk. Every hall has an identical template plan that is tailored to the specifications of the individual residence
hall, e.g., the location of modified rooms, evacuation area, and Knox box. The manual contains a one-page checklist of steps that are to be taken in the event that a fire alarm is triggered and/or smoke is observed. The DA contacts the University police who in turn contact the Tempe Fire Department. One step on the checklist requires the DA to contact by telephone each student with a disability and provide the same information to the residents with disabilities as provided to the RA, i.e., the alarm is going off and that the student should leave the hall. The RA's knock on the door of each room before they evacuate and say, "Get out of the building". They do not wait for a response and are expected to leave the building as promptly as possible.

Every resident-student receives a copy of the Residence Hall Handbook at the start of the academic year, or at mid-year if a new resident. The handbook states that residents and their guests are expected to promptly evacuate the building whenever a fire alarm sounds and to observe all fire/emergency guidelines. Students are to reassemble at a designated location so that the hall staff can account for all occupants. Hall staff do not re-enter the hall to locate missing individuals. This information is reported to emergency response personnel. Students are not allowed back in the hall until the fire department or ASU Police advise them the building is safe to re-enter.

As stated, the Tempe Fire Department participates in one fire drill per semester. The focus of their participation is to locate the residence hall, access the Knox box, and confer with the residence hall staff concerning the fireboard and the operation of the alarm system. The participation does not include physically removing students with disabilities from their rooms. The Fire Department's position is that evacuation during a drill situation would present an unnecessary risk of harm to not only the student but to the fire department personnel as well. However, during an actual emergency the Tempe Fire Department will evacuate student residents who need to be evacuated from a residence hall, whether disabled or non-disabled. The fire personnel will locate those individuals who need to be evacuated, prioritize the order of evacuation and determine whether aid can be tendered in place. The emergency personnel prioritize order of evacuation based upon proximity of the occupant to the risk of harm. When students can not readily evacuate because of physical disability or because the fire or heavy smoke is outside of their room, the fire department has advised the University that the safest place in the residence halls is the resident's own room. This is because of the engineering controls that are incorporated into the physical structure of the residence halls. The fire department's advice is to stay in the room until emergency personnel can render aid in place or evacuate the occupant. The fire department advised that it is their practice to check every single room in a structure when called to a scene.

More information about fire safety in the halls is available to all residents through a website.

The University has considered the concerns expressed by the complainants. The University staff charged with the safety of residence hall students engaged in a collaborative process with student-residents with disabilities who reside in the University's residence halls. Advocates for the students were also included in the
discussions. University staff from numerous departments, including the University police and safety personnel, and the Tempe Fire Department also participated in the public discussions. This process continued through the 2000-2001 academic year and the following changes resulted: (a) revision of the Desk Assistant Manual, (b) installation of Knox boxes, (c) creation of an educational brochure and revision of training of residence hall staff, and (d) Tempe Fire Department agreed to send engine units to one drill per semester. The complainants were not satisfied with the changes made by the University and filed this complaint with OCR on December 17, 2001.

Allegation: The University has failed to adopt effective evacuation procedures

Complainant's Position

Complainants' insist the University should take additional steps to provide for the evacuation of the resident hall students with disabilities, particularly the mobility impaired students who may not have the ability to get themselves from their bed to their chair and evacuate on their own.

In support of this position they suggest OCR should look to the following guidelines and precedent in reaching our decision in this case:

The ADA Title III Technical Assistance Manual, Covering Public Accommodations and Commercial Facilities (November 1993), III-4.2000 Reasonable modifications. This section provides an illustration where the elevators automatically shut off in an emergency and a health clinic "is obligated to modify its evacuation procedures, if necessary, to provide alternative means for clients with mobility impairments to be safely evacuated from the clinic without using the elevator."

The facts of this case are, that all the rooms adapted for the mobility impaired residents are located on the first floor of each resident hall. An elevator shut down will not affect these students unless they are visiting friends on upper floors. In either case, ASU procedure calls for students unable to evacuate to remain in a resident hall room since it is deemed by professional emergency responders of Tempe Fire to be the safest place for them to await the arrival of the fire department.

III-4.2600 Personal services and devices. The general rule is that a public entity is not required to provide services of a personal nature, such as assistance in eating, toileting, or dressing. The manual states, "However, the phrase ‘services of a personal nature’ is not to be interpreted as referring to minor assistance provided to individuals with disabilities." Examples given are removing the cover from a customer's straw, filling out a deposit slip, having the kitchen cut up food into smaller pieces.

We find that providing assistance from the bed to the chair and pushing the chair out of the building is a personal service that is not required to be provided. The degrees of strength needed for lifting, and the knowledge required to safely move persons clearly take this beyond the definition of "minor assistance".
The complaint does not specifically reference carrying as a remedy sought through OCR's investigation. It is important to note OCR's long-standing policy is that carrying is an unacceptable method for achieving program accessibility for mobility impaired persons except in limited circumstances. One exception is to allow carrying in manifestly exceptional cases if carriers are formally instructed on the safest and least humiliating means of carrying and the service is provided in a reliable manner. This case does not present manifestly exceptional circumstances that would allow carrying to achieve program accessibility. The existing evacuation plan obviates the need for carrying by University staff.

The complainants cite Spoon River College, 3 NDLR 183 (OCR 1992) for the precedent that a college must have written or verbal procedures in effect to address the needs of handicapped students. OCR found the College in violation because it had not taken adequate steps to plan for the evacuation of handicapped persons in the event of an emergency. This decision is not on point since ASU has a plan that considers individuals with disabilities in emergency planning.

University's Position

The University claims its Residential Life Emergency Evacuation Procedures are reasonable and effective. It alleges the dispute between ASU and the complainants stems from the fact that the complainants do not agree with the University's decision (made with input from the actual emergency responders) that it will not ask its student resident assistants to physically lift and carry students with disabilities out of their room during drills or actual emergencies. They are not required by the ADA or 504 to provide personal services, citing University of California, San Diego, 5 NDLR 163 (OCR 1993), "as a matter of law that the university was not required by §504 or Title II to pay for a personal attendant to push the complainant's wheelchair or provide other services of a personal nature." ASU further argues that "if having one's wheelchair pushed is a service of a personal nature, the process of an individual with a mobility impairment getting into and out of a wheelchair would also be a personal responsibility of the student."

The ASU Residential Life License Agreement is explicit that each student with a disability that requires attendant care has the sole responsibility for his/her own personal attendant care. The University contends that it is up to the student to make appropriate arrangements to receive personal services.

Professional firefighters with Tempe Fire receive extensive training on safely evacuating individuals in emergency conditions and have the opportunity to practice skills and maintain physical strength to perform evacuations in a safe manner. Professional firefighters have chosen this work for a career. The Chief advised that often four firefighters were required to evacuate one person. Student resident assistants do not possess any of these skills or attributes. The University contends that it is not reasonable or appropriate to require RA's to physically move disabled students.
Analysis and Conclusion

The University has in place an emergency evacuation procedure that it deems to be effective and produce the safest outcome for the highest percentage of individuals, including student residents, hall staff and rescue responders. These procedures were adopted and modified with input from the stakeholders, but rely in large part on the expert advice provided by professional emergency personnel, the State Fire Marshal and other persons with expertise in this area. The University is not obligated to provide personal attendants for students with disabilities and OCR policy discourages carrying of mobility impaired student-residents to achieve program accessibility. We find the University acted reasonably by adopting procedures based upon the expertise and advice of the professionals who are responsible for emergency evacuations. The plan takes into account the safety of student-residents with disabilities and does not discriminated against students with disabilities.

Allegation: Disabled students are subject to illegal discrimination because they are excluded from mandatory fire drill participation.

One result of the interactive process undertaken in the 2000-2001 academic year was that the University agreed to provide advance notice of fire drills to student-residents with severe mobility impairments and other residents with disabilities who request advance notice. Advance notice was deemed to be acceptable by complainants’ counsel in her June 7, 2001 letter to Cynthia Jewett, University counsel. The past practice was to advise these persons that their participation was voluntary. The policy has changed from voluntary participation to now encouraging all residents that they should participate to the extent possible in all fire and emergency drills.

The University advised OCR it will retain the practice of advance notice to student residents with disabilities of planned fire drills, but has revised its procedures as follows: 1) to encourage all students to participate in the drills to the extent they can. The student is to practice the steps she/he would take in a real emergency, e.g. call 9-1-1, identify yourself, and tell them your location and why you cannot leave. Additionally, the students will be asked to settle on what essential medicines or equipment they would need if evacuated and its location in the room so that emergency personnel could be alerted; 2) student residents are encouraged to provide the University with specific information that they wish to have included in the Knox Box spread sheets.

Analysis and Conclusion

We find that the University's emergency evacuation procedures do not exclude student residents with disabilities. All students, regardless of disability, are expected to evacuate the residence hall during fire drills and actual emergencies. The exception to the plan is mobility impaired student-residents. The mobility impaired student-residents are not excluded from the University's evacuation plans, but emergency planning for their
protection and safety does not contemplate evacuation, except in the event of a disaster, and then only by the assistance of professional emergency personnel. The Tempe Fire Department participates in one drill per semester. They refuse to evacuate any students during a drill for safety reasons. The University cannot compel the Tempe Fire Department to act otherwise.

Further, we find that the revised emergency evacuation procedures provide that all students should actively participate to the best of their ability in drills, and students with disabilities are offered the opportunity to include specific information concerning their disability in the Knox box. All student residents are given identical written materials and training.

The University began providing advance notice of drills as a result of the stakeholder meetings held in 2000-2001. The University, relying upon expert advice from those ultimately responsible for emergency evacuations, the Tempe Fire Department, has acted reasonably in adopting, and willingly revising as a result of interactive discussions with the stakeholders, its emergency evacuation procedures. We do not agree with complainant's position that providing advance notice of planned fire drills to disabled residents results in a less effective benefit from fire drills. All students are advised that they should participate in these drills to the extent possible. Advance notice is an accommodation requested by certain disabled students and granted by the University.

The main difference between non-disabled students and mobility-impaired students is whether or not the student can evacuate the building on his/her own power. The existing procedure to evacuate mobility-impaired students in actual emergencies relies upon the expertise of professional emergency personnel. Further, Section 504 and Title II do not require post-secondary institutions to provide personal assistance, such as lifting a person from their bed and setting him or her in a wheelchair in order to evacuate a residence hall. The University did not violate Title II or Section 504 when it adopted emergency evacuation procedures with the advice of the local fire department. The procedures take into account the safety of students with disabilities and provide student-residents with disabilities access to an effective emergency evacuation plan.

This letter is not intended, nor should be construed, to cover any other issues regarding compliance with Section 504 or Title II that may exist that are not discussed herein. Individuals filing a complaint or participating in an investigation are protected by federal law against harassment, retaliation, or intimidation by CFR Section 107.61 as it incorporates 34 CFR Section 100.7 (e), and 28 CFR Section 35.134.

Under the Freedom of Information Act, it may be necessary to release this document and related correspondence and records upon request. If OCR received such a request, we will see to protect, to the extent provided by law, personal information, which if released, could constitute an unwarranted invasion of privacy.

This letter concludes OCR's consideration of this matter. Therefore, we are closing the complaint effective the date of this letter. We would like to express our appreciation for the courtesy and cooperation that you and the University staff extended to our Office. If
you have any questions regarding this matter, please call me at (303) 844-4524, or email me at Linda.Howard-Kurent@ed.gov.

Sincerely,

Linda Howard-Kurent
Supervisory Team Leader

Cc: Cynthia Jewett, Esq.
    Office of General Counsel
Appendix C: Campus Map

1. Air Force and Aerospace Studies
2. Alden Memorial
3. Alumni Gym
4. Atwater Kent Laboratories
5. Bartlett Center
6. Boynton Hall
7. Campus Center
8. Police Department (WPI)
9. Collegiate Religious Ctr
10. 20 Trowbridge Road
11. 39 Dean Street
12. Fuller Laboratories
13. Goddard Hall
14. Gordon Library
15. Harrington Auditorium
16. Health Center
17. Higgins House
18. Higgins Laboratories
19. Hughes House
20. International House
21. Jeppson House (One Drury Lane)
22. Kaven Hall
23. OASIS
24. Olin Hall
25. Plant Services
26. Power House
27. Project Center
28. Salisbury Laboratories
29. Skull Tomb
30. Stratton Hall
31. Student Development and Counseling Center
32. Washburn Shops and Stoddard Laboratories

Student Residences
A. Daniels Hall
B. 16 Elbridge
C. Ellsworth Apartments
D. Founders Hall
E. Fuller Apartments
F. Unity House
G. Institute Hall
H. Morgan Hall
J. Sanford Riley Hall
K. 22 Schussler
L. Stoddard Complex
M. 25 Trowbridge

Greek Houses
G1. Alpha Chi Rho
G2. Alpha Gamma Delta
G3. Alpha Tau Omega
G4. Lambda Chi Alpha
G5. Phi Gamma Delta
G6. Phi Sigma Kappa
G7. Phi Sigma Sigma
G8. Sigma Alpha Epsilon
G9. Sigma Phi Epsilon
G10. Sigma Pi
G11. Tau Kappa Epsilon
G12. Theta Chi
G13. Zeta Psi

Bioengineering Institute (BEI)
39 Dean Street

Corporate and Professional Education
85 Prescott Street

Massachusetts Academy of Math and Science at WPI
85 Prescott Street

Handicap Restroom
Handicap Entrance
Handicap Ramp
Handicap Walkway