Syllabus

Purpose

This program is designed to equip State supervisors and managers with the necessary information and tools to ensure a safe work environment that is free from unrecognized and avoidable hazards for all employees, customers, and visitors. It supports the Division of Personnel's Policy (DOP P-15) *Workplace Security* and includes subject-matter-experts from the Division of Labor, the Division of Protective Services, and the Board of Risk and Insurance Management.

Workplace Safety: Your Responsibility endorses the State of West Virginia's responsibility and desire to take reasonable measures to ensure the health, safety, and welfare of State employees and the general public that they serve.

Objectives

Participants will:

- Explore workplace safety issues;
- Discuss their responsibilities in providing safe work environments;
- Review the Workplace Security Policy (DOP P-15); and
- Engage in discussions with subject-matter-experts.

Learning Outcomes

By the end of the program, participants will be able to:

- Promote the importance of maintaining a safe and healthy workplace;
- Know how to recognize and act upon potentially dangerous and avoidable hazards and situations; and
- Ensure a safe and healthy work environment is maintained.

Length

One day

Primary Audience

Managers and Supervisors

Revised 12/10

Workplace Security Policy

The purpose of the *Workplace Security Policy (DOP-P15)* is to take reasonable measures to ensure the health and safety off all employees and the general public while on State property. It is organized into the following main parts:

1. Definitions
2. Policy
3. Responsibilities
4. Procedures
5. References
6. Effective Date
7. Revisions
8. Policy Number

At the end of the policy, you will find attached the acknowledgement forms, one of which, every state employee must sign. It is your responsibility as a supervisor to make sure that each of your employees has a signed copy of the acknowledgement form/s in his/her personnel file.

Workplace Safety Exercise

Instructions: Please take a few minutes and read the Workplace Security Policy DOP-Policy 15. Please use the space to capture the information that is most important for you to remember.

OSHA Regulations

Reference 21-3Am The Legislature declares: (a) That it is the policy of this state to ensure all public employees be provided with safe and healthful work environments free from recognized and avoidable hazards.

Good Housekeeping

Good Housekeeping is important enough that OSHA specifically covers it in 29 CFR 1910.22. Under the heading "Housekeeping," the regulation states that "All places of employment, passageways, storerooms and service rooms should be kept clean and orderly and in a sanitary condition."

The regulation goes on to note that "The floor of every work room shall be maintained in a clean and, so far as possible, a dry condition…" It also states that "to facilitate cleaning, every floor, working place and passageway shall be kept free from protruding nails, splinters, holes or loose boards," and that aisles and passageways shall be kept clear and in good repair, with no obstruction across or in aisles that could create a hazard."

Good housekeeping is an important safety issue. It should not be a surprise if you consider that many of the potentially dangerous materials, tools and substances we work with are lying in wait for trouble in the work area. Even items that are not really hazardous can become so when they are left lying around where people can trip over them or bump into them.

Good housekeeping has other virtues. When your work area is clean and neat, it is a lot easier to find what you need and thereby do your job more efficiently. It also makes it a lot easier in an emergency to respond or get out fast.

Good housekeeping is everyone's responsibility. While the maintenance department handles heavy cleaning and similar tasks, they do not know where all your tools and materials are kept. They have not had the training you have had on proper handling of hazardous substances and other materials in the work area. In addition, their job is not to pick up after you. Good housekeeping has to be constant and ongoing if it is going to prevent and eliminate hazards in your work area.

Most people would never let any part of their own homes get as cluttered and dirty as their work areas become.

That is not just unpleasant; it can be dangerous.

Good Housekeeping (Continued)

General Hazards

Almost any hazard that can exist at work can exist in your work area. A fair percentage of them can be prevented by keeping things in their proper places and keeping the area clean. Housekeeping's role in safety is to prevent and remove hazards by keeping the work area in good condition on a continual basis.

Identifying Hazards

There are several types of hazards that should be eliminated immediately:

- Tripping and falling hazards are anything on the floor that does not belong. For example, machines, tools, cords, air hoses, scrap, and boxes should be organized so that floors are kept clear.

- Contact hazards – objects that can hit you or that you can bump into – are common problems. Open drawers and tools left perched precariously on a table are typical examples.

- Puncture and splinter hazards exist when sharp-edged or pointed tools are left out. Splinters can develop on any surface or on a variety of materials.

- Electrical hazards that you are likely to find include overloaded circuits, extension cords, cords left near heat or water or; anything that could cause fire or shock.

If you train your eyes to look for these hazards, you can eliminate them before they cause trouble.

Back Safety

The Occupational Safety and Health Administration (OSHA) has called back injuries the nation's number one workplace safety problem. Many back injuries are extremely painful and can result in long-lasting disability and/or loss of work. Medical bills incurred by back injuries can be very expensive. Fortunately, many spinal injuries are avoidable.

Nothing can guarantee you freedom from back pain, but there are many things you can do to help avoid it.

Lifting Safely

Preparing for the Lift

Before starting to lift or carry anything, check your entire walkway to make sure your footing will be solid. Your shoes should give you good balance, support and traction.

- Clear any moveable obstacles out of your way and make sure you know where the unmovable ones are.
- Cautiously lift the object that you will be moving to check its weight and center of gravity.

Performing the Lift

This is the part that causes most on-the-job injuries. Follow these keys to safe and easy lifting.

- Face the object squarely, and get as close to it as possible.
- Balance yourself solidly with your feet slightly apart.
- Squat down, bending your knees. Keep your back as straight and upright as possible.
- Grip the object firmly.
- Tighten your abdomen.
- Use your legs to bring you to a standing position keeping your back straight.
- Make the lift smoothly and under control.

Carrying and Lowering

When carrying an object, grip it firmly and hold it as close to your body as possible.

- Keep your back straight.
- Tighten your abdomen.
- Bend at the knees.
- Whenever possible, store heavy loads off the floor.

Sitting

Sitting can be twice as hard on your back as standing. Good sitting requires good support. Remember these tips when driving:

- Use a pillow or rolled-up towel to support your lower back.
- Keep the seat far enough forward to reach instruments and pedals easily.
- Stop from time to time to rest during long distance drives.

Twisting

The biggest danger to your back is twisting. Instead of twisting, use your feet to pivot. This will turn your whole body and not twist your back.

Slips, Trips, and Falls

More than 200,000 people in the United States are injured on the job from slips, trips and falls every year. In fact, injuries resulting from falls rank second only to auto accidents. A large percentage of injuries caused by falls occur in offices. Even people who work in high-risk environments are more likely to be injured by falling than by job-related hazards. Walking becomes second nature to us so we do not pay attention when walking from one place to another.

Most slips and trips end up in falls, but they each have special qualities that should be addressed.

Slips

A slip occurs whenever there is too little friction or traction between your feet and the surface on which you are walking. Three common causes of slips are constantly wet surfaces, occasional spills, and weather hazards.

Wet Indoor Surfaces

Following these tips can reduce the risk of slipping on wet indoor surfaces:

- Shorten your stride to keep your center of balance under you.
- Walk with your feet pointed slightly outward, creating a stable base.
- Make wide turns at corners.

Traction and Footwear

- Wear slip-resistant footwear appropriate for your job. Special sole patterns are specifically engineered for slippery work areas.
- Use abrasive strips to increase traction.
- Post signs to warn of wet areas.
- Clean up spills when you see them. If that is not possible, draw attention to the spill in some way so that others will see it and go around. Later, report the problem to the appropriate authorities so that it can be cleaned up.

Slips (Continued)

Inclement Weather

In inclement weather, you can reduce the risk of slipping outdoors if you:

- Slow down to react to a change in traction;
- Wear slip-resistant shoes or overshoes and carry your work shoes;
- Wear sunglasses when outdoors or in ice and snow to help you see possible hazards; and
- Be careful of wet shoes on a dry floor; they can be just as slippery as dry shoes on a wet floor.

Other Hazards

- *Loose Rugs*: Secure throw rugs to the floor or use rugs with a skid-resistant backing.
- *Small Spills*: Immediately clean up all small spills in your work area.
- *Changing Surfaces*: Moving across a change in surfaces, such as walking from a carpeted floor to a vinyl floor or hardwood floor can also cause slips.
- Do not forget to replace used bulbs and repair faulty switches before someone trips and falls.
- Use a flashlight if you must enter a dark room where there is no available light source.

Trips

Trips can occur whenever your foot strikes an object and your momentum causes you to be thrown off balance. Trips most often occur when:

- Your view is obstructed.
- You take a shortcut instead of using a proven pathway.
- There is clutter, especially near a walkway.

Lighting

Poor lighting can impair your vision and create dangerous situations:

- Always use the available light source.
- Do not forget to replace used bulbs and repair faulty switches before someone trips and falls.
- Use a flashlight if you must enter a dark room where there is no available light source.

Clutter

- Clutter can boost the chances of tripping.
- Walkways must be kept free of objects and clutter including pocketbooks, briefcases, and shoes.
- Close file cabinet doors.
- Carpet that does not lay flat should be tacked or taped down.
- Cables that cross walkways should be covered to reduce possible trips.
- Be aware of the threshold when stepping out of an elevator. It may not always be even with the floor. This is especially true of heavy-duty freight elevators.

Falls

Two of the more common causes of falls are: (1) Using ladders improperly; and (2) Using makeshift ladders.

Proper Equipment

- Take the time to get the proper equipment for the job and then use it properly.
- Make sure it is locked into position and stable.
- Check the rungs to make sure none are broken.
- Use a stepladder tall enough to avoid using the top two rungs as the ladder may become unstable.

Ladders

Extension ladders, because of their height, have the potential of causing a serious fall if misused. To prevent a possible life threatening fall, these guidelines should be followed:

- Follow the 1-to-4 rule. Set the base of the ladder 1-foot out from the wall for every 4 feet of ladder height.
- To keep the ladder from slipping have someone hold the base, or tie off the ladder securely.
- When working on a roof, the ladder should be extended 3 feet beyond its contact with the building. Never use the top two rungs.
- Whenever hoses or cords are nearby, be careful to position the cords around the ladder in a safe way.
- If planning to work on a ladder positioned in front of a door, either lock the door shut, or prop it open.

Falls (Continued)

Stairs

Stairs create their own kinds of hazards. Nearly 2.5 million people are injured every year from falls on stairs. However, stairs do not have to be dangerous if these safety principles are followed:

- Take each step one at a time;
- Make sure that the front foot is firmly planted before shifting body weight onto it;
- Always use the handrail;
- Never use the stairs as a temporary closet;
- Keep stairways free of clutter; and
- Never skip stairs or jump from one level to another.

Ergonomics

Ergonomics is the science of fitting workplace conditions and demands to the capabilities of the working population. Effective and successful "fits" assure high productivity, avoidance of illness and injury risks, and increased satisfaction among the workforce.

Although the scope of ergonomics is much broader, the term here refers to *assessing those work-related factors that may pose a risk of musculoskeletal disorders and recommendations to alleviate them.*

Identifying Problem Jobs

There are several methods used to identify problem jobs that are most likely to result in ergonomic disorders. One way is to review and periodically monitor injury and illness records such as the OSHA 200 form and workers' compensation data to identify patterns of ergonomics-related injuries and illnesses.

When problem jobs have been identified, they are evaluated for the following risk factors:

- Rate and number of repetitions: performance of the same motion or motion patterns every few seconds for more than two hours at a time.
- Postures and limb positions: fixed or awkward work postures, such as overhead work, twisted back or bent back, bent wrist, stooping, or squatting for more than a total of two hours.
- Vibration: use of vibrating or impact tools or equipment for more than a total of two hours.
- Loads/lifted: lifting, lowering, or carrying of anything weighing more than 25 pounds (11.34 kg) more than once during the work shift.
- Loads/static: holding a fixed or awkward position with arms or neck for more than ten seconds.
- Muscle forces: continually pulling or pushing objects.
- Work pace: pace rate or machine-paced work for more than four hours at a time (legally required breaks cannot be included when totaling the four-hour limit).
- Evaluate new equipment and processes for potential risk factors. Also evaluate hand tools to determine if the designs are ergonomically suitable for the intended use and appropriate for the workers who use them.

Ergonomics

Identifying Problem Jobs (Continued)

Solutions

When a job, process, or equipment has been evaluated, complete a risk factor checklist. Through this checklist, problems are identified for correction and supervisors and employees in the affected areas are notified. In conjunction with supervisors and employees, develop possible solutions, choose the most appropriate changes, implement the changes, and follow-up to determine the effectiveness.

For each problem job that has been changed, maintain a file of the improvements and changes completed. The file should contain documentation of the ergonomic-related illnesses or injuries, the actual changes made, and any similar incidents that occurred after the changes were implemented.

These are the ergonomic elements to teach to all employees:

- How to recognize workplace risk factors associated with work-related musculoskeletal disorders and the ways to reduce exposure to those risk factors.
- The signs and symptoms of work-related musculoskeletal disorders, the importance of early reporting, and medical management procedures.
- Reporting procedures and the person to whom the employee is to report workplace risk factors and work-related musculoskeletal disorders.
- The process to take in addressing and controlling workplace risk factors, each employee's role in the process, and how to participate in the process.
- Opportunity to practice and demonstrate proper use of implemented control measures and safe work methods that apply to the job.

Each employee involved in job analysis should be trained in the job analysis methods, especially as they relate to identifying workplace risk factors, and evaluation and implementation of control measures.

Do not implement any policy or practice which discourages reporting or which results in discrimination or reprisal against any employee who makes a report.

Planning for Productivity

People sometimes report eye fatigue and irritation, blurred vision, headaches, dizziness, experience pain or stiffness in the neck, shoulders, and back problems usually associated with their physical and environmental setting. The design of workstations should be carefully planned in order to maximize productivity and reduce the risk of workplace injuries. Some general guidelines are included below for consideration.

Lighting

Workstations and lighting should be arranged to avoid reflections from the screen or surrounding surfaces. Light should be directed so that it does not shine into the user's eye when the user/employee is looking at the screen. Normal office lighting can be supplemented by individual "task lighting" at a workstation if necessary. Task lighting enables people to adjust lighting to their individual preferences.

An individual workstation should provide the user/employee with maximum flexibility to adjust sitting position, arm and shoulder position, and height of work surfaces. The workstation should give the employee flexibility to reach, use, and observe the screen, keyboard, and the document.

It is important for employees to receive guidance on making good adjustments to ensure a proper match of the employee, the equipment and work methods.

Posture Support

The seat and backrest of the chair should support a comfortable posture permitting occasional variations in the sitting position. Chair height and backrest angle should be easily adjustable. A footrest may be necessary for some individuals.

Arms

When the user's hands are resting on the keyboard, the upper arm and forearm should form a right angle. The hands should be in a reasonably straight line with the forearm. Long or unusually high reaches should be avoided. Armrests should permit periodic support as needed.

Legs and Feet

The chair height is correct when the entire sole of the foot can rest on the floor or footrest and the back of the knee is slightly higher than the rest of the chair. This allows the blood to circulate freely in the legs and feet.

Screen Position Adjustment

Screens that swivel horizontally and tilt or elevate vertically enable the operator to select the optimum viewing angle.

Workstation Surface

The table or workstation should suit the kind of task to be done. It should be large enough for any reference books, files, telephone, or text and also permit different positions of the screen and keyboard. Adjustable surface height is an advantage.

Eye and Screen

The topmost line of the display should not be higher than the user's eyes. The screen and document holder should be the same distance from the eye (to avoid constant changes of focus) and close together so the user can look from one to the other without excessive movement of the neck or back. The incline of the document holder should be adjustable. Legibility is a prime consideration in selecting a screen.

Adjustment of the Keyboard

A movable keyboard can be arranged to suit the type of work and the need to consult documents or notes.

Task Considerations

The type of task may influence the development of fatigue. Therefore, in designing a workstation, the type of tasks a worker does should be considered when placing the screen and keyboard. Whatever the task, it is desirable for the user to have some "job control" – the opportunity to pace the work, add mini-breaks, or change positions.

Protect, Conserve, Improve

Do you know the link between your agency and safety and loss control? Do you know some of the most common safety mistakes that supervisors make on the job? Have you considered the financial impacts of workplace accidents?

The following information is provided to help you better protect your agency's resources, conserve more resources when feasible, and improve your agency's and team's performance.

Safety Mistakes

1. Behavior and Attitude
2. Lack of Knowledge
3. Failure to Follow Protocols
4. Physical Hazards
5. Substandard Work Environment / Equipment

Financial Impacts

1. Annual Premiums
2. Deductibles
3. Loss of Production or Services
4. Reputation
5. Marketing/Sales
6. Replacement of Equipment and Property
7. Profitability

Safety Committees

Given the full support of management, a safety committee can give every employee who serves on it a sense of responsibility and safety awareness that he can communicate to his fellow workers.

A properly run safety committee can be used to fight more than one battle for management. Once employees start thinking about the workplace from management's point of view—and you listen to what they have to say—they may come up with suggestions ranging from safety and health improvement, to time saving and to process improvement. The cost of insurance and workers' compensation insurance may be lowered as a result of committee work.

Pointers

The key to an effective safety committee is the whole-hearted endorsement of management. This means continuing recognition of the importance of the committee members as individuals and the work they do as a team. It also means acting swiftly and decisively on committee recommendations.

- Keep committees small even if it means setting up a number of committees at one location. Everyone should have a chance to have their say and to feel that their contribution is important. There's some sentiment that having safety "experts" as committee members cramps the style of rank-and-file employees. You might be better off using professionals as advisors, rather than full-fledged committee members.

- The consensus seems to be that committee meetings should be held once a month and should last no more than an hour.

- Ideally, the work of a safety committee is a participatory decision-making process. Studies show that younger, more highly educated workers may take this participatory approach more seriously.

- If you are involved in a joint union-management committee, you should make every effort to keep the committee's deliberations out of the bargaining arena and vice versa. A step in the right direction is for both sides to select as committee members individuals who are not directly involved in contract negotiations.

Organization of the Committee

The size of the facility and its hazard potential dictate the type and size of a safety committee. A small agency may have one central safety and health committee, while large agencies have found it necessary to set up networks of dozens of committees.

The chairperson of each safety committee should be a person whose authority exceeds the authority of each member of the group. Thus, a director might head up a committee of department heads, while a supervisor leads a committee of a rank-and-file workers.

Some experts say that safety and health professionals should stay on the sidelines serving only as advisors.

Functions of the Committee

At the time a safety committee is organized, definite policies should be established, including some or all of the following:

- Establishing procedures for handling suggestions and recommendations of the committee;
- Making systematic inspection tours at regular times to discover and report unsafe conditions and practices;
- Reviewing the circumstances and causes of accidents and recommending corrective measures;
- Conducting regularly scheduled meetings to discuss accident and illness prevention methods, safety and health promotion, hazards noted on site inspections, injury and illness records, and other pertinent subjects;
- Providing information to front-line supervisors;
- Recommending changes or additions to improve protective clothing and equipment;
- Developing or revising rules to comply with current safety and health standards; and
- Promoting safety and first-aid training for committee members and other employees.

Basically, management should provide the committee with its direction, goals, and limits. Inform new members that they will not be “policing” or “bossing”—their function is strictly advisory.

Size of Committees

Each committee should be small enough so that every member can function actively and conspicuously. If the job is too big for a small group, set up subcommittees or auxiliary committees.

In a large agency, where many key people should have a voice in safety matters, they should be rotated or invited to certain meetings, instead of serving as regular committee members.

Meetings

To keep members interested, committee meetings should be held at least once a month. The secretary of the committee should:

- Provide each member with a notice of the meeting and a copy of the minutes of the last meeting.

- With the advice of the chairman, draw up a tight agenda; meetings should not last more than an hour.

A typical meeting should include revision of the minutes from the previous meeting, signing of the attendance sheet and reports on past assignments. Finally, specific duties should be assigned and accepted, with deadlines noted in the minutes.

To stimulate interest on the part of rank-and-file committee members, make them profit-conscious.

Safety Inspections Committee members, as nonprofessionals, see conditions from the viewpoint of employees. By visiting an area only once a month, they will notice changed conditions more readily than someone who is there every day. Another advantage of committee-conducted inspections is that members have varying backgrounds, experience, and knowledge to guide them in their observation of work conditions and procedures.

A large committee should be divided into teams of 3-5 members. Rotation of team members is recommended so that a member works with different people from time to time.

Committee members should wear the protective equipment required in the areas they visit.

Additional Tips

- One member of an inspection team should act as leader and one should do the writing.

- Before starting out, the team should discuss where they are going and any details about the goal/s of the inspection.

- The team should "huddle" before going into a noisy area in order to avoid a lot of arm waving and other unsatisfactory communications.

- A checklist should be prepared so that the team knows what to look for and what to keep a record of for documentation purposes.

- A copy of the report on previous inspections of the area should be provided so that the team can find out if earlier recommendations have been adopted.

- The team should have a list of special hazards they may encounter. For instance, welding crews may move from place to place and committee members should know what precautions to follow where these crews are working.

Inspection Reports

Safety committee reports most frequently are concerned with crowded or disorderly conditions, unguarded machines, unsafe methods of material handling, tools in bad condition, danger from flying objects, insufficient lighting or glare, unreasonable heat or cold, or poor ventilation.

But the inspection team also should watch for and report unsafe behavior.

Unsafe behavior falls into two categories. One is individual behavior contrary to instructions or to normal safe conduct. This sort of behavior should be corrected by supervision.

The second type of unsafe behavior stems from unsafe methods and procedures permitted by someone in authority. Committee members should report such unsafe practices and recommend correction whether they are violations by employees or by someone higher up. Committee members should not be concerned about who is responsible for unsafe behavior-only that it is corrected.

Notes should be kept while the inspection is in progress. These should explain exactly what is meant by an "X" for unsatisfactory on a checklist. Brief "shorthand" notes are not enough; all the facts must be set down.

The report should be written by a committee member and, if necessary, checked by other members of the committee or inspection team. It is probably desirable to have a typist make several copies-one for the safety department, one for the committee, and one for the head of the department in which the inspection was conducted. A copy also should be sent to anyone concerned with correcting the condition described.

The report must be complete enough to be understood by the various people who may have occasion to read it. Locations should be accurately named or numbered, machines and operations identified by their correct names and unsafe conditions or actions described in detail. A notation of "bad housekeeping" is not enough; the report should give specifics.

Interpersonal Communications

When an inspection team enters a department, they should tell the supervisor at once that an inspection is being made. The department head may have information for the team, or s/he may wish to accompany the committee members.

If talking is permitted, members of the inspection team should be allowed to ask questions about operations and listen to employee suggestions. Committee members should not promise to have conditions corrected and they should not agree to present employee suggestions to management. The supervisor is responsible for correcting unsafe conditions and giving workers a hearing. Employees should make their recommendation to him/her.

It sometimes is necessary for an inspection team to watch people at work closely. This can be embarrassing to the person under observation and is one of the reasons for having a small inspection team. The team should explain what is occurring and ask the employee's permission to watch. Usually, the employee will be at ease after such an introduction. But if s/he is nervous or uncooperative, it may be better to postpone the observation.

Once a supervisor is told by the Inspection Team that something needs to be corrected, the supervisor may commit to correct it right away and may suggest that the matter need not be reported. The committee, however, should make note of the condition. This keeps the record straight and reminds the committee to check on the condition the next time around to ensure that the issue has been resolved.

Ineffective Committees

These are some pitfalls to avoid in setting up a safety committee:

- Beware of establishing a committee with no real power. Do not let the committee become a vehicle for avoiding responsibility.

- Do not let a handful of people perpetuate themselves on the committee. Rotate membership through overlapping terms so there always is a certain percentage of experienced members.

Fire Safety

The Fire Emergency Evacuation Plan

The purpose of a fire emergency evacuation plan is to know what to do and what not to do if a fire occurs. It assures that everyone will get out quickly and safety; and that they will assemble in a predetermined area for accounting. Planning for a fire emergency requires consideration of specific elements.

Most of these are included in the final plan and are used elsewhere in the organization and by the local fire officials. The content of the plan can be divided into two categories: (1) Personal; and (2) Managerial.

Personal Responsibility

The personal responsibilities are those that fall to people everywhere. They involve being a good citizen and caring for yourself and for other people. Once management has done its part to provide a safe work environment with a carefully prepared evacuation plan, the remaining actions fall into the realm of personal responsibility. The first of these is treating every alarm like a real emergency. Each person should begin evacuation procedures immediately. Each person should proceed quickly and calmly to the proper exit and to the designated assembly point for a head count. Each person assigned responsibilities in the emergency plan should carry them out and then proceed to the designated assembly point.

Managerial Responsibility

The managerial and supervisory responsibilities deal with creating a safe work environment. The management and supervisory elements of an emergency evacuation plan are:

- Evaluating the facility, collecting needed data, and creating a plan of action;
- Drafting a floor plan for each area of the facility;
- Developing emergency job descriptions and assigning suitable employees to handle them;
- Compiling and distributing emergency telephone numbers and procedures;
- Setting up drill procedures and a system for evaluation; and
- Training and educating employees about the plan and their part in carrying it out.

Although the types of information needed for each of these will vary with the location and type of organization, the elements of each item are similar.

Evaluation, Planning and Data Collection

The first step in creating an evacuation plan is to learn who is in the building and where they are located as well as to determine what type of equipment is in the building and where it is located, including alarm systems, smoke detectors, fire extinguishers, sprinklers, manual pull alarms, and other warning or fire fighting devices. Questions to consider include: *Is the system monitored by an outside company or local fire department*? and *What are their telephone numbers and other contact information*?

The second step in creating an evacuation plan is to consider the evaluation process. An emergency plan for a public service building or tourist area would be different than one for an organization with few visitors. Questions to consider include: *Is the population composed of employees who are familiar with the area, or are there outsiders present*? *How will visitors be evacuated*? *Who will be in charge of this*? *How many people will be needed to do it*? *Are there people with special needs or people who do not speak English*? *How will you evacuate people in wheelchairs when the elevators cannot be used*? *What about people with impaired hearing who may not hear the alarm*? *What about people with visual impairments who may need special help to evacuate*? *Who will provide this assistance*?

These are important questions because employees have been involved in planning and drills. Visitors have not, however, and probably do not know what the alarm system means or know where the exits are located.

The Floor Plan

Once this thinking stage is complete, a floor plan must be created. A separate plan is needed for each floor or section of the building. Show the primary, secondary, and alternate exits, such as to the roof. Mark all fire extinguishers and alarm pull stations, as well as emergency phones.

A floor plan needs to be readied for each area, with the notation, "YOU ARE HERE' clearly marked. The two closest fire exits should be marked. A reminder not to use the elevators should be added.

Data Collection

An important part of preparing a fire evacuation plan is gathering important data and information in one place and then providing it to the local fire department. This information will be invaluable in an emergency situation. It should be updated whenever responsibilities or the facility's characteristics change. Many fire departments have forms to gather this information. In general, an evacuation plan includes: emergency contacts, addresses, owners and emergency contact information for the facility. Contact information for the manager or director and his/her assistant also should be included.

Data Collection (Continued)

Building Information:	Height, area, construction, and number of floors; information about fire stairs, location of fire stairs, horizontal exits, elevators, and communications systems.
Fire Safety Information:	Alarms and detection systems, sprinkler systems, fire suppression devices, standpipe systems, and locations of the nearest water supplies for extinguishing a fire.
People information:	How many are present on an average day, and what is their distribution by location and by time of day? How many are employees and how many are visitors? Are they present on weekends? Do any have special needs in an emergency situation? Where do the people with special needs work?
Facility Information:	Where are the electrical and ventilation systems located? Power, lighting, heating, gas, air conditioning, and similar equipment should be listed. Where are emergency shutoffs? What current is used to operate them?
Refuse Information:	Where and what kind of refuse is stored at the facility? Are there any special hazards involved? Is there a detection or suppression system located in the area? Is the area kept locked?
Hazardous Materials Info:	Are there hazardous materials stored or used in the facility? How much is present at each location? Are there materials in drums, pipelines, or another type of container? Provide material safety data sheets for each of these.

After all this information is gathered, it should be assembled in a logical fashion and copies made for employees with emergency responsibilities and for fire officials.

Most organizations also require that several key personnel have a copy of the plan at home or in some off-site place where it would be available for ready reference.

Job Descriptions and Assignments

Important in reacting to an emergency is creating an effective and well-prepared emergency team. The number and composition will vary with the size and complexity of the facility. Therefore, each organization must evaluate how many people and responsibilities will be needed to cope with an actual emergency. Some suggested job descriptions are:

Building Fire Marshal and Alternate

These are responsible for organizing and implementing all aspects of the fire/ emergency plan. They also conduct fire inspections, keep the plan up-to-date, authorize changes to improve safety, and set up a command center in case of an emergency. The marshal also sets drills and works with other team members to critique and change procedures as needed.

Emergency Coordinator and Alternate

These people select, train, and organize employees for conducting emergency operations.

Floor and Zone Wardens

These people are in charge of overseeing evacuation of their assigned area. They also may be the people assigned to initiate a fire alarm and should be the last to leave their area in drills and emergencies. Zone wardens, for example would make sure all restrooms are clear and that people with special needs have left the area.

Stairwell Monitor

Often one per floor, these people make sure the stairway is safe for exit, hold open the door and make sure it is closed when not in use so it does not act as a chimney.

Elevator Monitor

Directs people to the nearest stairway and makes sure no one uses or waits on elevators.

Restroom Monitor

Clears restrooms in an area before leaving.

Special Needs Monitor

Organizes the people who will assist those people with special needs in an emergency. Works with and assigns these "buddies" in advance, and makes certain any problems are reported to the emergency coordinator immediately.

Accountability Monitor

This person oversees the reassembly area and handles head counting and making sure all persons are accounted for. Reports any people who are missing to the emergency coordinator.

Job Descriptions and Assignments (Continued)

Not every one of these positions will be needed in all organizations. In some situations, several will be needed. Ideally, no one should simply be assigned to these duties; rather, they should be asked in a private setting where they can say 'no' easily.

Another factor in choosing them is suitability. It makes little sense to assign someone who is often away from the building to one of these positions.

Furthermore, someone who is calm under pressure is a better choice than one who falls apart in emergencies. They also must be strong enough to carry out their responsibilities. A tiny or frail person would not be a good choice for stairway monitor, but may make a fine elevator monitor. A person in a wheelchair may need to be carried down many flights of stairs. Make sure to appoint people who are strong enough to do it, willing to do it, and sensitive to the feelings of the person being carried.

Emergency Telephone Numbers

Each organization should create a list of emergency contact information and keep it updated. This list should be posted near telephones and floor plans. The exact contents will vary with the organization, but should reflect its purpose - enabling people to summon help quickly and easily in an emergency situation.

The following are suggestions of content to be included:

- Name, address, telephone number, and cross street for the facility;
- Names, locations, and home and work phone numbers for key managers and safety and emergency personnel;
- Emergency phone numbers for fire, police, ambulance, poison control, suicide, and crisis services, and the call letters and frequencies of the emergency broadcast system in the area;
- Utility companies that service the site; and
- Other important contacts and the date of the last update of the information.

These telephone lists should be distributed freely throughout the organization. A bad place for them is an employee handbook where they will never be found in a real emergency. Many organizations create a sticker that must be attached to every telephone in the building.

Drill Procedures and Evaluation

Fire is always unexpected. The key to survival is knowing the proper response even in a dark, smoke-filled building, where you can hardly see or breathe.

The best way to assure this kind of response is through regular drills that are conducted unannounced. They should occur at least four times each year and should include all procedures that would occur in a real fire.

In a fire-ready facility, lack of response to a fire alarm cannot be tolerated. In some cases, sanctions may be needed to impress employees with the seriousness of the drills. A good way to do this is to increase the realism of the drills. Invite the fire department to participate and sound sirens as they approach. Block a stairway and see how employees react. Hide employees in a restroom or copy room, and see if they are discovered missing.

Evaluating the Drill

Each fire drill should be critiqued to look for ways to improve response. This is often best done by assembling the emergency team so that each area of the facility can be evaluated with a series of questions.

Did everyone take the drill seriously? If not, how do you respond? Was everyone accounted for and how soon? Was the assembly area adequate? Are there situations where it might not be usable? Where would people assemble then? How would they know this?

How were the responses for people with special needs? Where they treated carefully and in a dignified manner? If someone is in a wheelchair, was the chair carried outside? Where did the person wait and how did he or she get back inside? Were all 'buddies' present and suitable? Are alternates or new ones needed?

Did all alarms sound properly? How did the emergency communication system work? Could everyone hear the alarms and emergency announcement? Are repairs or changes, like a flashing alarm system needed?

Training and Education

The last of the management and supervisory responsibilities is telling employees about the plan (education) and making certain they are prepared to carry it out (training).

- This means making sure they understand the alarm system and know exactly what to do when it sounds.

- It also means keeping the plan up-to-date, conducting regular drills and fire awareness activities including inspections, and being prepared to enforce the plan with employees who are bent on ignoring alarms and fire hazards.

- Employees should be taught in hands-on demonstration to use fire extinguishers properly and to know when to use them. They also must know the extent of their authority for sounding an alarm and beginning evacuation procedures.

- Everyone must remember to stay low, below the smoke and fumes, and to move deliberately but not to run. Oxygen is in short supply in a burning building. Running will make it harder to breathe and get out.

- In addition, each person must understand that he/she should never to go back into a building for any reason.

Reporting a Fire

In a facility that stresses readiness, most alarms will be drills. Someday, however, there may be a real fire and everyone needs to know what to do.

In a real emergency, the fire department should be called immediately, and given the exact location of the fire. This includes the name of the building, street address, cross street, and the location of the fire within the facility. Including other information, such as the extent of the fire, possible injuries, or suspected causes will be helpful to responders.

If possible, a trained person should use an extinguisher to put out the fire.

Enough people should be trained so that knowledgeable people will always be available. And they must understand when to try to put out a fire and when to leave it alone. If putting it out is not possible, they need to know to contain the fire by closing (not locking) nearby doors and windows to cut off available oxygen needed for burning.

Using a Fire Extinguisher

The first point in using a fire extinguisher is making sure there is a clear exit at the user's back. This way, the user can turn and exit if the fire grows or the extinguisher can't put it out.

Fire officials use the word PASS to remind people to use fire extinguishers:

Pull the pin. Hold the extinguisher with the nozzle pointing away and pull the pin located below the handle. This will unlock the operating lever.

Aim low at the base of the fire as you stand six to eight feet from the fire. Aiming high on the fire can spread it and make it much worse.

Squeeze the lever slowly and evenly.

Sweep from side to side at the base of the fire, moving toward it until the flames are out.

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Individual Action Plan

Instructions: *Today's program offered many new ideas to improve safety in the workplace. Please think about the items you became aware of, want to avoid, and will take action on. In the space provided below, write:*

3 things you became aware of during this session:

_____

_____

_____

2 things you will avoid to improve safety:

_____

_____

1 thing you will take action on to improve safety:

_____

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