

Section 1.04 Work Safety Planning

1. Scope

This section sets forth the requirements of work planning. It includes hazard assessment, job hazard analyses (JHAs), communications, emergency response plans, site safety plans, lightning hazards, and lone work plans. This section applies to all Reclamation and contractor activities.

2. General Requirements

a. Hazard Assessments

The responsible supervisor must assure that a workplace or work activities assessment is completed to determine if hazards are present or are likely to be present. The supervisor can complete a pre-job hazard analysis from Appendix 1.04-A; if warranted, the supervisor will ensure a written JHA is completed to identify all potential hazards. If potential exists for exposure to any chemical, physical, or biological agent that may have a detrimental effect, the supervisor must ensure that a health hazard assessment is included with the JHA.

b. Facility Safety

To help manage the safety and health of Reclamation employees, contractors, and visitors, each site should develop its own customized annual site safety plan. This allows the site's management to share its philosophy, expectations, and requirements for safety and health at the facility. It is also a means for documenting and communicating to employees the site annual safety goals.

3. Responsibilities

a. Area Office Program Coordinators

- Shall ensure that JHAs are being created and followed when appropriate.
- Shall assist first-line supervisors with mitigation measures for complex hazards or work tasks.
- Shall ensure that a fatigue management plan is created and followed by all appropriate personnel (when applicable).
- Shall assist in the creation of the site safety plan.
- Shall assist in the preparation of the emergency response plan.

b. First Line Supervisors

- Shall ensure that JHAs are prepared and followed before each job is assigned.
- Shall assist and advise the team preparing the JHA to ensure that all appropriate hazards are addressed in the JHA.

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Chapter 1: General Requirements | Section 1.04 Work Safety Planning

Applicability: Reclamation Employees, Facilities, Operations, and Contractors

- Shall assist and advise the team preparing the JHA to ensure that all appropriate hazards are addressed in the JHA.
- Shall ensure that all personnel are trained on JHAs, fatigue management, and emergency response plans.

c. Onsite Job Leads

- Shall ensure that all employees involved in a task covered by a JHA are familiar with and understand the JHA.
- Shall assist in the preparation of all JHAs for tasks with which they are involved.

d. People Doing the Work

- Shall review the JHAs for the work they do, understand the JHA requirements and methods to mitigate any hazards, and follow the JHA guidance.
- Shall understand emergency response procedures and follow those procedures during an emergency.
- Shall follow the fatigue management plan to minimize fatigue-related hazards.

4. Training Requirements

a. Initial.

All employees are required to be trained initially on JHA preparation and use, emergency response procedures, the site safety plan, and the fatigue management plan. No work will be assigned to an employee until they have been trained on and demonstrated these procedures.

b. Physical Qualification

All employees must be physically and medically qualified, as appropriate, for performing their assigned duties.

c. Certification

Supervisors shall ensure employees are certified or qualified as required in all sections of the Reclamation Safety and Health Standards. All field supervisors should be certified in first aid and cardiopulmonary resuscitation (CPR).

5. Hazard Identification, Assessment, and Safety Measures

a. Requirements for JHAs

The responsible supervisor must review any completed risk assessments and all tasks associated with a job to determine if a JHA is required. When developing the JHA, the job lead can use the optional Pre-Job Hazard Checklist (Appendix 1.04-A) and the following JHA process flow chart to guide the process.

Reclamation Safety and Health Standards—2024 Edition

Chapter 1: General Requirements | Section 1.04 Work Safety Planning

Applicability: Reclamation Employees, Facilities, Operations, and Contractors

FIGURE 1.04-1 Flow chart for use in determining whether a JHA is required for a job.

When a JHA is deemed necessary	When a JHA is deemed not necessary
Step 1: Job Supervisor completes pre-JHA form.	Step 1: Conduct pre-job meeting with employees
Step 2: Conduct pre-job meeting. Employees review and sign the JHA.	Step 2: Job is initiated and completed.
Step 3: Job is initiated and completed.	Step 3: Conduct post work review.
Step 4: Post work review. Discuss near misses and hazards.	N/A
Step 5: Revise the JHA to reflect post work review.	N/A

In making the assessment, the supervisor must consider mechanical, electrical, pressure, temperature, chemical, biological, radiation, sound, gravity, or motion hazards that can result in death or serious bodily injury. Examples of such hazards can include the following:

- being struck by falling or flying objects,
- getting pinched in/between or caught in rotating machinery,
- lifting excessive weight or lifting frequently,
- repetitive motion,
- electrical shock,
- radiation from welding and other sources,
- drowning,
- significant exposure to toxic or hazardous substances, gases, fumes, and atmospheres, and
- falls from heights above 4 feet.

b. Completing the Job Hazard Analysis

If the supervisor determines a JHA is required, the supervisor or their designated employee must consult with the employees involved in the activity and, if necessary, the local safety and health professional to develop a JHA. The job lead must review and sign the JHA, and the reviewing official must approve the JHA to indicate all appropriate hazards are addressed. The supervisor or their designated employee must then review the JHA with employees at a pre-job meeting before performing the work. A copy of the JHA must be maintained at the work site.

c. Written Procedures

Written procedures or job plans may be attached to the JHA as additional documentation; however, step-by-step procedures will be incorporated into the JHA.

Reclamation Safety and Health Standards—2024 Edition

Chapter 1: General Requirements | Section 1.04 Work Safety Planning

Applicability: Reclamation Employees, Facilities, Operations, and Contractors

d. Elements of a Job Hazard Analysis

Record developed written procedures using the sample Reclamation-wide standard form in Appendix 1.04-B: Job Hazard Analysis. At a minimum, the JHA must include the following basic elements:

- title identifying the project and specifying the operation,
- a number used for recording and indexing,
- emergency information, including physical location and emergency phone number(s),
- the date, to ensure the procedure is current,
- description of work to be performed,
- equipment, tools, and facilities involved,
- required employee knowledge, skills, physical ability, and certifications,
- principal or significant steps/tasks/activities of the operation in sequence, and
- approval signatures.

Guidance for Significant Steps. Supervisors will divide operations into only the number of significant steps/tasks/activities necessary to ensure adequate consideration of important items. Significant steps are those that encompass major aspects of the work. Limit the JHA to 7 to 10 significant steps/tasks/activities, and no more than 15 if the entire job is included.

- When evaluating the hazards of each significant step, include all hazards associated with the entire step without becoming encumbered by the details. Comprehension of the related safety message is enhanced if the document contains only brief, succinct points versus lengthy, complex narratives. Examples of significant steps include the following:
 - remove head cover,
 - remove old gasket,
 - clean gasket surface,
 - replace gasket, and
 - replace head cover.
- Risk Assessment. The determination of risk is a subjective, qualitative process that considers the criticality of the task, process, or condition. When assessing risk, consider physical, chemical, and/or biological hazards for each step of the job task. For high-risk hazards, use the DOI Operational Risk Management Assessment matrix (<https://www.smis.doi.gov/safetynet/information/program/ORMP.html>) as appropriate. The risk assessment matrix uses a combination of severity (the most serious type of injury or illness that can reasonably be expected from exposure to a hazardous condition) and probability (the likelihood that a condition will occur) to provide a decision maker with accurate information he or she can use to make informed decisions concerning appropriate risk controls.
- Hierarchy of Controls. Identify hazard control measures using the hierarchy of controls:

Reclamation Safety and Health Standards—2024 Edition

Chapter 1: General Requirements | Section 1.04 Work Safety Planning

Applicability: Reclamation Employees, Facilities, Operations, and Contractors

- elimination of the hazard,
 - substitution,
 - engineering controls,
 - administrative controls, and
 - safety equipment and personal protective equipment (PPE).
- When using safety equipment and/or PPE as a hazard control measure, the supervisor or foreman must provide employees with the specific safety equipment that is required. For example, instead of simply stating that a respirator is required, the supervisor/foreman must provide employees with a full-face negative pressure respirator with combination HEPA and organic vapor cartridge.
 - Required Training. JHAs must identify any required training (e.g., forklift training, Class 2 Asbestos training, etc.) and job leads must confirm that involved employees' training is current.
 - Required Certifications. JHAs must identify required certifications (e.g., crane operator certification) and job leads must confirm that involved employees' certifications are current.
 - Required Signatures. JHAs must include signatures of the job lead and the reviewing official.
 - Pre-approval Review for High-Risk Tasks. JHAs for tasks identified as high-risk that cannot be fully mitigated must be reviewed by a safety specialist or an industrial hygienist before approval by the job lead.
 - Pre-approval Review for Significant-Exposure Tasks. JHAs for tasks identified as having significant risk of exposure to occupational health issues that cannot be fully mitigated must be reviewed by a safety specialist or an industrial hygienist before approval by the job lead.
 - Post-job JHA Review. A post-job review must be performed by all team members involved in the task within seven days of job completion. This can be an informal review conducted after the work is completed, except when an activity resulted in a near miss, an injury, or damage to a facility. The JHA for a particular job/task must be updated to reflect lessons learned from the review, including any incidents involving a near miss, an injury, or damage to facility. The updated JHA must be approved by the appropriate supervisor.
 - Manager Review of Updated JHAs. An appropriate manager must review the updated JHA in conjunction with the appropriate safety specialist and/or any necessary subject matter experts with 14 days of any near miss, injury, or damage to the equipment or facility.
 - Reassessment During Work. As work is performed under a JHA, workers and supervisors can reassess the JHA to ensure that all significant hazards have been addressed and adequate hazard controls have been implemented. Job site monitoring and observation of work activities must be a basis for assessment and revision. All work

Reclamation Safety and Health Standards—2024 Edition

Chapter 1: General Requirements | Section 1.04 Work Safety Planning

Applicability: Reclamation Employees, Facilities, Operations, and Contractors

must stop whenever the JHA is determined to be lacking in identification or mitigation of hazards, or whenever the scope of work has changed. Work cannot restart until either a revised JHA or a new JHA is developed, discussed with all affected employees, and signed by all affected employees and the job lead.

e. Elements/Activities No Necessary in a JHA

It is not necessary to document every conceivable common hazard if the potential injury is not expected to require more than first aid treatment. Examples of such common day-to-day hazards include walking on level or slightly inclined surfaces, climbing standard staircases, lifting moderately light objects with little or no repetition, infrequent bending, operating a passenger vehicle, and using common hand tools and equipment.

f. High-Risk Tasks that Cannot be Mitigated

A high-risk task that cannot be mitigated requires the approval of the safety specialist and an appropriate manager (e.g., facility manager and area manager, regional office division chief, or equivalent) before the work can begin.

g. Emergency Call-Out Situations that Must Be Addressed Immediately

The job lead shall complete a pre-job hazard checklist and JHA, even if a supervisor is not available to sign the JHA. The job lead and the first-level supervisor shall discuss the JHA with the second-level supervisor after the work is completed.

h. Approvals

All approvals indicated on the JHA form shall be completed before activities begin, except in the circumstances described in paragraph 1.04.5.g. Verbal confirmation of approval can be used in special circumstances, for example, during an emergency call out.

6. Pre-Job Briefing and Planning Requirements

a. Pre-Job Meeting

All team members involved in the task must participate in a pre-job meeting before starting work. The job lead will review the pre-JHA checklist (optional) and discuss the JHA. All team members must participate in the discussion of the JHA and revise the JHA if needed.

7. Hazardous Environmental Conditions (Weather/Other)

a. Lightning Safety

There is no safe place outside when lightning is within 5 miles. (Sound travels 1 mile every 5 seconds. If lightning is observed and thunder follows within 30 seconds, then the lightning is within 5 miles.) Personnel will begin seeking shelter when lightning is observed within 25 miles, especially on lakes and waterways. Move inside a strong building or an enclosed hardtop vehicle, and avoid contact with plumbing and inside wiring, including appliances and corded phones, during a thunderstorm.

b. Requirements for Lightning Hazard Plans

When outdoor work is performed where a lightning hazard has been identified, a lightning hazard plan shall be developed. The lightning hazard plan shall contain, at a minimum, the following items:

- a designated person responsible for monitoring the weather to initiate the evacuation process when appropriate.
- a protocol to notify all persons at risk from the lightning threat. Depending on the number of individuals involved, a team of people may be needed to coordinate the evacuation plan.
- identified safe sites and a means to route the people to those locations, and
- an identified all clear signal that is considerably different than the warning signal.

8. Safe Practices

a. Working Alone

When employees must work alone and when the possibility of injury and inability to provide medical treatment could create life-threatening situations, supervisors must implement protective measures. The JHA process must determine appropriate measures and address the specific situations and hazards.

b. Communication

An effective means of communication must be available. This communication could include cellular phone, two-way radios, hardline telephones, and check-in and check-out procedures. Selected communication must be tested before the start of operations to verify that equipment will operate efficiently in the environment.

- **Lone Workers.** When an employee is working alone in an isolated location, communicate frequently to ensure the employee's safety. In some instances, employees (such as dam tenders) are stationed in isolated work areas and generally perform their duties alone. At a minimum, daily communication identifying activities and locations for that day is required.

c. Emergency Response Procedures

An emergency response plan must be in writing, and all employees must be informed about the plan and procedures. The emergency response plan must include provisions for emergency medical care and treatment. Include arrangements for ambulance service and emergency treatment and maintain a list of phone numbers. Contractors must submit emergency response plans to the contracting officer representative (COR) and the COR must approve the plan before the start of operations.

Reclamation Safety and Health Standards—2024 Edition

Chapter 1: General Requirements | Section 1.04 Work Safety Planning

Applicability: Reclamation Employees, Facilities, Operations, and Contractors

- Lone Workers. Employees working alone must have an effective way to obtain emergency assistance. If an employee misses a pre-determined check-in, initiate emergency procedures.

d. Fatigue Management

Supervisors must ensure a fatigue management plan (FMP) is developed for the following work patterns:

- work exceeds 10 hours a day for more than 4 consecutive days,
- work exceeds 50 hours in a 7-day work week,
- work exceeds 12 hours a day for more than 3 consecutive days, and
- work exceeds 58 hours a week for sedentary work (including office work)

e. Fatigue Management Plan Requirements

The FMP shall identify affected workers, management responsibility, training, and the controls established at the worksite. The FMP shall also address the circumstances, approval procedures, and precautions for exceeding the following conditions for operator work hour limitations.

- Equipment Operators. Equipment Operators. Operators of equipment, such as hoisting equipment and draglines, mobile construction equipment, electrically powered systems, hydropower plants, industrial manufacturing systems, hydraulically operated equipment, powered vessels, and boats, shall not be permitted to exceed 12 hours of duty time in any 24-hour period, including time worked at another occupation. A minimum of 8 consecutive hours of rest between shifts in a 24-hour period is required. See Appendix A for the definition of rest.
- Motor Vehicle Operators. Operators of motor vehicles while on duty shall not operate vehicles for a continuous period of more than 10 hours in any 24-hour period. Moreover, no employee may operate a motor vehicle while on duty after being in a duty status for more than 12 hours during any 24-hour period. A minimum of 8 consecutive hours shall be provided for rest in each 24-hour period.
- Training. Training shall include symptoms of fatigue, habits and actions the worker may take to avoid fatigue, actions workers should take if they observe fatigue in a coworker, and controls in place to prevent fatigue.
- Controls. Controls for fatigue may include work scheduling (limit number of consecutive night shifts), rotating jobs to prevent repetitive work, breaks at critical times in the work cycle, control of environmental factors (heat, cold, use of personal protective equipment), buddy check-in for individuals working alone, and alternate transportation for long commutes. Controls for fatigue shall include a discussion of driving to and from work and any possible mitigation of driving as a factor of fatigue.

▲ RSHS Appendix A: Definitions

RSHS Appendix A ([Definitions](#)) is available to print at:

<https://www.usbr.gov/safety/rshs/index.html>.

▲ RSHS Appendix B: Additional References and Citations

RSHS Appendix B ([Additional References and Citations](#)) is available to print at:

<https://www.usbr.gov/safety/rshs/index.html>.

Appendix 1.04-A: Pre-job Hazard Assessment Checklists

Appendix 1.04-A ([Pre-job Hazard Assessment Checklists](#)) are available to print at:

<https://www.usbr.gov/safety/rshs/>

Appendix 1.04-B: Job Hazard Analysis

Appendix 1.04-B ([Job Hazard Analysis Form](#)) from RSHS Chapter 1, Section 1.04 is available to print at: <https://teamssp.bor.doi.net/printanddup/forms/7Forms/7-2037.pdf>