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# Recommended Practices for Safety & Health Programs in Construction













## DISCLAIMER

These practices for safety and health programs for construction worksites are recommendations only. Employers in construction work must have a program that includes measures to detect and correct workplace hazards. However, their program may not contain all of the practices recommended in this document. Employers will not be cited if their safety and health program does not comply with this document.

# FOREWORD

Establishing a safety and health program at your job site is one of the most effective ways of protecting your most valuable asset: your workers. Losing workers to injury or illness, even for a short time, can cause significant disruption and cost—to you as well as the workers and their families. It can also damage workplace morale, productivity, turnover, and reputation.

Safety and health programs foster a proactive approach to "finding and fixing" job site hazards before they can cause injury or illness. Rather than reacting to an incident, management and workers collaborate to identify and solve issues before they occur. This collaboration builds trust, enhances communication, and often leads to other business improvements. Employers who have implemented safety and health programs, including many who are in OSHA's Voluntary Protection Programs (VPP) or the Safety and Health Achievement Recognition Program (SHARP) for small and medium-sized businesses, have also found that managing for safety results in higher-quality product or output and higher profits.

These recommended practices reflect current conditions in the construction industry:

- New construction techniques, materials, and equipment have come into common use.
- Greater diversity in the construction workforce means that people from different backgrounds and cultures are working alongside each other, often speaking different languages.
- An aging workforce and the rise of sedentary lifestyle means that some workers are at higher risk for work-related musculoskeletal disorders.

## Resources and Tools to Support Implementation of These Recommended Practices

OSHA has created a dedicated Web page to support the implementation of these practices at www.osha.gov/SHPGuidelines. The page includes a link to these recommended practices as well as the following:

- **Additional resources.** Articles and information sources related to each core element of the recommended practices, plus other topics discussed in the recommended practices.
- **Tools.** Downloadable templates, worksheets, and reference materials you can use as you develop your own safety and health program.

Please visit the recommended practices Web page and explore the resources available. OSHA will update the Web page and add resources and tools as they become available.

- Increased temporary and contract employment means that traditional relationships between workers and employers are shifting, and changes in safety programs and policies will be required to ensure the safety and health of all workers at worksites characterized by these newer and more fluid relationships.

These practices also reflect what we have learned from best-in-class programs and what makes them effective. In particular, these recommended practices place greater emphasis on involving workers, and include a more robust program evaluation element to help drive continuous improvement. These practices also stress the need for communication and coordination on worksites involving more than one employer.



**David Michaels, PhD, MPH**

**Assistant Secretary of Labor for Occupational Safety and Health**

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# INTRODUCTION

THESE RECOMMENDED PRACTICES provide responsible employers, workers, and worker representatives[1] with a sound, flexible framework for addressing safety and health issues on diverse construction job sites. They may be used by any construction company or job site, but they will be particularly helpful to small and medium-sized contractors. They also include guidance specifically aimed at general contractor employment, staffing agency employment, and multiemployer work situations. These recommended practices have been developed solely for the construction industry. Separate recommended practices are available for all other industries.

The recommended practices emphasize a proactive approach to managing occupational safety and health. Traditional approaches are often reactive—that is, actions are taken only *after* a worker is injured or becomes sick, a new standard or regulation is published, or an outside inspection finds a problem that must be fixed. Finding and fixing hazards *before* they cause injury or illness is a far more effective approach. Doing so avoids the direct and indirect costs of worker injuries and illnesses, and promotes a positive work environment.

1 Worker participation is vital to the success of the program. In several places in these recommended practices, OSHA refers not just to workers but also to their representatives, such as labor unions or religious or community groups.

These best practices present principles and approaches to implementing and maintaining a safety and health program for the entire construction company. OSHA recognizes that a wide variety of small and large construction job sites exist. Some are short-duration, while others may take years to complete; some sites are characterized by frequently changing conditions, while other sites' conditions may change less often. An effective program emphasizes top-level ownership, participation by employees, and a "find and fix" approach to workplace hazards.

The "find and fix" approach to workplace hazards refers to the "Hazard Identification" and "Hazard Prevention and Control" core elements. Because of the wide variety of site conditions, these two core elements should be implemented on a site-specific basis in order to effectively detect and correct hazards.

The concept of continuous improvement is central to these recommended practices. As with any journey, the first step is often the most challenging. The idea is to begin with a basic program and grow from there. By initially focusing on achieving modest goals, monitoring performance, and evaluating outcomes, you can help your company progress over time along the path to higher levels of safety and health.

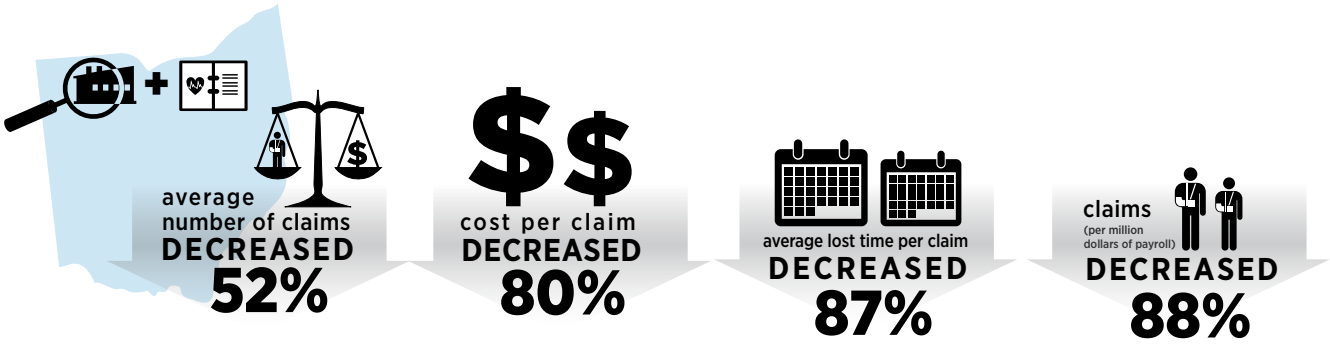
## THE BENEFITS OF IMPLEMENTING THESE RECOMMENDED PRACTICES

Responsible employers know that the main goal of a safety and health program is to prevent work-related injuries, illnesses, and deaths, as well as the suffering and financial hardship these events can cause for workers, their families, and their employers.

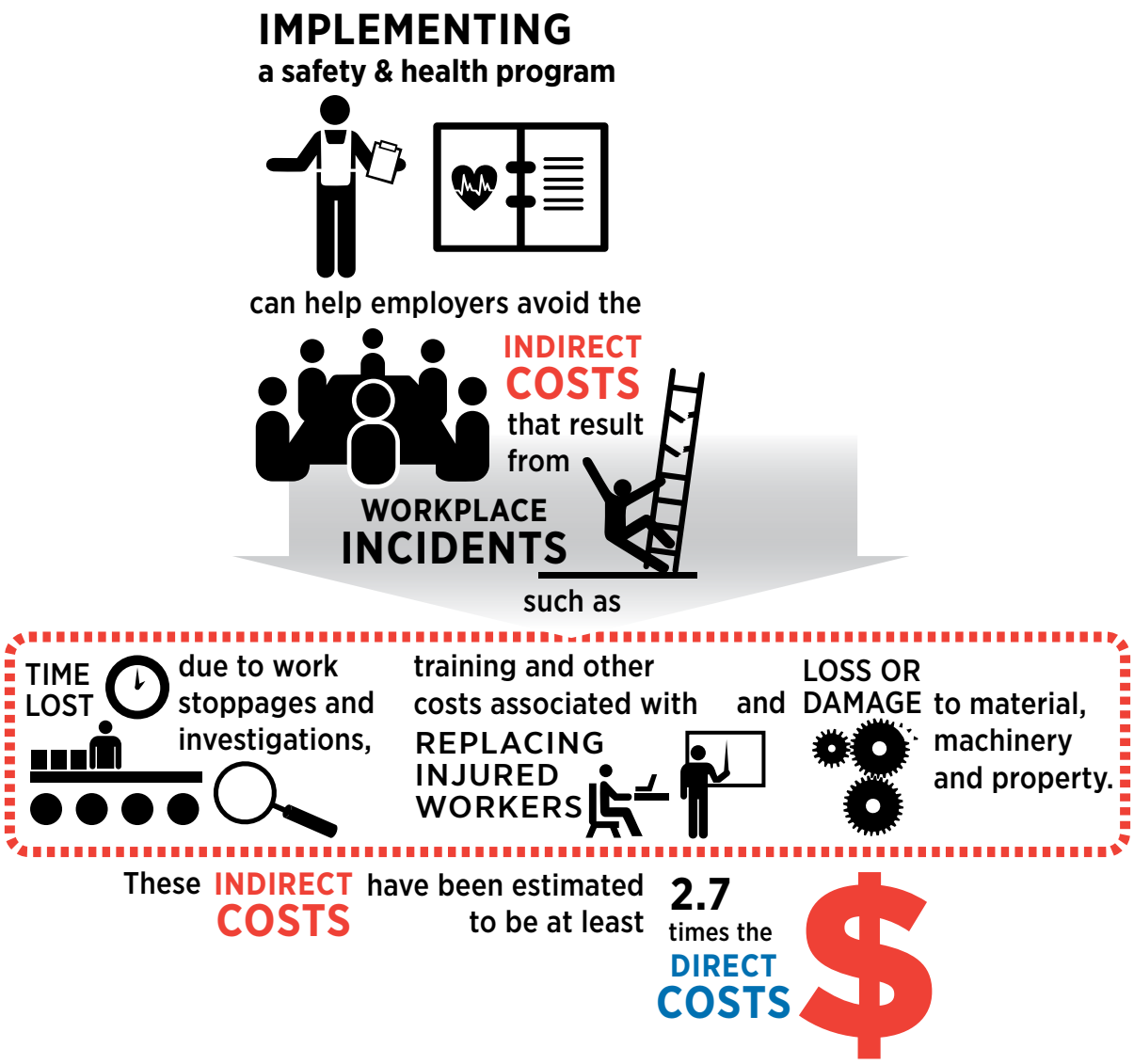
Employers may find that implementing these recommended practices brings other benefits as well. The renewed or enhanced commitment to safety and health and the cooperative atmosphere between employers and workers have been linked to:

- Improvements in production and quality.
- Better employee morale.
- Improved employee recruiting and retention.
- A more favorable image and reputation (among customers, suppliers, and the community).

**A study of small employers in Ohio found that workers' compensation claims fell dramatically after working with OSHA's SHARP program to adopt programs similar to those described in these recommended practices.**




*Source: Ohio Bureau of Workers' Compensation (2011), Ohio 21(d) SHARP Program Performance Assessment.*




*Source: Leigh, J.P. (2011), Economic Burden of Occupational Injury and Illness in the United States. Milbank Quarterly, 89:728-772.*[2]

## HOW TO USE THE RECOMMENDED PRACTICES

Each section of the recommended practices describes a core program element (see page 7), followed by several action items. Each action item is an example of steps that general contractors, subcontractors, managers, supervisors, and workers can take to establish, implement, maintain, and improve safety and health programs. A general self-evaluation tool can be found on the recommended practices Web page. It can be tailored to your construction site to track your progress and document how you have implemented (or will implement) each action item.

### Seven interrelated elements

The seven core elements are interrelated and are best viewed as part of an integrated system. Actions taken under one core element can

2 The 2.7 multiplier for indirect costs includes some social costs, such as workers' compensation costs not covered by insurance.

(and likely will) affect actions needed under one or more other elements. For example, workers must be trained in reporting procedures and hazard identification techniques in order to be effective participants. Thus, the "Education and Training" core element supports the "Worker Participation" core element. Similarly, setting goals (as described under "Management Leadership") will be more effective if you routinely evaluate your progress in meeting those goals (see "Program Evaluation and Improvement"). Progress in each core element is important to achieve maximum benefit from the program.

## One size does not fit all

While the action items under each core element are specific, they are not prescriptive. The process described in these recommended practices can, and should, be tailored to the needs of each construction company and/or job site. Likewise, your safety and health program can and should evolve. Experimentation, evaluation, and program modification are all part of the process. You may also experience setbacks from time to time. What is important is that you learn from setbacks, remain committed to finding out what works best for you, and continue to try different approaches.

Injuries and illnesses occur in all construction trades. The preventive approaches described in these recommended practices work equally well for small and large organizations in the construction industry. Small employers may find that they can best accomplish the actions outlined in these recommended practices using informal communications and procedures. Larger employers, who have more complex work processes and hazards, may require a more formal and detailed program. They may also wish to integrate their safety and health program with other programs that they are using to manage production, quality control, and environmental protection or sustainability.

## The importance of worker participation

Throughout these recommended practices, OSHA emphasizes the importance of worker participation in the safety and health program. For a program to succeed, workers (and, if applicable, their representatives) must participate in developing and implementing every element of the safety and health program. This emphasis on worker participation is consistent with the OSH Act, OSHA standards, and OSHA enforcement policies and procedures, which recognize the rights and roles of workers and their representatives in matters of workplace safety and health. Several action items described in these recommended practices rely on perspectives, expertise, and input that can come only from workers and their representatives.

## When more than one employer is involved

Employers and workers on "multiemployer" worksites should pay particular attention to the "Coordination and Communication for Employers on Multiemployer Worksites" section. This section describes actions that controlling employers such as general contractors, prime contractors and construction managers, subcontractors, and temporary staffing agencies (and their workers) should take to ensure protection of everyone on the job site.

For tools and resources to help you implement these recommended practices, visit: **www.osha.gov/shpguidelines**

# NINE EASY THINGS TO GET YOUR PROGRAM STARTED

**If these recommended practices appear challenging, here are some simple steps you can take to get started. Completing these steps will give you a solid base from which to take on some of the more structured actions presented in the recommended practices.**

## 1. ALWAYS SET SAFETY AND HEALTH AS THE TOP PRIORITY

Tell your workers that making sure they finish the day and go home safely is the way you do business. Assure them that you will work with them to find and fix any hazards that could injure them or make them sick.

## 2. LEAD BY EXAMPLE

Practice safe behaviors yourself and make safety part of your daily conversations with workers.

## 3. IMPLEMENT A REPORTING SYSTEM

Develop and communicate a simple procedure for workers to report any injuries, illnesses, incidents (including near misses/close calls), hazards, or safety and health concerns without fear of retaliation. Include an option for reporting hazards or concerns anonymously.

## 4. PROVIDE TRAINING

Train workers on how to identify and control hazards using, for example, OSHA's Hazard Identification Training Tool.

## 5. CONDUCT INSPECTIONS

Inspect the job site with workers and ask them to identify any activity, piece of equipment, or material that concerns them. Use checklists and other resources, such as OSHA's Construction Industry Digest, to help identify problems.

## 6. COLLECT HAZARD CONTROL IDEAS

Talk with workers about ideas on safety improvements throughout the project.

## 7. IMPLEMENT HAZARD CONTROLS

Assign workers the task of choosing, implementing, and evaluating the solutions.

## 8. ADDRESS EMERGENCIES

Identify foreseeable emergency scenarios and develop instructions on what to do in each case. Meet to discuss these procedures and post them in a visible location at the job site.

## 9. MAKE IMPROVEMENTS

Set aside a regular time to discuss safety and health issues, with the goal of identifying ways to improve the program.

# CORE ELEMENTS OF THE RECOMMENDED PRACTICES FOR SAFETY AND HEALTH PROGRAMS IN CONSTRUCTION

| | |
|---|---|
| **MANAGEMENT LEADERSHIP** | • Top management demonstrates its commitment to eliminating hazards and to continuously improving workplace safety and health, communicates that commitment to workers, and sets program expectations and responsibilities.<br>• Managers at all levels make safety and health a core organizational value, establish safety and health goals and objectives, provide adequate resources and support for the program, and set a good example. |
| **WORKER PARTICIPATION** | • Workers and their representatives are involved in all aspects of the program—including setting goals, identifying and reporting hazards, investigating incidents, and tracking progress.<br>• All workers, including contractors and temporary workers, understand their roles and responsibilities under the program and what they need to do to effectively carry them out.<br>• Workers are encouraged and have means to communicate openly with management and to report safety and health concerns or suggest improvements, without fear of retaliation.<br>• Any potential barriers or obstacles to worker participation in the program (for example, language, lack of information, or disincentives) are removed or addressed. |
| **HAZARD IDENTIFICATION AND ASSESSMENT** | • Procedures are put in place to continually identify workplace hazards and evaluate risks.<br>• Safety and health hazards from routine, nonroutine, and emergency situations are identified and assessed.<br>• An initial assessment of existing hazards, exposures, and control measures is followed by periodic inspections and reassessments, to identify new hazards.<br>• Any incidents are investigated with the goal of identifying the root causes.<br>• Identified hazards are prioritized for control. |
| **HAZARD PREVENTION AND CONTROL** | • Employers and workers cooperate to identify and select methods for eliminating, preventing, or controlling workplace hazards.<br>• Controls are selected according to a hierarchy that uses engineering solutions first, followed by safe work practices, administrative controls, and finally personal protective equipment (PPE).<br>• A plan is developed that ensures controls are implemented, interim protection is provided, progress is tracked, and the effectiveness of controls is verified. |
| **EDUCATION AND TRAINING** | • All workers are trained to understand how the program works and how to carry out the responsibilities assigned to them under the program.<br>• Employers, managers, and supervisors receive training on safety concepts and their responsibility for protecting workers' rights and responding to workers' reports and concerns.<br>• All workers are trained to recognize workplace hazards and to understand the control measures that have been implemented. |
| **PROGRAM EVALUATION AND IMPROVEMENT** | • Control measures are periodically evaluated for effectiveness.<br>• Processes are established to monitor program performance, verify program implementation, and identify program shortcomings and opportunities for improvement.<br>• Necessary actions are taken to improve the program and overall safety and health performance. |
| **COMMUNICATION AND COORDINATION FOR EMPLOYERS ON MULTIEMPLOYER WORKSITES** | • General contractors, contractors, and staffing agencies commit to providing the same level of safety and health protection to all employees.<br>• General contractors, contractors, subcontractors, and staffing agencies commmunicate the hazards present at the worksite and the hazards that work of contract workers may create on site.<br>• General contractors establish specifications and qualifications for contractors and staffing agencies.<br>• Prior to beginning work, general contractors, contractors, and staffing agencies coordinate on work planning and scheduling to identify and resolve any conflicts that could impact safety or health. |

## FOR MORE INFORMATION

For more information about these recommended practices, tools to help you implement them, and related topics, see the recommended practices Web page. This page includes links to many tools and resources developed by OSHA and others that can help employers and workers implement these recommended practices. OSHA will continue to update and add to this resource list.

OSHA's On-site Consultation Program offers free and confidential occupational safety and health services to small and medium-sized businesses in all states across the country and in several territories, with priority given to high-hazard worksites.

On-site Consultation Program services are separate from enforcement and do not result in penalties or citations. Consultants from state agencies or universities work with employers to identify workplace hazards, provide advice on compliance with OSHA standards, and help them establish and improve their safety and health programs.

For free assistance, including help implementing your program, visit:
**www.osha.gov/dcsp/smallbusiness**
or call 1-800-321-6742 (OSHA)



# MANAGEMENT LEADERSHIP




MANAGEMENT PROVIDES the leadership, vision, and resources needed to implement an effective safety and health program. Management leadership means that business owners, managers, and supervisors:

- Make worker safety and health a core organizational value.
- Are fully committed to eliminating hazards, protecting workers, and continuously improving safety and health on job sites.
- Provide sufficient resources to implement and maintain the safety and health program.
- Visibly demonstrate and communicate their safety and health commitment to workers and others.
- Set an example through their own actions.

## Action item 1: Communicate your commitment to a safety and health program

A clear, written policy helps you communicate that safety and health is a primary organizational value—as important as productivity, profitability, product or service quality, and customer satisfaction.

### How to accomplish it

Establish a written policy signed by top management describing the organization's commitment to safety and health, and pledging to establish and maintain a safety and health program for all workers.

- Communicate the policy to all workers and, at appropriate times and places, to relevant parties, including:
  - Contractors, subcontractors, staffing agencies, and temporary workers at your worksite(s)
  - Suppliers and vendors
  - Other businesses in a multi-tenant building
  - Visitors
  - Customers
- Reinforce management commitment by considering safety and health in all business decisions, including estimating and bidding on projects, subcontractor and vendor selection, scheduling, and implementing safety designs into construction processes, drawings, and modifications.
- Be visible in operations and set an example by following the same safety and health procedures you expect workers to follow. Conduct weekly or daily toolbox talks on safety and health, and discuss/review safety and health indicators and/or open safety items on a "to do" list.

## Action item 2: Define program goals

By establishing specific goals and objectives, management sets expectations for managers, supervisors, and workers, and for the program overall. The goals and objectives should focus on specific actions that will improve worker safety and health.

### How to accomplish it

- Establish realistic, measurable goals for improving safety and health.
- Develop plans to achieve the goals by assigning tasks and responsibilities to particular people, setting timeframes, and determining resource needs.

## Action item 3: Allocate resources

Management provides the resources needed to implement the safety and health program, pursue program goals, and address program shortcomings when they are identified.

### How to accomplish it

- Estimate the resources needed to establish and implement the program. One example is ensuring safety equipment is included in the project budget.
- Allow time in workers' schedules for them to fully participate in the program. Safety can be built into the labor rates when estimating a project.
- Integrate safety and health into planning and budgeting processes, and align budgets with program needs.
- Provide and direct resources to operate and maintain the program, meet safety and health commitments, and pursue program goals.

*Note:* Resource needs will vary depending on your organization's size, complexity, hazard types, and program maturity and development. Resource needs may include capital equipment and supplies, staff time, training, access to information and tools (e.g., vendor information, Safety Data Sheets, injury/illness data, checklists, online databases) and access to safety and health experts, including OSHA's free and confidential On-site Consultation Program (see "For More Information" in the introduction to these recommended practices).

## Action item 4: Expect performance

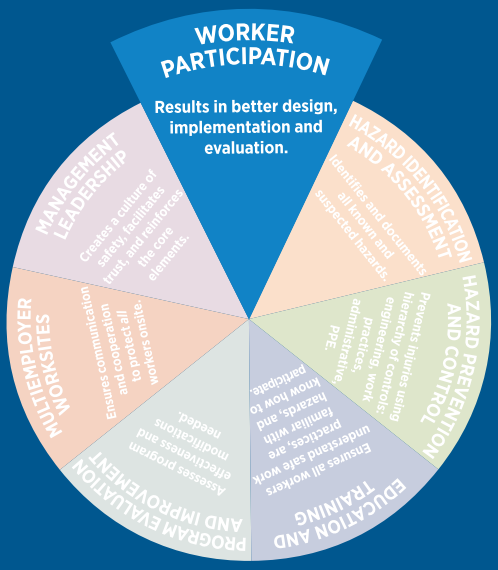
Management leads the program effort by establishing roles and responsibilities and providing an open, positive environment that encourages communication about safety and health.

### How to accomplish it

- Identify a frontline person or persons who will lead the safety program effort, make plans, coordinate activities, and track progress. Define and regularly communicate responsibilities and authorities for implementing and maintaining the program, and hold people accountable for performance.
- Provide positive recognition for meeting or exceeding safety and health goals aimed at preventing injury and illness (e.g., reporting close calls/near misses, attending training, conducting inspections).
- Establish ways for management and all workers to communicate freely and often about safety and health issues, without fear of retaliation.

*Note:* Maintaining a positive and encouraging tone is important. Successful programs reward, rather than discipline, workers who identify problems or concerns, much like successful quality programs. Disciplinary measures should be reserved for situations in which an individual manager or worker is uncooperative or becomes an impediment to progress.

# WORKER PARTICIPATION




**TO BE EFFECTIVE**, any safety and health program needs the meaningful participation of workers and their representatives. Workers have much to gain from a successful program, and the most to lose if the program fails. They also often know the most about potential hazards associated with their jobs. Successful programs tap into this knowledge base.

Worker participation means participation in establishing, operating, evaluating, and improving the safety and health program. All workers at a worksite should participate, including those employed by subcontractors and temporary staffing agencies (see "Coordination and Communication on Multi-employer Worksites").

**IN AN EFFECTIVE** safety and health program, all workers:

- Are encouraged to participate in the program and feel comfortable providing input and reporting safety or health concerns.
- Have access to information they need to participate effectively in the program.
- Have opportunities to participate in all phases of program design and implementation.
- Do not experience retaliation when they raise safety and health concerns; report injuries, illnesses, and hazards; participate in the program; or exercise safety and health rights.

*Note:* Worker participation is vital to the success of safety and health programs. Where workers are represented by a union, it is important that worker representatives also participate in the program, consistent with the rights provided to worker representatives under the Occupational Safety and Health Act of 1970 and the National Labor Relations Act.



## RETALIATION AGAINST WORKERS IS ILLEGAL

**Section 11(c) of the Occupational Safety and Health Act of 1970 prohibits employers from retaliating against employees for exercising a variety of rights guaranteed under the OSH Act, such as filing a safety and health complaint with OSHA, raising a health and safety concern with their employers, participating in an OSHA inspection, or reporting a work-related injury or illness. OSHA vigorously enforces the anti-retaliation protections provided under 11(c) of the OSH Act and other federal statutes. For more information, see www.whistleblowers.gov.**

## Action item 1: Encourage workers to participate in the program

By encouraging workers to participate in the program, management signals that it values their input into safety and health decisions.

### How to accomplish it

- Give workers the necessary time and resources to participate in the program.
- Acknowledge and provide positive reinforcement to those who participate in the program.
- Maintain an open door policy that invites workers to talk to managers about safety and health and to make suggestions.

## Action item 2: Encourage workers to report safety and health concerns

Workers are often best positioned to identify safety and health concerns and program shortcomings, such as emerging job site hazards, unsafe conditions, close calls/near misses, and actual incidents. By encouraging reporting and following up promptly on all reports, employers can address issues before someone gets hurt or becomes ill.

### How to accomplish it

- Establish a simple process for workers to report injuries, illnesses, close calls/near misses, hazards, and other safety and health concerns, and respond to reports promptly. Include an option for anonymous reporting to reduce fear of reprisal.[3]
- Report back to workers routinely and frequently about action taken in response to their concerns and suggestions.
- Emphasize that management will use reported information only to improve job site safety and health, and that no worker will experience retaliation for bringing such information to management's attention (see Action item 5).
- Empower all workers to initiate or request a temporary suspension or shutdown of any work activity or operation they believe to be unsafe.
- Involve workers in finding solutions to reported issues.



3 Under OSHA's injury and illness recordkeeping rule (29 CFR 1904), employers are required to establish a "reasonable" procedure for employees to report work-related injuries and illnesses promptly and accurately. A reasonable procedure is defined as one that would not deter or discourage a reasonable employee from accurately reporting a workplace injury or illness.

## Action item 3: Give workers access to safety and health information

Sharing relevant safety and health information with workers fosters trust and helps organizations make more informed safety and health decisions.

### How to accomplish it

- Give workers the information they need to understand safety and health hazards and control measures on the job site. Some OSHA standards require employers to make specific types of information available to workers, such as:
  - Safety Data Sheets (SDSs)
  - Injury and illness data (prevent disclosure of sensitive and personal information as required)
  - Results of worker exposure monitoring conducted at job sites (prevent disclosure of sensitive and personal information as required)
- Other useful information for workers to review can include:
  - Chemical and equipment manufacturer safety recommendations
  - Job site equipment and vehicle inspection reports
  - Incident investigation reports (prevent disclosure of sensitive and personal information as required)
  - Job hazard analyses (JHAs) and/or job safety analyses (JSAs)

## Action item 4: Involve workers in all aspects of the program

Including worker input at every step of program design and implementation improves your ability to identify the presence and causes of job site hazards, creates a sense of program ownership among workers, enhances their understanding of how the program works, and helps sustain the program over time.

### How to accomplish it

- Provide opportunities for workers to participate in all aspects of the program, including, but not limited to helping:
  - Develop the program and set goals to reduce or eliminate injuries and illnesses.
  - Report hazards and develop solutions that improve safety and health.
  - Analyze hazards in each step of routine and nonroutine jobs, tasks, and processes.
  - Define and document safe work practices.
  - Conduct site inspections, including equipment and vehicles.
  - Develop and revise safety procedures.
  - Participate in incident and close call/near miss investigations.
  - Train current coworkers and new hires.
  - Develop, implement, and evaluate training programs.
  - Evaluate program performance and identify ways to improve it.
  - Take part in exposure monitoring and medical surveillance associated with health hazards.
- Conduct daily planning meetings, huddles, toolbox talks, or tailgate meetings to engage workers in the safety and health program.

## Action item 5: Remove barriers to participation

To participate meaningfully in the program, workers must feel that their input is welcome, their voices will be heard, and they can access reporting mechanisms. Participation will be suppressed if language, education, or skill levels on the job site are not considered, or if workers fear retaliation or discrimination for speaking up (for example, if investigations focus on blaming individuals rather than the underlying conditions that led to the incident, or if reporting an incident or concern could jeopardize the award of incentive-based prizes, rewards, or bonuses).

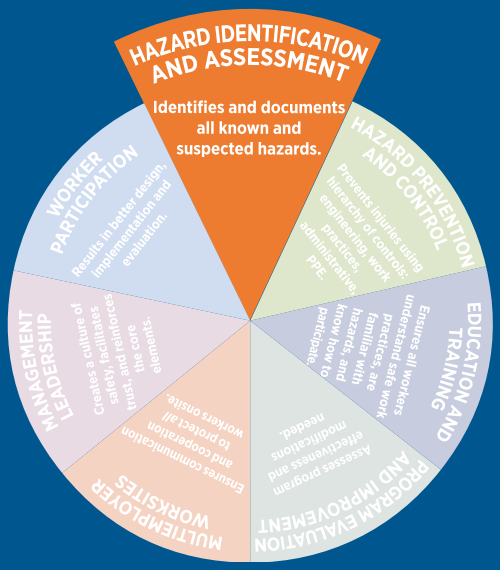
### How to accomplish it

- Ensure that workers from all levels of the organization can participate regardless of their skill level, education, or language.
- Provide frequent and regular feedback to show employees that their safety and health concerns are being heard and addressed.
- Authorize sufficient time and resources to facilitate worker participation; for example, hold safety and health meetings during regular working hours.
- Ensure that the program protects workers from being retaliated against for reporting injuries, illnesses, and hazards; participating in the program; or exercising their safety and health rights. Ensure that other policies and programs do not discourage worker participation.
- Post the Section 11(c) fact sheet (found at www.whistleblowers.gov) in the workplace or otherwise make it available for easy access by employees.

*Note:* Incentive programs (such as point systems, awards, and prizes) should be designed in a manner that does not discourage injury and illness reporting; otherwise, hazards may remain undetected. Although sometimes required by law or insurance providers, mandatory drug testing following injuries can also suppress reporting. Effective safety and health programs recognize positive safety and health activities, such as reporting hazardous conditions or suggesting safer work procedures. (See OSHA's "Employer Safety Incentive and Disincentive Policies and Practices" memorandum, dated March 12, 2012: www.osha.gov/as/opa/whistleblowermemo.html.)



# HAZARD IDENTIFICATION AND ASSESSMENT




**IN CONSTRUCTION,** unanticipated hazards can arise due to changes in project timelines, sequence of events, and the fast pace of some construction projects. Hazard identification and assessment is a crucial part of an effective safety and health program.

One of the "root causes" of construction injuries, illnesses, and incidents is the failure to identify or recognize hazards that are present, or that could have been anticipated. A critical element of any effective safety and health program is a proactive, ongoing process to identify and assess such hazards.

**TO IDENTIFY AND ASSESS** hazards, employers and workers:

- Collect and review information about the hazards present or likely to be present at the job site.
- Conduct frequent and regular inspections of the job site to identify new or recurring hazards.
- Investigate injuries, illnesses, incidents, and close calls/near misses to identify the underlying hazards, their causes, and safety and health program shortcomings.
- Group similar incidents and identify trends in injuries, illnesses, and hazards reported.
- Consider hazards associated with emergency or nonroutine situations.
- For each hazard identified, determine the severity and likelihood of incidents that could result, and use this information to prioritize corrective actions.

Some hazards, such as housekeeping and tripping hazards, can and should be fixed as they are found. Fixing a hazard on the spot emphasizes the importance of safety and health and takes advantage of a safety leadership opportunity. Fixing other hazards identified using the processes described here will be addressed in the next section, "Hazard Prevention and Control."

## Action item 1: Collect existing information about job site hazards

Information on job site hazards may already be available (from both internal and external sources) to employers and workers.

### How to accomplish it

- Collect, organize, and review information with workers to determine what types of hazards may be present and which workers may be exposed or potentially exposed.

- Information available may include:
  - Equipment and machinery operating manuals.
  - SDSs provided by chemical manufacturers.
  - Self-inspection reports and inspection reports from insurance carriers, government agencies, and consultants.
  - Records of previous injuries and illnesses, such as OSHA 300 and 301 logs and reports of incident investigations.
  - Workers' compensation records and reports.
  - Patterns of frequently occurring injuries and illnesses.
  - Exposure monitoring results, industrial hygiene assessments, and medical records (appropriately redacted to ensure patient/worker privacy).
  - Existing safety and health programs (hazard communication, confined spaces in construction, respiratory protection, process safety management, PPE, etc.).
  - Input from workers, including surveys or minutes from safety and health committee meetings.
  - Results of job hazard analyses (also known as job safety analyses).
- Information about hazards may be available from outside sources, such as:
  - OSHA, National Institute for Occupational Safety and Health (NIOSH), and Centers for Disease Control and Prevention (CDC) websites, publications, and alerts.
  - Trade associations.
  - Labor unions, state and local occupational safety and health committees/coalitions ("COSH groups"), and worker advocacy groups.
  - Safety and health consultants.

## Action item 2: Inspect the job site for safety hazards

Hazards can be introduced over time as conditions on the job site change, for example, as the building goes up, equipment or tools become worn, different trades arrive at and depart from the site, and housekeeping practices decline. Setting aside time to frequently and regularly inspect the job site for hazards can help identify shortcomings so that they can be addressed before an incident occurs.

### How to accomplish it

- Designate a competent person to conduct frequent and regular inspections of the job sites, materials, and equipment. Have workers on the inspection team, and talk to them about hazards that they see or report.
- Plan ahead to anticipate the potential introduction of additional hazards by the next group of trades or sequence of construction activies and to address these additional hazards. For example, ensure that structures can handle any additional anticipated loads.
- Be sure to document inspections so you can later verify that hazardous conditions have been corrected. Take photos or video of problem areas to facilitate on-the-job discussion and brainstorming about how to immediately control them.
- Include all areas and activities in these inspections, such as trenching and excavations, staging areas, layout yards, working at heights, materials storage, heavy equipment maintenance, and the activities of on-site contractors, subcontractors, and temporary workers.

- Regularly inspect both mobile construction equipment (e.g., forklifts, bulldozers, aerial lifts and cranes) and transportation vehicles (e.g., cars, trucks).
- Create material delivery areas and internal traffic control plans for the construction site and laydown areas.
- Use checklists that highlight things to look for. Typical hazards fall into several major categories, such as those listed below; each workplace will have its own list:
  - Slip, trip, and fall hazards
  - Electrical hazards
  - General housekeeping
  - Equipment operation
  - Equipment maintenance
  - Fire protection
  - Work organization and process flow (including staffing and scheduling)



  - Work practices
  - Ergonomic problems
  - Lack of emergency procedures
- Before changing operations, workstations, or workflow; making major organizational changes; or introducing new equipment, materials, or processes, seek the input of workers and evaluate the planned changes for potential hazards and related risks.

*Note:* Many hazards can be identified using common knowledge and available tools. For example, you can easily identify and correct hazards associated with broken stair rails and frayed electrical cords. Workers can be a very useful internal resource, especially if they are trained in how to identify and assess risks.

## Action item 3: Identify health hazards

Identifying workers' exposure to health hazards is typically more complex and less obvious than identifying physical safety hazards. For example, gases and vapors may be invisible, often have no odor, and may not have an immediately noticeable harmful health effect. Health hazards include chemical hazards (solvents, adhesives, paints, toxic dusts such as lead and silica, etc.), physical hazards (noise, radiation, heat, etc.), biological hazards (infectious diseases), and ergonomic risk factors (heavy lifting, repetitive motions, vibration from operating tools and earthmoving equipment).

### How to accomplish it

- Identify *chemical hazards*—review SDSs and product labels to identify chemicals at your job site that have low exposure limits, are highly volatile, or are used in large quantities or in unventilated spaces. Identify activities that may result in skin exposure to chemicals.
- Identify *physical hazards*—identify any exposures to excessive noise (areas where you must raise your voice to be heard by others), elevated heat (indoor and outdoor), or sources of radiation (radioactive materials, X-rays, or radiofrequency radiation).

- Identify *biological hazards*—determine whether workers may be exposed to sources of infectious diseases, molds, toxic or poisonous plants, or animal materials (fur or scat) capable of causing allergic reactions or occupational asthma.
- Identify *ergonomic risk factors*—examine work activities that require heavy lifting, work above shoulder height, repetitive motions, or tasks with significant vibration.
- Conduct quantitative exposure assessments, when possible, using air sampling or direct reading instruments.
- Review OSHA 300 logs to help identify health hazards associated with job site exposures.

*Note:* Identifying and assessing health hazards may require specialized knowledge. Small businesses can obtain free and confidential occupational safety and health advice services, including help identifying and assessing workplace hazards, through OSHA's On-site Consultation Program (see www.osha.gov/dcsp/smallbusiness/consult.html).

## Action item 4: Conduct incident investigations

Incidents—including injuries, illnesses, close calls/near misses, and reports of other concerns—provide a clear indication of where hazards exist. By thoroughly investigating incidents and reports, you will identify hazards that are likely to cause future harm. The purpose of an investigation must always be to identify the root causes (and there is often more than one) of the incident or concern, in order to prevent future occurrences.

### How to accomplish it

- Develop a clear plan and procedure for conducting incident investigations, so that an investigation can begin immediately when an incident occurs. The plan should cover items such as:
  - Who will be involved
  - Lines of communication
  - Materials, equipment, and supplies needed
  - Reporting forms and templates
- Train investigative teams on incident investigation techniques, emphasizing objectivity and open-mindedness throughout the investigation process.
- Conduct investigations with a trained team that includes representatives of both management and workers.
- Investigate close calls/near misses.
- Identify and analyze root causes to address underlying program shortcomings that allowed the incidents to happen.
- Communicate the results of the investigation to managers, supervisors, and workers to prevent recurrence.

*Note:* OSHA has special reporting requirements for work-related incidents that lead to serious injury or a fatality (29 CFR 1904.39). OSHA must be notified within 8 hours of a work-related fatality, and within 24 hours of an amputation, loss of an eye, or inpatient hospitalization.

*Note:* Effective incident investigations do not stop at identifying a single factor that triggered an incident. They ask the questions "Why?" and "What led to the failure?" For example, if a piece of equipment fails, a good investigation asks: "Why did it fail?" "Was it maintained properly?" "Was it beyond its service life?" and "How could this failure have been prevented?" Similarly, a good incident investigation does not stop when it concludes that a worker made an error. It asks such questions as: "Was the worker provided with appropriate tools and time to do the work?" "Was the worker adequately trained?" and "Was the worker properly supervised?"

## Action item 5: Identify hazards associated with emergency and nonroutine situations

Emergencies present hazards that need to be recognized and understood. Nonroutine or infrequent tasks, including mobilization and demobilization of the site, critical lifts with cranes, concrete pours, or setting critical structural members, also present potential hazards. Plans and procedures need to be developed for responding appropriately and safely to hazards associated with foreseeable emergency scenarios and nonroutine situations.



### How to accomplish it

- Identify foreseeable emergency scenarios and nonroutine tasks, taking into account the types of material and equipment in use and the location at the worksite. Scenarios such as the following may be foreseeable:
  - Structural collapse (i.e., bridges, buildings, trenches, and concrete forms)
  - Nonroutine tasks, such as infrequently performed activities (i.e., critical lifts and concrete pours)
  - Fires and explosions
  - Medical emergencies
  - Weather emergencies and natural disasters
  - Hazardous material spills
  - Startups after planned or unplanned equipment shutdowns

## Action item 6: Characterize the nature of identified hazards, identify interim control measures, and prioritize the hazards for control

The next step is to assess and understand the hazards identified and the types of incidents that could result from worker exposure to those hazards. This information can be used to develop interim controls and to prioritize hazards for permanent control (see "Hazard Prevention and Control").

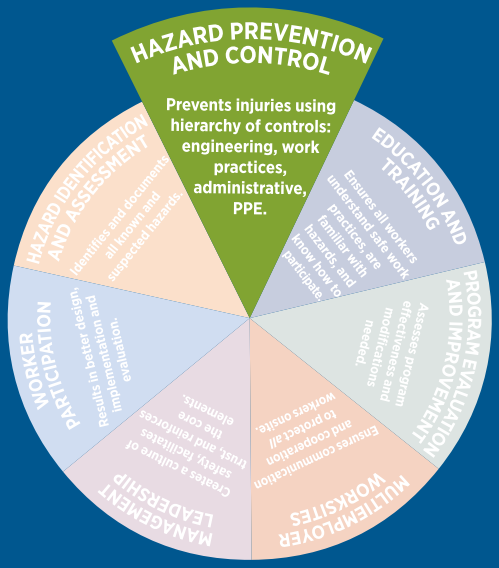
### How to accomplish it

- Evaluate each hazard by considering the severity of potential outcomes, the likelihood that an event or exposure will occur, and the number of workers who might be exposed.
- Use interim control measures to protect workers until more permanent solutions can be implemented.
- Prioritize the hazards so that those presenting the greatest risk are addressed first. Note, however, that employers have an ongoing obligation to control all serious recognized hazards and to protect workers.

*Note:* "Risk" is the product of hazard and exposure. Thus, risk can be reduced by controlling or eliminating the hazard, or by reducing workers' exposure to hazards. An assessment of risk helps employers understand hazards in the context of their own workplace, and prioritize hazards for permanent control.

# HAZARD PREVENTION AND CONTROL

**EFFECTIVE CONTROLS protect workers from hazards; help avoid injuries, illnesses, and incidents; minimize or eliminate safety and health risks; and help employers provide workers with safe and healthful working conditions. The processes described in this section will help employers prevent and control hazards identified in the previous section.**




**TO EFFECTIVELY CONTROL** and prevent hazards, employers should:

- Involve workers, who often have the best understanding of the conditions that create hazards and insights into how they can be controlled.
- Identify and evaluate options for controlling hazards, using a "hierarchy of controls."
- Use a hazard control plan to guide the selection and implementation of controls, and implement controls according to the plan.
- Develop plans with measures to protect workers during emergencies and nonroutine activities.
- Evaluate the effectiveness of existing controls to determine whether they continue to provide protection, or whether different controls may be more effective. Review new technologies for their potential to be more protective, more reliable, or less costly.

## Action item 1: Identify control options

A wealth of information exists to help employers investigate options for controlling identified hazards. Before selecting any control options, it is essential to solicit workers' input on their feasibility and effectiveness.

### How to accomplish it

- Review sources such as OSHA standards and guidance, industry consensus standards, NIOSH publications, manufacturers' literature, and engineering reports to identify potential control measures. Keep current on relevant information from trade or professional associations.
- Investigate control measures used at other worksites and determine whether they would be effective at your job sites.
- Get input from workers who may be able to suggest and evaluate solutions based on their knowledge of the job site, equipment, and work processes.

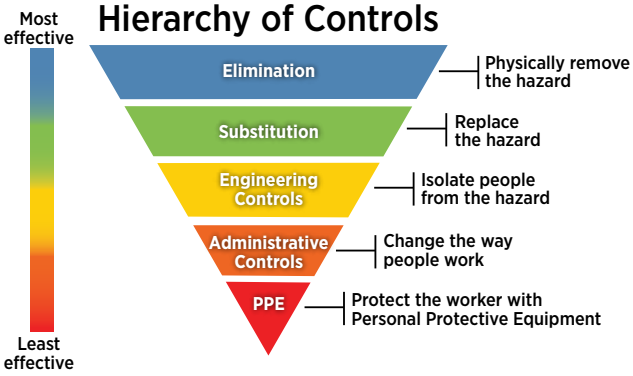
- For complex hazards, consult with safety and health experts, including OSHA's On-site Consultation Program.
- Plan the sequencing of various trades to reduce overlap where possible and to avoid exposing other trades to hazards.

## Action item 2: Select controls

Employers should select the controls that are the most feasible, effective, and permanent.

### How to accomplish it

- Eliminate or control all serious hazards (hazards that are causing or are likely to cause death or serious physical harm) immediately.
- Use interim controls while you develop and implement longer-term solutions.
- Select controls according to a hierarchy that emphasizes engineering solutions (including elimination or substitution) first, followed by safe work practices, administrative controls, and finally PPE.
- Avoid selecting controls that may directly or indirectly introduce new hazards. Examples include exhausting contaminated air into occupied work spaces or using hearing protection that makes it difficult to hear backup alarms.
- Review and discuss control options with workers to ensure that controls are feasible and effective.
- Use a combination of control options when no single method fully protects workers.




*Source: NIOSH*

*Note:* Whenever possible, select equipment, machinery, and materials that are inherently safer based on the application of "Prevention through Design" (PtD) principles. Apply PtD when making your own job site or equipment decisions. For more information, see the link to the NIOSH PtD initiative on the recommended practices Web page.

## Action item 3: Develop and update a hazard control plan

A hazard control plan describes how the selected controls will be implemented. An effective plan will address serious hazards first. Interim controls may be necessary, but the overall goal is to ensure effective long-term control of hazards. Control plans at a construction site may need to be updated and modified often as the project develops and the site conditions and hazards change.

### How to accomplish it

- List the hazards needing controls in order of priority.
- Assign responsibility for installing/implementing the controls to a specific person or persons with the power or ability to implement the controls.
- Establish a target completion date.
- Plan how you will track progress toward completion.
- Plan how you will verify the effectiveness of controls after they are installed or implemented.

## Action item 4: Select controls to protect workers during nonroutine tasks and emergencies

A hazard control plan includes provisions to protect workers during nonroutine tasks and foreseeable emergencies, such as falls, cave-ins, fires and explosions, chemical releases, hazardous material spills, infrequent activities, natural and weather disasters, workplace violence, terrorist or criminal attacks, disease outbreaks (e.g., pandemic influenza), and medical emergencies. Nonroutine tasks, or tasks workers don't normally do, should be approached with particular caution. Prior to initiating such work, review JSAs with the workers involved and notify others about the nature of the work, work schedule, and any necessary precautions.

### How to accomplish it

- Develop procedures to control hazards that may arise during nonroutine tasks (e.g., mobilization and demobilization of the site, critical lifts with cranes, concrete pours, or setting critical structural members).
- Develop or modify plans to control hazards that may arise in emergency situations.
- Procure any equipment needed to control emergency-related hazards.
- Assign responsibilities for implementing the emergency plan.
- Conduct emergency drills to ensure that procedures and equipment provide adequate protection during emergency situations.

*Note:* Depending on your location, type of business, and materials stored or used on site, authorities including local fire and emergency response departments, state agencies, the U.S. Environmental Protection Agency, the Department of Homeland Security, and OSHA may have additional requirements for emergency plans. Ensure that your procedures comply with these requirements.

## Action item 5: Implement selected controls on the job site

Once hazard prevention and control measures have been identified, they should be implemented according to the hazard control plan.

### How to accomplish it

- Implement hazard control measures according to the priorities established in the hazard control plan.
- When resources are limited, implement measures on a "worst-first" basis, according to the hazard ranking priorities (risk) established during hazard identification and assessment. (Note, however, that regardless of limited resources, employers have an obligation to protect workers from recognized, serious hazards.)
- Promptly implement any measures that are easy and inexpensive—such as general housekeeping, removal of obvious tripping hazards such as electrical cords, and basic lighting—regardless of the level of hazard they involve.

## Action item 6: Follow up to confirm that controls are effective

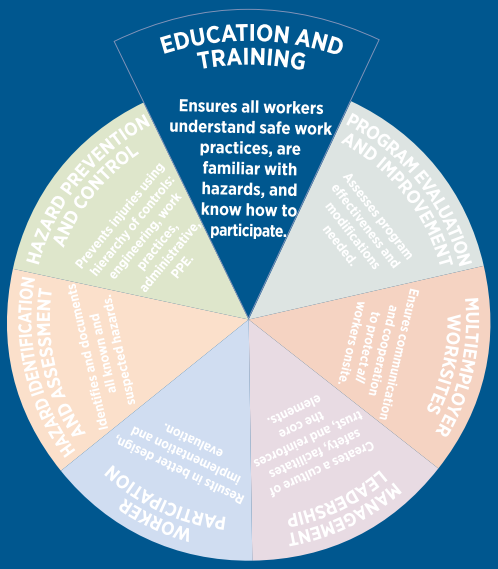
To ensure that control measures are and remain effective, employers should track progress in implementing controls, inspect and evaluate controls once they are installed, and follow routine preventive maintenance practices.

### How to accomplish it

- Track progress and verify implementation by asking the following questions:
  - Have all control measures been implemented according to the hazard control plan?
  - Have engineering controls been properly installed and tested?
  - Have workers been appropriately trained so that they understand the controls, including how to operate engineering controls, safe work practices, and PPE use requirements?
  - Are controls being used correctly and consistently?
- Conduct regular inspections (and industrial hygiene monitoring, if indicated) to confirm that engineering controls are operating as designed.
- Evaluate control measures to determine if they are effective or need to be modified. Involve workers in the evaluation of the controls. If controls are not effective, identify, select, and implement further control measures that will provide adequate protection.
- Confirm that work practices, administrative controls, and PPE use policies are being followed.
- Conduct routine preventive maintenance of equipment and controls to help prevent incidents due to equipment failure.



# EDUCATION AND TRAINING




**EDUCATION AND TRAINING are important tools for informing workers and managers about hazards and controls so they can work more safely and be more productive. Another role of education and training, however, is to provide workers and managers with a greater understanding of the safety and health program itself, so that they can contribute to its development and implementation.**

**EDUCATION AND TRAINING** provides employers (owners and executives), managers, supervisors, and workers with:

- Knowledge and skills needed to do their work safely and avoid creating hazards that could place themselves or others at risk.
- Awareness and understanding of hazards and how to identify, report, and control them.
- Specialized training, when their work involves unique hazards.

Additional training may be needed depending on the roles assigned to employers or individual managers, supervisors, and workers. For example, employers, managers, and supervisors may need specific training to ensure that they can fulfill their roles in providing leadership, direction, and resources for the safety and health program. Workers assigned specific roles in the program (e.g., incident investigation team members) may need training to ensure their full participation in those functions.

Effective training and education can be provided outside a formal classroom setting. Peer-to-peer training, on-the-job training, daily toolbox talks, and worksite demonstrations can be effective in conveying safety concepts, ensuring understanding of hazards and their controls, and promoting good work practices.

## Action item 1: Provide program awareness training

Managers, supervisors, and workers all need to understand the program's structure, plans, and procedures. Having this knowledge ensures that everyone can fully participate in developing and implementing the program.

### How to accomplish it

- Provide training to all managers; supervisors; workers; and contractor, subcontractor, and temporary agency workers on:
  - Safety and health policies, goals, and procedures
  - Functions of the safety and health program

  - Whom to contact with questions or concerns about the program (including contact information)
  - How to report hazards, injuries, illnesses, and close calls/near misses
  - What to do in an emergency
  - The employer's responsibilities under the program
  - Workers' rights under the OSH Act
- Provide information on the safety and health hazards of the job site and the controls for those hazards.
- Ensure that training is provided in the language(s) and at a literacy level that all workers can understand.
- Emphasize that the program can only work when everyone is involved and feels comfortable discussing concerns; making suggestions; and reporting injuries, incidents, and hazards.



- Confirm, as part of the training, that all workers have the right to report injuries, incidents, hazards, and concerns and to fully participate in the program without fear of retaliation.

## Action item 2: Train employers, managers, and supervisors on their roles in the program

Employers, managers, and supervisors are responsible for workers' safety, yet sometimes have little training on safety-related concepts and techniques. They need specific training that allows them to fulfill their leadership roles in the program.

### How to accomplish it

- Reinforce employers, managers, and supervisors' knowledge of their responsibilities under the OSH Act and the workers' rights guaranteed by the Act.
- Train employers, managers, and supervisors on procedures for responding to workers' reports of injuries, illnesses, and incidents, including ways to avoid discouraging reporting.
- Instruct employers, managers, and supervisors on fundamental concepts and techniques for recognizing hazards and methods of controlling them, including the hierarchy of controls (see "Hazard Prevention and Control").
- Instruct employers, managers, and supervisors on incident investigation techniques, including root cause analysis.
- As a starting point, consider providing the OSHA 30-hour construction safety course, or a similar course.

## Action item 3: Train workers on their specific roles in the safety and health program

Additional training may be needed to ensure that workers can incorporate safety and health responsibilities into their daily routines and activities.



### How to accomplish it

- Instruct workers on how to report injuries, illnesses, incidents, and concerns. If a computerized reporting system is used, ensure that all employees have the basic computer skills and computer access sufficient to submit an effective report.
- Instruct workers assigned specific roles within the safety and health program on how they should carry out those responsibilities, including:
  - Hazard recognition and controls (see Action item 4)
  - Participation in incident investigations
  - Program evaluation and improvement
- Provide opportunities for workers to ask questions and provide feedback during and after the training.
- As the program evolves, institute a more formal process for determining the training needs of workers responsible for developing, implementing, and maintaining the program.

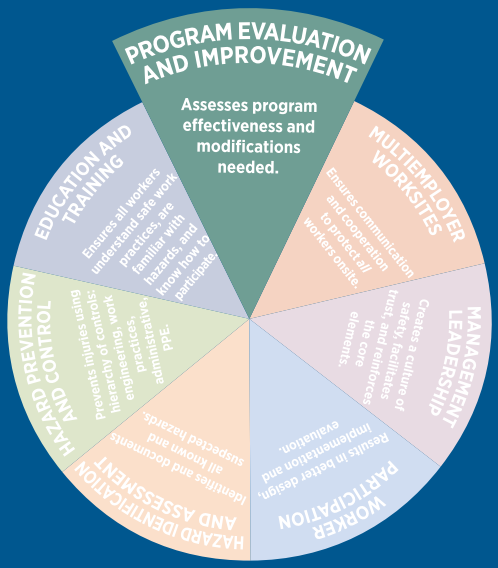
## Action item 4: Train workers on hazard identification and controls

Providing workers with an understanding of hazard recognition and control, and actively involving them in the process, can help to eliminate hazards before an incident occurs. Employers are required to instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his or her work environment to control or eliminate any hazards or other exposure to illness or injury [29 C.F.R. 1926.21(b)(2)]. As a starting point, employers may consider providing the OSHA 10-hour course for construction or a similar course to be supplemented by orientation training and toolbox talks to cover hazards on each specific site.

### How to accomplish it

- Train workers on techniques for identifying hazards, such as job hazard analysis (see OSHA Publication 3071).
- Train workers so they understand and can recognize the hazards they may encounter in their own jobs, as well as more general work-related hazards.
- Instruct workers on concepts and techniques for controlling hazards, including the hierarchy of controls and its importance.
- Train workers on the proper use of work practice and administrative controls.
- Train workers on when and how to wear required PPE.
- Provide additional training, as necessary, when construction progresses. Consider situations such as when new trades and/or equipment arrive at the job site to perform the next phase of the project.

# PROGRAM EVALUATION AND IMPROVEMENT




**ONCE A SAFETY and health program is established, it should be evaluated initially to verify that it is being implemented as intended. After that, employers should periodically, and at least annually, step back and assess what is working and what is not, and whether the program is on track to achieve its goals. Whenever these assessments identify opportunities to improve the program, employers, managers, and supervisors—in coordination with workers—should make adjustments and monitor how well the program performs as a result. Sharing the results of monitoring and evaluation on the job site, and celebrating successes, will help drive further improvement.**

**PROGRAM EVALUATION** and improvement includes:

- Establishing, reporting, and tracking goals and targets that indicate whether the program is making progress.
- Evaluating the program initially, and periodically, to identify shortcomings and opportunities for improvement.
- Providing ways for workers to participate in program evaluation and improvement.

## Action item 1: Monitor performance and progress

The first step in monitoring is to define indicators that will help track performance and progress. Next, employers, managers, supervisors, and workers need to establish and follow procedures to collect, analyze, and review performance data.

Both *lagging* and *leading* indicators should be used. Lagging indicators generally track worker exposures and injuries that have already occurred. Leading indicators track how well various aspects of the program have been implemented and reflect steps taken to prevent injuries or illnesses *before* they occur.

### How to accomplish it

- Develop and track indicators of progress toward established safety and health goals.
  - Track *lagging indicators*, such as:
    - Number and severity of injuries and illnesses
    - Results of worker exposure monitoring that show that exposures are hazardous
    - Workers' compensation data, including claim counts, rates, and cost

  - Track *leading indicators*, such as:
    - Level of worker participation in program activities
    - Number of employee safety suggestions
    - Number of hazards, near misses, and first aid cases reported
    - Amount of time taken to respond to reports
    - Number and frequency of management walkthroughs
    - Number and severity of hazards identified during inspections
    - Number of workers who have completed required safety and health training
    - Timely completion of corrective actions after a job site hazard is identified or an incident occurs
    - Timely completion of planned preventive maintenance activities
    - Worker opinions about program effectiveness obtained from a safety climate or safety opinion survey
- Analyze performance indicators and evaluate progress over time.
- Share results with workers and invite their input on how to further improve performance.
- When opportunities arise, share your experience and compare your results—across similar construction projects within your company, with other companies you know, or through trade or business associations.

*Note:* Indicators can be either quantitative or qualitative. Whenever possible, select indicators that are measurable (quantitative) and that will help you determine whether you have achieved your program goals. The number of reported hazards and near misses would be a quantitative indicator. A single worker expressing a favorable opinion about program participation would be a qualitative indicator.

## Action item 2: Verify that the program is implemented and is operating

Employers need to continuously evaluate the effectiveness of the entire program and newer site-specific programs to ensure they are operating as intended, are effective in controlling identified hazards, and are making progress toward established safety and health goals and objectives. The scope and frequency of program evaluations will vary depending on changes in OSHA standards; the scope, complexity, and maturity of the program; and the types of hazards it must control.

### How to accomplish it

- Verify that the core elements of the program have been fully implemented on each of your job sites.
- Involve workers in all aspects of program evaluation, including reviewing information, such as incident reports and exposure monitoring results; establishing and tracking performance indicators; and identifying opportunities to improve the program.
- Verify that the following key processes are in place and operating as intended:
  - Reporting injuries, illnesses, incidents, hazards, and concerns
  - Conducting job site inspections and incident investigations
  - Tracking progress in controlling identified hazards and ensuring that hazard control measures remain effective

  - Collecting and reporting any data needed to monitor progress and performance

- Review the results of any compliance audits to confirm that any program shortcomings are being identified. Verify that actions are being taken that will prevent recurrence.

## Action item 3: Correct program shortcomings and identify opportunities to improve

Whenever a problem is identified in any part of the safety and health program, employers—in coordination with supervisors, managers, and workers—need to take prompt action to correct the problem and prevent its recurrence.

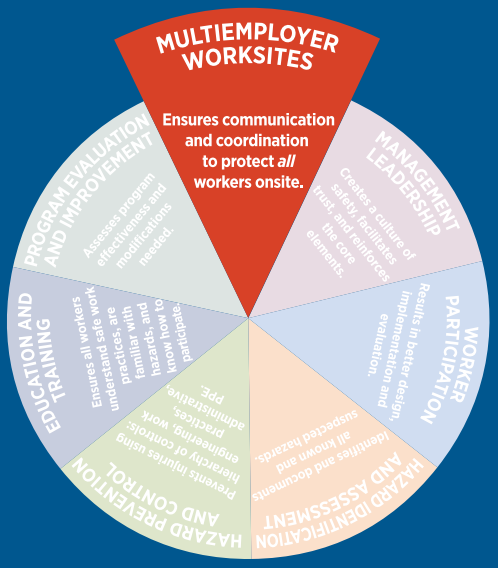
### How to accomplish it

- If you discover program shortcomings, take actions needed to correct them.
- Proactively seek input from managers, workers, supervisors, and other stakeholders on how you can improve the program.
- Determine whether changes in equipment, materials, key personnel, or work practices trigger any need for changes in the program.
- Determine whether your performance indicators and goals are still relevant and, if not, how you could change them to more effectively drive improvements in safety and health.

*Note:* The scope and frequency of program evaluations will depend on the scope, complexity, and maturity of the program and on the types of hazards it must control. Program evaluations should be conducted periodically (and at least annually) but might also be triggered by a change in process or equipment, or an incident such as a serious injury, significant property damage, or an increase in safety-related complaints.



# COMMUNICATION AND COORDINATION FOR EMPLOYERS ON MULTIEMPLOYER WORKSITES




**CONSTRUCTION JOB SITES** typically have workers who are employed by a general contractor and other workers who are employed by a contractor or subcontractor, or workers from other sources.

In these circumstances, it is important that each employer and contractor consider how its work and safety activities can affect the safety of other workers at the job site. Examples include electrical or mechanical contractors working for the general contractor at a building construction site. Several subcontractors working together on a job site (such as a subcontractor tying rebar and another subcontractor setting concrete formwork at the same job site) would be another example.

**IN TODAY'S ECONOMY**, an increasing number of workers are assigned by staffing agencies to work at specific "host" worksites under the direction and control of the host employer. Examples include unskilled laborers or skilled trade workers from a staffing agency who may be placed in either short- or long-term assignments with a general contractor or other contractor. In these situations, it is important for the staffing agency and the host employer to communicate and coordinate to provide and maintain a safe work environment for their workers. (Note: Any employer on a multi-employer worksite may be a "joint employer" with a staffing agency if temporary workers are utilized.)

In both temporary worker and multiemployer situations, safety is enhanced if employers establish mechanisms to coordinate their efforts and communicate effectively regarding their safety and health responsibilities to afford all workers equal protection against hazards. These mechanisms include measures to ensure that all workers on site (and their representatives) can participate in preventing injuries and illnesses. Failure to take these steps may undermine safety programs. For example, if the different employers have inconsistent policies for when and where to wear PPE, workers may mistakenly believe that the equipment is not needed, leading to injury. Inconsistent safety policies may also cause workers to question the credibility of safety and health programs, resulting in less meaningful employee engagement and participation.

Effective communication and coordination among such employers means that:

- General contractors and their workers are aware of:
  - The types of hazards that may arise from the work being done on site by workers employed by contractors, subcontractors, or staffing agencies.
  - The procedures or measures needed to avoid or control exposure to these hazards.
  - How to contact the contractor, subcontractor, or staffing agency if they have a safety concern.
- Before coming on site, contractors, subcontractors, and staffing agencies and their workers are aware of:
  - The previous work done and the types of hazards that may already be present at the job site.
  - The procedures or measures they need to use to avoid or control their exposure to these hazards.
  - How to contact the general contractor to get more information, report an injury, illness, or incident or if they have a safety concern.



## Action item 1: Establish effective communication

Each general contractor establishes and implements a procedure to ensure the exchange of information about hazards present on site and the hazard control measures in place. Thus, all workers on the site are aware of worksite hazards, and the methods and procedures needed to control exposures to them.

### How to accomplish it

- The general contractor communicates with contractors, subcontractors, and staffing agencies to determine which among them will implement and maintain the various parts of the safety and health program, to ensure protection of all on-site workers before work begins. These determinations can be included in contract documents that define the relationships between the parties and confirmed during pre-construction meetings.
- The general contractor establishes and implements procedures to exchange information with contractors, subcontractors and staffing agencies about hazards present on the job site and the measures that have been implemented to prevent or control such hazards.
- The general contractor gathers and disseminates information sufficient to enable each employer to assess hazards encountered by its workers and to avoid creating hazards that affect workers on the site.
- Contractors, subcontractors, and staffing agencies regularly give the general contractor any information about injuries, illnesses, hazards, or concerns reported by their workers and the results of any tracking or trend analysis they perform.
- Each contractor or subcontractor establishes and implements a procedure for providing the general contractor with information about the hazards and control measures associated with the work being done by its workers, and the procedures it will use to protect workers on the site.
- The general contractor gives contractors, subcontractors, and staffing agencies the right to conduct site visits and inspections and to access injury and illness records and other safety and health information.
- The general contractor provides contractors, subcontractors, and staffing agencies and their workers information on hazards that could occur as a result of nonroutine operations or emergencies and procedures to follow in emergency situations.
- Information is communicated before on-site work starts and, as needed, if conditions change.





## Action item 2: Establish effective coordination

General contractors, contractors, subcontractors, and staffing agencies coordinate on work planning, scheduling, and resolving program differences to identify and work out any concerns or conflicts that could impact safety or health.

### How to accomplish it

- General contractors:
  - Include in contracts and bid documents any safety-related specifications and pre-qualifications and ensure that contractors, subcontractors, and staffing agencies selected for the work meet those requirements.
  - Identify issues that may arise during on-site work and include procedures to be used by the general contractor, contractors, subcontractors, and staffing agencies for resolving any conflicts before work starts. This may be accomplished through pre-construction meetings.
- General contractors coordinate with contractors, subcontractors, and staffing agencies to:
  - Ensure that work is planned and scheduled to minimize impacts on safety.
  - Ensure that joint-employed workers are adequately trained and equipped before arriving on the worksite.
  - Harmonize their safety and health policies and procedures to resolve important differences, so that all workers at the site have the same protection and receive consistent safety information (i.e., conduct site-specific training).
- General contractors, contractors, subcontractors, and staffing agencies:
  - Work together to deal with unexpected staffing needs by ensuring that enough trained and equipped workers are available or that adequate lead time is provided to train and equip workers.
  - Make sure that managers with decision-making authority are available and prepared to deal with day-to-day coordination issues.

# LIST OF ABBREVIATIONS

| | |
|---|---|
| **CDC** | Centers for Disease Control and Prevention |
| **NIOSH** | National Institute for Occupational Safety and Health |
| **OSHA** | Occupational Safety and Health Administration |
| **PPE** | personal protective equipment |
| **PtD** | Prevention through Design |
| **SDS** | Safety Data Sheet |
| **SHARP** | Safety and Health Achievement Recognition Program |
| **VPP** | Voluntary Protection Programs |

# GLOSSARY OF TERMS

**close call/near miss:** An incident that could have, but did not, result in death, injury, or illness. They signal that hazards are not being adequately controlled or that new hazards have arisen.

**contractor:** An individual or firm that agrees to furnish materials or perform services at a specified price.

**elimination:** A change in process or workplace condition that removes the hazard or ensures that no worker can be exposed to a hazard under any foreseeable circumstances.

**hierarchy of controls:** A system for selecting and implementing the most effective control solutions for workplace hazards that includes:

- Elimination.
- Substitution.
- Engineering controls.
- Administrative controls.
- Personal protective equipment.

This is known as the "hierarchy of controls" because they should be considered in the order presented. Controls at the top of the hierarchy are potentially more effective and more protective than those lower in the hierarchy.

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| **host employer:** | An employer who has general supervisory authority over the worksite, including controlling the means and manner of work performed and having the power to correct safety and health hazards or require others to correct them. |
| **industrial hygiene:** | The science of protecting and enhancing the health and safety of people at work and in their communities. |
| **job hazard analysis:** | A technique that focuses on job tasks as a way to identify hazards before they occur. It focuses on the relationships among the worker, the task, the tools, and the work environment. |
| **joint-employed worker:** | A worker hired and paid by a staffing agency and assigned to work for a host employer, whether or not the job is actually temporary. |
| **lagging indicators:** | Measures of the occurrence and frequency of events in the past such as the number or rate of injuries, illnesses, and fatalities. |
| **leading indicators:** | Measures intended to predict the occurrence of events in the future. Leading indicators are proactive, preventative, and predictive measures that provide information about the effective performance of safety and health program activities that can drive the control of workplace hazards. |
| **metrics:** | Measures of performance. |
| **multiemployer worksite:** | Any worksite where two or more employers are present. See OSHA's Multiemployer Citation Policy. |
| **nonroutine operations:** | Operations that do not occur frequently or that occur as a result of an emergency. |
| **peer-to-peer training:** | A type of on-the-job training where workers exchange information about hazards, controls, reporting procedures, and work procedures that are relevant to the safety and health program. |
| **Prevention through Design:** | A NIOSH national initiative to prevent or reduce occupational injuries, illnesses, and fatalities through the inclusion of prevention considerations in all designs that impact workers. PtD encompasses all of the efforts to anticipate and design out hazards to workers in facilities, work methods and operations, processes, equipment, tools, products, new technologies, and the organization of work. |
| **quantitative exposure assessment:** | Techniques used to quantitatively measure workers' exposure to hazards, particularly health hazards, such as sampling for chemicals, dusts, biological organisms, noise, radiation, or other assessments. The purpose of such assessments is to quantify the level of workers' exposure to a hazard. Also known as exposure monitoring. |
| **root cause analysis:** | A collective term that describes a wide range of approaches, tools, and techniques used to uncover causes of problems. |

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| **Safety and Health Achievement Recognition Program:** | An OSHA program that recognizes small business employers who have used OSHA's On-site Consultation Program services and operate an exemplary injury and illness prevention program. |
| **safety data sheet:** | Written or printed material used to communicate the hazards of substances and chemical products to employees prepared in accordance with paragraph (g) of OSHA's Hazard Communication standard. |
| **serious hazards:** | Hazards that are causing or are likely to cause death or serious physical harm. See OSHA's Field Operations Manual, Chapter 4. |
| **shortcoming:** | A fault, deficiency, or gap that results in a failure to meet program design criteria. |
| **staffing agency:** | A firm that provides temporary workers to host employers. A staffing agency hires its own employees and assigns them to support or supplement a client's workforce in situations involving employee absences, temporary skill shortages, seasonal workloads, and special projects. |
| **substitution:** | The replacement of toxic or hazardous materials (or the equipment or processes used with them) with ones that are less harmful. |
| **Voluntary Protection Programs:** | An OSHA initiative that recognizes employers and workers in the private industry and federal agencies who have implemented effective safety and health management systems and maintain injury and illness rates below the U.S. Bureau of Labor Statistics averages for their respective industries. |
| **work practices:** | A set of procedures for performing a specific work assignment safely. |