

UTAH DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF DRINKING WATER

Field Safety Manual

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Acknowledgement

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INTRODUCTION

This Field Safety Manual is intended to help Department of Environmental Quality (DEQ) Division of Drinking Water (DDW) staff and DEQ District Engineers to:

- Recognize safety hazards encountered while performing onsite inspections of public water systems;
- Safely perform required work related functions; and
- Help DEQ and DDW and its employees to comply with Utah Labor Commission / Utah Occupational Safety & Health (UOSH) Rules (Note: UOSH has adopted the Occupational Safety and Health Administration United States Department of Labor (OSHA) by reference)

DDW expects its employees to be familiar with this manual and always to act in a safe manner in the office or in the field.

This Manual is a companion to the actual safety regulations covering employers and employees, as referenced in each section of this document, which are administered by the UOSH. This Safety Manual does not replace any or cover all of the requirements detailed in the actual UOSH regulations. Please defer to the UOSH regulations if any clarification is needed regarding the DDW Safety Manual. This Manual should never be considered a substitute for any provisions of a regulation.

DDW is charged with conducting sanitary surveys of all public water systems on a regular and recurring basis through the federal Safe Drinking Water Act. In addition, DDW employees also conduct construction inspections, compliance investigations, well grout witness, and other field visits of public water systems.

DDW employees engage and are exposed to a variety of hazards when conducting field work as the inspections are typically a comprehensive survey of the water system's physical facilities. The DDW Safety Manual is intended to help employees identify hazards associated with typical fieldwork activities. This Manual has a section with direction for generally encountered hazards that DDW staff may experience when conducting field work.



Helpful Tool: Employees Rights under UOSH

UOSH protects employees' rights to participate in the creation of a safe and healthy workplace without fear of discharge, retaliation, or discrimination. To learn more about employees' rights, see UOSH R614-1-10 Discrimination.

UOSH Website <https://laborcommission.utah.gov/divisions/UOSH/>

SAFETY POLICY

Although ensuring a safe working environment is an inherent function of management, this does not relieve any one individual of the responsibility to strive for the greatest possible degree of personal safety. The Division of Drinking Water's safety policy includes the following:

1. All employees are required to become familiar with and follow
 - a. DDW field safety policy and
 - b. DDW workplace safety protocols.
2. New employees must be informed of and be provided an electronic copy of this Safety Policy.
3. All employees that perform onsite inspections and field work will be provided with the personal safety equipment required to meet the site specific hazards of their assigned field work. See the Field Safety Manual chapter on Personal Protection Equipment (PPE) for further details and guidance.
4. All employees that perform onsite inspections and field work must:
 - a. Use proper safety devices and protective equipment for field work as required by DEQ, DDW and/or UOSH regulations.
 - b. Promptly report safety related incident, hazard, injury, or occupational illness following established DEQ/DDW reporting procedures.
 - c. Respect and follow the safety protocols or programs in place at the sites.
 - d. Take care of the personal protective equipment (PPE) properly.
 - e. Not wear torn or loose clothing while working around machinery.
 - f. Not remove, displace, damage, destroy or carry off any safeguard, notice, or warning provided to make the workplace safe.
 - g. Include a hard copy of this manual as part of staff's PPE.
 - h. Attend the mandatory annual Sanitary Survey Division Safety meeting. Staff is also strongly encouraged to review topics outlined within this Safety manual throughout the year within their section meetings.
5. DDW staff is not expected to complete inspections under the following unsafe scenarios (See the "NO GO" Policy chapter in the Field Safety Manual for more information and specific guidance for each "NO GO" Scenario listed below):
 - a. Confined Spaces
 - b. Unsafe Weather/Road Conditions (e.g. Severe Storms, Extreme Heat, damaged roads, flash floods)
 - c. Specific situations where staff does not feel safe or comfortable.
6. Staff encountering a "NO GO" scenario listed above does not relieve them from completing the intended work. Instead staff is expected to follow the "NO GO" Policy steps below:
 - a. Communicate to the water system why you can't proceed
 - b. Work with the water system to identify alternative way to verify required information
 - c. DDW staff is expected to document the scenario, reasoning, and resolution when a "NO GO" scenario of either an Unsafe Weather/Roads Conditions and/or a specific situation where staff felt unsafe that inhibited them from completing their inspection in entirety. The "NO GO" incident should be documented within the Notes of the Survey for the Water System in Waterlink. The notes within waterlink are a Division provided tool to document these incidences. A "NO GO" note documentation is not required for every instance where staff encounters a confined space during an inspection. See the Field Safety Manual Chapter on the "NO GO" Policy for further discussion on the level of documentation expected from staff. A "NO GO" Report must contain the following information at a minimum:

- Document what Public Water System (PWS) and relevant facility where “NO GO” scenario is encountered
 - Document the reasoning why staff was unable to complete a said task and,
 - Document the follow up instructions that were given to the PWS to complete the review of said task.
 - Alert manager that a “NO GO” note has been completed when a specific hazardous condition was encountered. DDW staff will notify their manager of any unsafe workplace condition experienced in the field promptly upon returning to the office. Unsafe conditions include topics outlined within this Safety manual e.g., personal confrontations, hazardous materials, or hazardous situations encountered.
7. It is recommended that staff conduct an onsite field safety meeting to identify all potential hazardous and appropriate emergency contact information in remote areas. The intention of this meeting is for staff to take a moment to understanding risks associated with each site and be mindful of work activities in isolated or remote locations, extreme weather, hazardous terrain, harmful wildlife, or lack of ready access to emergency services.

PERSONAL PROTECTIVE EQUIPMENT

DDW employees that perform onsite inspections and other field work should consider a wide range of personal protective equipment (PPE) in order to be prepared for the conditions that may be found in the field. Staff is expected to take every precaution possible to keep safe while conducting field visits.

There are three primary types of field work DDW staff will take part in:

1. Construction Inspections
2. Well Grouting Witness Inspections
3. Sanitary Survey Inspections

UOSH and DDW require specific PPE depending on the type of work to be completed and hazards encountered at the site where the inspection is completed. In the Resource Section of this Field Safety Manual there is a list of the type of equipment that is required for each of the primary inspection types listed above. The equipment lists also include additional equipment that is strongly recommended for staff to be able to safely complete typical field work tasks.

DDW staff is encouraged to consider building a general “field bag” to include typical required PPE equipment and field assistance items for all types of field work, such as:

- Copy of this Field Safety Manual
- Gloves
- Long sleeved shirts and long pants
- Sun screen
- Insect repellent
- First Aid Kit
- Cell phone for remote sites
- Camera
- Hearing protection
- Measuring tape
- Mirror and flashlight (for Sanitary Surveys)
- Pressure gauge (for Sanitary Surveys or technical assistance related to pressure issues)
- Tire pressure gauge (for inspection vehicle)

An example of some additional items that may assist staff in completing specific types of site inspections and are helpful to include in a field duffle:

- Safety glasses (for construction inspections)
- Safety vest (for construction inspections)
- Hard Hat (for construction inspections & well drilling sites)
- Steel-Toe Boots (for construction inspections & well drilling sites)
- Mud Scale (for well grouting)
- Viscosity Funnel (for well grouting)
- Chlorine Test Kit (for well grouting)

If you must wear a respirator to enter an area, DO NOT ENTER. DDW employees have not received the medical evaluation and fit test required before utilizing respirators or a Self-Contained Breathing Apparatus (SCBA). See the “NO GO” Policy of this safety manual for more information.

STEPS TO PREPARE FOR YOUR FIELD SITE VISIT

Preparation and hazard identification are valuable tools in a safety and accident prevention program. The following are steps to help staff prepare for a field site visit. This information is by no means all-inclusive, but is a resource to help staff be safe and work in a safe environment. You may also need to refer to UOSH standards. Check with your supervisor if you need further clarification.

1) Field Safety Checklist

Prepare for your field visit by completing a Field Safety checklist and Field Equipment checklist (see the Resources section of this document) prior to your field visit. This may include contacting the water system to gather additional information. Let the water system be aware that there may be areas you will not be able to go, see the "NO GO" Policy of this manual, such as confined spaces; ask for their assistance in providing information about these areas. All completed Field Safety checklists should be documented within the respective Public Water Systems/ Site Visits file in edocs. See the "NO GO" chapter within this manual for more ideas and information regarding working with a public water system to document areas you will not be able to enter.

2) Field Safety Hazards Identification

The next step is to identify the hazards associated with each activity. If you are new to field work or unsure what to expect from a site use the *Field Safety Hazards Identification Matrix*. A copy of the matrix can be found in the Field Safety Hazards Section of this manual. The matrix lists the hazards associated with each field activity you identified. Identifying the hazards you might encounter will make sure you are prepared with the appropriate PPE to complete the field work. The matrix can also be found in edocs Field Safety Policy folder or the shared drive (U:\Common\DDW Policy and Procedures\Field Safety Policy and Manual)

3) Assess Safety Risk And Make Decision

Carefully review the safety information given for each hazard in the Field Safety Hazards Section. Consider other information you know about this water system (file search, previous site visits "NO GO" Reports, etc.) that may present additional hazards before conducting the field visit.

4) Conduct the Site Visit and Document Unsafe or Corrected Conditions

Document any potential workplace safety hazards that were observed on the "NO GO" Report form found in the Resources Section of this document. The completed "NO GO" Report should be saved in edocs within the respective Public Water Systems/Site Visits file in edocs. The intent is to save any safety reports in a common place in the edocs Site Visits file within the individual Public Water Systems edocs file so there is a standardized location for all safety information related to the specific sites that all staff will have access to. This will allow new staff to be informed of any previous safety concerns or hazards encountered by other DDW staff.

Do not list potential safety hazards as a deficiency or make recommendations on how to correct the unsafe condition. Advise the water system that UOSH has the regulatory authority over workplace safety hazards – and that they do provide free technical assistance (consultations) for systems that want help identifying and correcting these issues.



Helpful Tool: Report of a Workplace Accident

Injuries occurring on the job need to be reported to Kimberly Diamond- Smith, or the current Human Resources Specialist for DDW, or the current Human Resources Specialist for DDW in the Human Resource office, as soon as possible. **Minor illness or injury** should be reported no later than **2 working days after the occurrence**. **Serious injury or illness** must be reported

within 8 hours. If you need assistance determining minor vs. serious, please contact Kimberly Diamond-Smith at 801-536-4285. **Initial medical care must be by a Worker's Compensation Fund approved provider.** A current list of providers can be accessed at www.wcf-utah.com. Employee should inform the medical provider that the injury is work related and give them the name of Kimberly Diamond-Smith at 536-4285, 195 N 1950 W, Box 4801, Salt Lake City, UT 84116 as the contact. Any information given to the employee concerning the injury and treatment should be forwarded to Kimberly Diamond-Smith, or the current Human Resources Specialist for DDW for Workers Compensation purposes.

If you are involved in a **vehicle collision** during work hours you need to **immediately** notify Kimberly Diamond-Smith at 801-536-4285. If the accident you are reporting involves an Enterprise Rent-A-Car vehicle, please contact Cerena Withers at (801) 538-9658. If you are cited, or there are any injuries a drug test will be administered. DEQ / DDW Fleet Operations accident report is a paperless Access on-line accident report form available at <https://riskconnectpm.secure.force.com/RiskIntakePortal/>



Helpful Tool:
Report of a Workplace Hazard

Use the *Workplace Hazard Report* form as a way to warn other staff of unsafe workplace conditions. A copy of the form is included in the Resource Section of this manual. This document should be filed with the water system records under the respective system's Site visits-Field Safety folder. If an unsafe workplace condition has been corrected, update the water system records to let others know of the change.

“NO GO” POLICY

What if I can’t inspect what I need to see?

DDW Safety Policy is staff should not enter or complete inspections under the following “NO GO” scenarios:

- a. Confined Spaces
- b. Adverse or Unsafe Weather/Road Conditions (e.g., Snow/Rain/Thunder Storms, Extreme Heat)
- c. Any situation where staff does not feel safe or comfortable.

Instead of staff proceeding into a potentially unsafe scenario, staff is expected to follow the “NO GO” Policy steps below:

1) Communicate to the water system why you can’t proceed

Situations arise in the field when you may be unable to proceed with part or all of an inspection due to unsafe workplace conditions. You will need to be able to tell the water system why you can’t inspect some or all of the water system. This would include pointing out to the water system what is needed before you can safely proceed or requesting that they supply the information for you if the situation can’t be made safe while you are on site. Check with your supervisor for guidance if necessary.

2) Work with the water system to identify alternative ways to get the information

When you are unable to proceed due to unsafe workplace conditions, there are alternative methods you can use to get the information to complete the inspection:

- Request that the water system demonstrate the information by taking a photo or video showing evidence of required feature, e.g.: no unsealed openings, locked hatches, vents properly screened, proper gaskets, etc. This may be discussed with the water system in advance of the survey, so it is available when you are there, taken at the time of the inspection, or give a deadline to the system to deliver the information to you before the inspection report is completed. Photos taken by the water system should be clearly labeled so that staff can identify which facility the photo is applicable to.
- When requesting additional information from the water system be sure to give a clear timeframe for their response.
- Take photos of the area without entering the space when you are unable to enter due to unsafe workplace conditions; i.e., area is a confined space.
- Use binoculars to inspect the area from an elevated location such as a nearby hill, etc. A camera stand can be used to help steady the camera or binoculars
- The surveyor may also gather information by discussing with the water system their maintenance schedules and records
- Recommend that the water system get a professionally trained or certified inspector to collect the information if you feel the water system would be at risk if he or she were to collect the information.



Note:

A hazard is recognized if it is commonly known in the employer’s industry, or if there is evidence that the employer knew or should have known of the existence of the hazard, or if it can be established that any reasonable person would have recognized the hazard.

3) Reporting and documenting the details of the “NO GO” scenario/scenarios that were experienced in the “NO GO” Report form.

- **“NO GO” Note should be saved in Notes section of the PWS sanitary survey section of waterlink.**

DDW staff is expected to document the scenario, reasoning, and resolution when a “NO GO” scenario of either an Unsafe Weather/Roads Conditions and/or a specific situation where staff felt unsafe that inhibited them from completing their inspection in entirety. The “NO GO” notes within waterlink are a Division provided tool to document these incidences. A “NO GO” note is not required for every instance where staff encounters a confined space during an inspection. The “NO GO” notes includes documentation of the PWS and relevant facility where a “NO GO” scenario was encountered and the resolution agreed upon between staff and the public water system to address the requirements of the inspection. DDW staff should let the water system know that a DDW “NO GO” scenario that prevents a complete sanitary survey or site visit will be identified in the site’s history of the field visits within the Division’s files

Certain “NO GO” scenarios may be identified as a workplace hazard and should be documented appropriately. Staff is required to document any hazards encountered during field work by notifying their manager promptly and completing the “NO GO” notes within waterlink.

Within the inspection report, do not list safety hazard as a deficiency on the sanitary survey or make recommendations on how to correct the unsafe workplace condition. Recording the Workplace Hazard within the “NO GO” note section of waterlink is intended to be an effective way to warn others who follow you after the unsafe workplace condition was noted. Check with your supervisor for guidance if necessary. Explain to the water system that UOSH regulates workplace safety, and does provide free technical assistance.

UOSH can be reached at (801) 530-6901 or (800) 530-5090 during normal business hours.

Website: <http://www.laborcommission.utah.gov/UOSH/index.html>

4) Unsafe to Inspect

If too many of the system’s facilities are unavailable for inspection due to workplace safety concerns, the surveyor may decide that the system is not available to survey. In this case, notify the water system in writing that it cannot be surveyed and will not receive credit for a completed survey. DDW staff should inform their manager that staff was unable to complete the survey due to unsafe to inspect conditions. Enforcement actions may be imposed on systems refusing or not available for a follow-up survey after a conference between the surveyor and their supervisor. Enforcement actions could include, but are not limited to, additional monthly bacteriological samples, not approved rating, and formal enforcement.

5) Personal Safety

You have the most to gain from working in a safe manner. Management has the responsibility to implement a safety program. However, you have the ultimate responsibility for your own safety and well-being.

If you feel your personal safety is threatened, DO NOT proceed with the survey or site visit until your concerns can be resolved.

Document your concerns in the “NO GO” Report Form.

SAFETY HAZARDS

Safety Hazard Types:

- Animal Hazards
- Chemical Hazards
- Biological Hazards
- Confined Spaces
- Construction Safety
- Defensive Driving / Vehicle Safety
- Electrical Safety
- Equipment Safety
- Hazard Communication Standard
- Working from Heights (ex., Ladder/Scaffolding)
- Tripping/Slipping
- Noise
- Lifting
- Personal Safety
- Hazardous Terrain
- Weather and Heat Exhaustion/Heat Stroke

ANIMAL HAZARDS

Is there a potential for dogs to be roaming loose in the area you are about to inspect?

- Arrange to have dogs contained or removed prior to your inspection.
- Before entering a yard, whistle, call out, or rattle the gate.
- When there *is* a dog on the premise, ask that the dog be restrained, or ask the person to pick up and hold the dog. NEVER reach out and pet a strange dog. Dogs may not bite the owner but will bite a stranger.
- When challenged or threatened by a dog (*dogs have strong territorial instincts*): don't run; stand still, drop your arms to your side. Don't look directly into the face of the dog, they may take that as a challenge. Don't rattle your keys or make startling moves. Wait for the dog to leave, then back away slowly. Don't run.
- In case of a dog bite, report the incident immediately to your supervisor and submit a DEQ / DDW Incident Report form (see the Resources Section of this document).

Is there a potential for bees, spiders or snakes to be inside the enclosed space you are about to inspect?

Always visually inspect inside an enclosed space before inspecting and have any bees, spiders or snakes removed prior to proceeding i.e., covered hatch lock protectors, etc. If you are allergic to insect bites, be sure always to have the appropriate medical treatment with you.

What is my risk of encountering a brown recluse spider?

According to experts, the brown recluse spider (*Loxosceles reclusa*) is very rare to the Northwest. You are more likely to encounter something else. That something else is often an aggressive house spider (*Tegenaria agrestis*), otherwise known as a hobo spider. Although native to the region, they are not very common.

How do I know if a hobo spider has bitten me and should I be concerned?

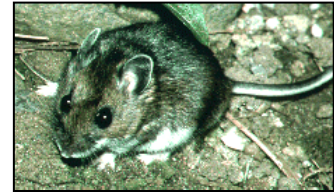
A hobo bite is similar to that of a brown recluse. Bites from either spider can result in lesions, then the tissue underneath often dies and sloughs off. Another symptom is a headache that doesn't respond to aspirin and that may last several days. Hobo spider bites, although not known to be fatal, should receive immediate medical attention. In case of a spider bite, report the incident immediately to your supervisor and submit a DDW Accident/Incident Report form. For more information go to the Cooperative Extension Service's web page at: <http://gardening.wsu.edu/library/inse005/inse005.htm>.



Hobo spider bite on a finger (Source: WSU Publication EB1548)

Are there rodent droppings present in the enclosed space you are about to enter?

If the enclosed space is infested with rodent droppings, there may be a risk of exposure to Hantavirus. AVOID the area until it has been properly disinfected and aired out by the water system.



Where is Hantavirus found and how common is it?

The deer mouse (*Peromyscus maniculatus*) is the main carrier of Hantavirus in the western United States; however, all wild rodents should be avoided. The deer mouse can carry and shed the virus without showing any signs of being sick. In Washington, about 11% of nearly 900 deer mice tested have been Hantavirus positive.

How is a person exposed?

Deer mice shed the virus in their urine, saliva, and droppings. A person may be exposed to Hantavirus by breathing dust after cleaning rodent droppings or disturbing nests, or by living or working in rodent-infested settings.

What are the symptoms of Hantavirus Pulmonary Syndrome?

Symptoms usually begin one to three weeks after exposure to infected deer mice. HPS is characterized by fever, chills and muscle aches, followed by the abrupt onset of respiratory distress and shortness of breath. The muscle aches are severe, involving the thighs, hips, back and sometimes the shoulder. Other symptoms include nausea, vomiting, and abdominal pain.

Source: Washington State DOH Publication 333-018 12/00 Rodent Control – Taking Steps to Prevent Hantavirus



Helpful Tool: Report of a Workplace Accident/Incident

Injuries occurring on the job need to be reported to Kimberly Diamond- Smith, or the current Human Resources Specialist for DDW in the Human Resource office, as soon as possible. Minor illness or injury should be reported no later than 2 working days after the occurrence. Serious injury or illness must be reported within 8 hours. If you need assistance determining minor vs. serious, please contact Kimberly Diamond-Smith at 801-536-4285. Initial medical care must be by a Worker's Compensation Fund approved provider. A current list of providers can be accessed at www.wcf-utah.com. Employee should inform the medical provider that the injury is work related and give them the name of Kimberly Diamond-Smith at 536-4285, 195 N 1950 W, Box 4801, Salt Lake City, UT 84116 as the contact. Any information given to the employee concerning the injury and treatment should be forwarded to Kimberly Diamond- Smith, or the current Human Resources Specialist for DDW for Workers Compensation purposes.

CHEMICAL HAZARDS

You may find chemical safety hazards while conducting sanitary surveys and field visits. The following questions will help you evaluate if you can work safely in the area. Use your best judgment before proceeding, and **do not enter if you are not sure you can do so safely**. If necessary, explain to the water system why you can't proceed.

1. Hazard Communication Standard. Ask the water system questions about the chemicals, and don't expose yourself to chemicals that are improperly stored, unmarked, or unknown. Review the Material Safety Data Sheet (MSDS) for any chemicals you may encounter.
2. Are there hazards that require the use of personal protective equipment (for example, head, eye, face, hand, or foot protection)? If yes, do you have the proper personal protective equipment (PPE) with you, are you trained in the use of the equipment, and do you know its limitations?
3. **DO NOT enter if there are hazards that require the use of a personal protective respirator**. DDW staff is not trained or certified in the use of respirators or SCBA. Therefore, the Division does not provide respiratory equipment. You should take active steps to consider other ways to get the job done.
4. Are there eye wash facilities and a quick drench shower within the area where you may be exposed to injurious corrosive materials?
5. Do you know who to contact and what to do in an emergency?



Gas Chlorination Treatment areas have the potential to contain a hazardous atmosphere from chlorine leaks. Areas are designed to be entered safely under normal operating conditions if the following procedures are in place:

1. There is a means for leak detection, and ammonia is available for testing leaks. Use caution when working around (ammonia to test for chlorine leaks. Toxic gaseous chloramines are formed when ammonia is mixed with chlorine.
2. Sensor tube for the automatic detector is near the floor level, screened, and recently tested.
3. There is an alarm tied to the interruptions in the chlorine feed.
4. Chlorination room is vented at floor level with adequate make-up air supply coming from the ceiling across the room.
5. Chlorination equipment is properly contained and cylinders restrained to prevent falling.
6. The door in the chlorination room opens out and has a panic bar and window.
7. Water systems have written emergency procedures.



DO NOT ENTER GAS CHLORINATION TREATMENT AREAS WHEN EMPTY CYLINDERS ARE ACTIVELY BEING CHANGED OUT FOR FULL CYLINDERS.

This is the most likely time when gas leaks will occur that could create a hazardous atmosphere. Wait until after the area has been ventilated and cylinders tested for leaks before entering. Chlorine gas is heavier than air so in the event of a leak head to higher ground.

CONFINED SPACES

Confined spaces are so variable in type that you may not immediately recognize the true nature of the hazard. This is especially true of pits, vaults, below grade pipe galleries, equipment rooms, gravity rapid rate sand filter systems for surface water treatment, or confined compartments. Knowing how to identify confined spaces and the hazards they present can mean the difference between life and death.

Definition

A **Confined Space** has three characteristics; it must meet **ALL THREE** characteristics to be considered a confined space:

1. Large enough that a person can physically enter and perform work inside.
A space must be large enough to get entirely inside. An access port that permits a worker to reach inside but not large enough to bodily enter the space would not be considered a confined space. Any hazards encountered in these situations would be covered by other regulations (air contaminants, lockout/tag out, hazard communication, etc.).
2. Limited or restricted means for entry or exit.
There is only limited means of entry or exit, limiting your ability to escape if an accident occurred while in the space; for example, open-top spaces such as pits or excavations or a space that must be entered using stairs or ladders.
3. Not designed for continuous occupancy.
A space may be designed for access and maintenance work, but it has not been designed for continuous occupancy. For example, a vault housing equipment may have mechanical ventilation and lighting that would permit workers to be in the space. However, if the ventilation is designed for equipment cooling rather than for human occupation the space would not be considered designed for continuous occupancy.



DIVISION OF DRINKING STAFF SHALL NOT ENTER CONFINED SPACES UNLESS THE FOLLOWING ARE ALL MET:

- **CONINTOUS VENTILATION OR AIR MONITORING,**
- **SAFE ENTRY OR ACCESS POINT MAINTAINED,**
- **ADEQUATE LIGHTING, AND**
- **STAFF FEELS COMFORATABLE AND SAFE TO ENTER**



Helpful Tool:

Have water system provide documentation such as photos, video or maintenance records on conditions inside of a confined space. See the "NO GO" Policy section within this manual for more details.

Examples of Confined Spaces



Booster Pump Station Vault



Reservoir and Hatch Cover



Well and Filter Vessels Located in a Pit with Unsafe Access Ladder



Gravity Rapid Sand Filter Basins

CONSTRUCTION SAFETY

You may need to enter construction or industrial areas while conducting sanitary surveys and field site visits. The following questions will help you evaluate if you can safely enter the area. Use your best judgment before proceeding, and **do not enter if you are not sure you can do so safely**. If necessary, explain to the water system why you can't proceed.

1. Are construction trenches more than 4 feet deep?

Construction trenches more than 4 feet deep are confined spaces - **DO NOT ENTER**. Always stand a safe distance from the edge of a trench. Generally, a safe distance from the edge of a trench is a distance equal to 1:1 from the edge of the trench to the bottom of the trench. Look for evidence of stress that could indicate an increased risk of trench failure such as fissures, stress cracks or sloughing along the edge of the trench.



- Are spoil piles at least two feet away from the edge of the trench?
- Is there any type of shoring or shielding in the trench?
- Who is the competent person for the excavation?
- Is there a means of egress within 25 feet?

2. Is there safe clearance for walking where heavy construction equipment is operating?

AVOID walking under overhead loads and STAY OUTSIDE the swing radius of equipment. Always make eye contact with the equipment operator.

- ### 3. Do you have the appropriate footwear for the conditions? (i.e., non-slip soled shoes for rough trails, mossy or slippery rocks, uneven or slippery floors, ladders, etc.). Discuss any special needs with the facility representative prior to the site visit.
- ### 4. Are there trip/slip hazards in the construction area due to poor housekeeping practices?

Avoid walking through areas where trip/slip hazards are present and ask the water system to remove the hazards before entering if you cannot do so safely.

- ### 5. Are hard hats provided and worn where the danger of falling objects or overhead obstacles exists?



Construction Zones

While conducting sanitary surveys or field visits, DDW employees may encounter active construction zones. PPE equipment to enter construction zones can include, but is not limited to, hard hats, safety vests, safety glasses, appropriate safety shoes, and hearing protection if noise levels exceed safe levels. Some DDW employees are not provided with appropriate safety shoes to enter active construction zones where steel-toed safety shoes are required. DDW employees may enter when the construction activity ceases and it is safe to do so.

DEFENSIVE DRIVING/VEHICLE SAFETY

Division of Drinking Water personnel will operate a motor vehicle in the performance of their work assignments. DDW staff that conducts onsite inspections or other field work is expected to:

- 1. Have a valid Utah driver license**
2. Complete required DEQ driver training
3. Obey all applicable traffic laws
4. All staff must wear seat belts at all times while vehicle is in operation
- 5. Utilize defensive driving skills**
6. Be aware of other vehicles and surroundings
7. Know who to call if your vehicle breaks down
8. Report any mechanical malfunctions or other maintenance needs immediately
9. Report all motor vehicle accidents as per established DEQ policy

Other Precautions

- If someone bumps you from behind or is following you, don't pull over at that spot, especially if it is isolated. Go to a public place with lots of lights and people and report to your supervisor immediately or call 911
- Driving precautions in rural areas: watch for debris and potholes; lanes are narrow, be aware of oncoming traffic; watch for surface changes; watch for slow going vehicles; be aware of unguarded railroad crossings; and watch for animals

Working in Traffic Conditions

- Be aware of the traffic conditions in the area
- Wear a safety vest when in areas of traffic movement
- Does the site have proper signage and traffic control?

Driving in Adverse Weather or Road Conditions

- Be aware of the weather and road conditions in the area
- Pull over or stop at a safe place when needed
- Use your judgment before proceeding
- Include in your field gear/pack the items for handling adverse weather conditions

DEQ vehicles are covered for liability by the Utah State Risk Management Fund (self-insured). Policy Number SG-79 as long as vehicle is owned by the State of Utah

Administered by:

Department of Administrative Services
Division of Risk Management
5120 State Office Building
Salt Lake City, UT 84114
Telephone (801) 538-9560
Fax (801) 965-4221

An accident report must be submitted in all of the following instances:

- A vehicle vs. vehicle
- A vehicle vs. animal or person
- A vehicle vs. an object
- Vandalism
- Any incident when occurrence of damage is of unknown origin

An accident report must be completed and submitted within 24 hours of the incident.

A post-accident drug or alcohol test will be conducted on an employee who is involved in a vehicle while on duty:

1. Where a fatality occurs
2. Where the employee receives a citation under state or local law for a moving violation arising from the accident and the accident involves bodily injury to any person, who, as a result of the injury, immediately receives medical treatment away from the scene if the accident
3. Where the employee receives a citation under state or local law for a moving violation arising from the accident and the accident involves one or more motor vehicles that incur disabling damage as a result of the accident that must be transported away from the scene by a tow truck or other vehicle
4. Where there is reasonable suspicion that the employee had been driving while under the influence of a controlled substance.

If the vehicle breaks down contact:

- Emergency Roadside Assistance: 1-800-277-2273
 - Vehicle maintenance, windshields, and tire replacement (SG79): 1-800-227-2273
- Unit/Client # = VIN or License Plate #



Helpful Tool:

Report of a Vehicle Accident

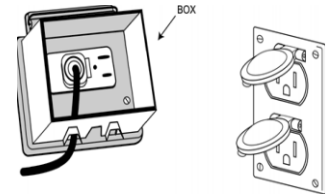
If you are involved in motor vehicle collision during work hours you need to immediately notify Kimberly Diamond-Smith at 801-536-4285. If you are cited, or there are any injuries a drug test will be administered. DEQ / DDW Fleet Operations accident report is a paperless Access on-line accident report form available at <https://riskconnectpm.secure.force.com/RiskIntakePortal>. Fax other reports including police, driver exchange, personal statements, and/or tow bill if applicable to (801) 965-4221

ELECTRICAL SAFETY

You may find electrical safety hazards while conducting sanitary surveys and field visits. The following questions will help you evaluate if you can work safely in the area. Use your best judgment before proceeding, and **do not enter if you are not sure you can do so safely**. If necessary, explain to the water system why you can't proceed.

1. Is there any exposed wiring and cords with frayed or deteriorated insulation?
2. In wet or damp locations, are electrical tools and equipment adequately protected?

Make sure fixtures and receptacles located in wet or damp locations are approved for such use. They must be constructed or installed so that water cannot enter or accumulate in wire ways, lamp holders, or other electrical parts.



Examples of waterproof receptacles & outlets

3. Are electrical enclosures such as switches, receptacles, and junction boxes provided with tight fitting covers or plates?

Make sure cabinets, fittings, boxes, and other enclosures in wet or damp locations are installed to prevent moisture from entering and accumulating inside.

4. Is the use of metal ladders prohibited in areas where the ladder or the person using it could come in contact with energized parts of equipment, fixtures, or circuit conductors?
5. Do they have a lock out/tag out procedure in progress?
(Lock out/tag out is a procedure to control the release of hazardous energy and system to protect against accidental restarting of equipment while maintenance is being done.)
DDW staff should never be involved with any inspections that require lock out/tag out procedures.



If staff arrives at a site and the site's contact states the site is under lock out/tag out procedure, staff should ask the water system about their lock out/tag out procedure. **DO**

NOT ENTER the area if you cannot do so safely. Regardless of any safety procedures that may be in place, you should never turn on or off any electrical equipment even if asked to do so by the water system.

6. **DDW staff shall not under any circumstances attempt to start or stop water system owned electrical equipment**

EQUIPMENT SAFETY

Sanitary surveys and field visits sometimes involves inspecting areas with equipment that may pose a safety hazard. The following questions will help you evaluate if you can work safely in the area. Use your best judgment before proceeding. **Do not enter if you are not sure you can do so safely.** If necessary, explain to the water system why you can't proceed.

Equipment Guarding

- Are rotating or moving parts of equipment guarded to prevent physical contact?



DO NOT go near unguarded moving parts or enter a facility that has unguarded moving parts.

Take care NOT to wear torn or loose clothing when inspecting around machinery. The photo to the right shows the engine shaft guard in the background that would prevent contact from the rotating shaft.

- Is there safe clearance for walking in aisles where motorized or mechanical handling equipment is operating?

Never remove, displace, damage, destroy, or carry off any safeguard, notice, or warning provided to make the equipment safe.

Equipment Noise Level

- Do you have the appropriate hearing protection for the conditions? Water systems must provide appropriate hearing protection when necessary. **If**

adequate hearing protection is not available DO NOT ENTER THE AREA.

You must have the suitable hearing protectors (molded ear muffs or foam ear plugs) for the conditions.

HAZARD COMMUNICATION STANDARD

Employee Right to Know

You have the right to know about hazards you face on the job and how to protect yourself. The Hazard Communication standard requires that employees are trained in the identification of chemicals they may encounter and protective measures they must take to prevent exposure and/or injury.

Recognize, understand, and use labels and Material Safety Data Sheets
Use safe procedures when working with hazardous substances

Hazardous materials may be:

- Toxic
- Corrosive
- Explosive
- Flammable
- Reactive

Most chemicals are toxic at some level of exposure. If allowed to enter the body through the nose, mouth, or skin, they can make you sick or cause death. Health effects may be:

- Acute - health effects that occur rapidly following exposure
- Chronic - health effects are long, continuous and follows repeated long-term exposure

Hazardous materials can enter your body in several ways:

- Absorption
- Ingestion
- Inhalation
- Injection

Labeling

1. What is in the container?
2. Possible hazards
3. Precautions you must take
4. Symptoms of over exposure
5. What to do in case of over exposure
6. Where to find further instruction and information
7. Safety equipment to use

For someone who has been exposed to hazardous materials

1. Contact emergency services immediate
2. Refer to MSDS for specific first aid procedures
3. Refer to MSDS for emergency instructions
4. Report all injuries to your supervisor immediately

When working with Hazardous chemicals

1. Use the required safety equipment
2. Check your clothing and gear for signs of wear

3. Remove contact lenses if vapors might be present
4. Pay attention to all warning signs
5. Read the label on every container you handle
6. If you are unfamiliar with a hazardous material, be sure to read the MSDS for that material
7. Take all precautions recommended on the label or in the Safety Data Sheets (SDSs)

LADDER SAFETY

Walking Surfaces, Walkways and Catwalks

The following questions will help you evaluate the safety and condition of the walking surfaces, walkways, and catwalks you may encounter while conducting sanitary surveys or field visits. Use your best judgment before proceeding, and **do not enter if you are not sure you can do so safely**. If necessary, explain to the water system why you can't proceed.

1. Are walking surfaces or steps kept dry or are appropriate means taken to assure the surfaces are slip-resistant (i.e., mossy or slippery rocks, surfaces covered with water, painted concrete floors that are wet, etc.)?
2. Is adequate headroom provided for the entire length of the walkway or catwalk?
3. Are standard guardrails provided wherever walkway or catwalk surfaces are elevated more than 4 feet above the adjacent floor or ground?
4. Are floor openings guarded by a cover, guardrail, or equivalent on all sides? Every open-sided floor or platform 4 feet or more above adjacent floor or ground level shall be guarded by a standard on all open sides except where there is an entrance to ramp, stairway or fixed ladder.



Ladders

Fixed Ladders

There are two types of **Fixed Ladders**:

- **Caged Safety Ladders** are fixed ladders equipped with cages; and
- **Ladders with Ladder Safety Devices** are fixed ladders that incorporate lifebelts, friction brakes, and sliding attachments to climb the ladder.

Do not use fixed ladders equipped with LADDER SAFETY DEVICES. DDW employees have not been properly trained nor have they been provided with the proper equipment to use ladder safety devices.

To use **Caged Fixed Ladders** safely:

- Cages should be provided on ladders of more than 20 feet to a maximum unbroken length of 30 feet.
- Cages should extend a minimum of 42 inches (3 ½ feet) above the top landing surface, unless other acceptable protection is provided.
- Landing platforms should be provided for each 30 feet of height or fraction thereof, except that, where no cage or ladder safety device is provided, landing platforms should be provided for each 20 feet of height. Each ladder section should be offset from adjacent sections.
- Cages should extend down the ladder to a point not less than 7 feet or more than 8 feet above the base of the ladder.



- Have both hands free to hold on to the ladder.
- Face the ladder when you are climbing up or down.

Portable Ladders

There are two types of **Portable Ladders**:

- **Step ladders**; and
- **Portable Metal or Wooden Ladders**.

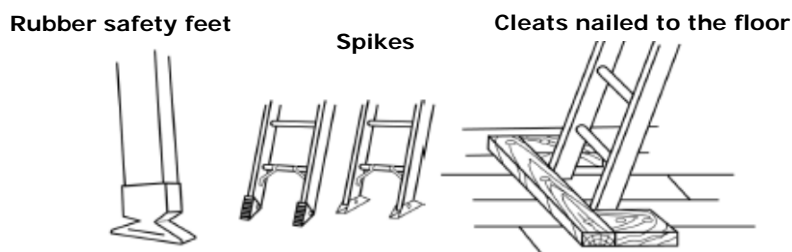
To use **Step ladders** safely:

- Use step ladders that are less than or equal to 20 feet long.
- Do not climb on the bracing or back legs of the stepladder.
- Do not stand on a step higher than the third step from the top, if working five feet or higher from the ground.
- Do not use the tops of stepladders as steps.
- Have both hands free to hold on to the ladder.
- Face the ladder when you are climbing up or down.

To use **Portable Metal or Wooden Ladders** safely:

- Use portable ladders only for their intended purpose
- Do not use ladders as guys, braces, or skids
- Do not put ladders on boxes, barrels or other bases to make the ladder taller
- Make sure while climbing portable ladders, you:
 - Have both hands free to hold onto the ladder
 - Face the ladder when you are climbing up or down
 - Top of ladder must extend at least 3 feet over the upper landing surface
 - Do not use on slippery surfaces without ladder being secured at top and bottom
- Use the appropriate length of ladder.
 - Use single ladders less than 30 feet long
 - Shorter ladders cannot be spliced to make longer sections
- Make sure the base section of the portable ladder has secure footing so it will not slip, or the bottom *must* be tied or held in position.

Examples of securing a ladder at the base

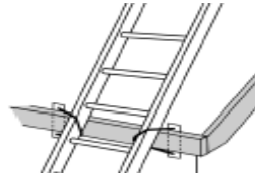


- Make sure where the top of the ladder rests is reasonably rigid and strong enough to support the load and that both rails are supported at the top, unless the ladder has a single support attachment.

Examples of securing a ladder at the top

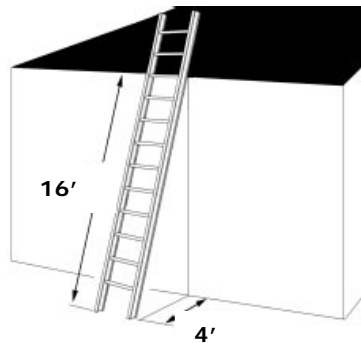


Ladder with a single support attachment for a pole



Ladder tied to the support at the top

- Make sure a non self-supporting portable ladder is set at a safe angle. The proper angle is to place the base a distance from the vertical wall equal to one-fourth the working length of the ladder.



Example of a portable ladder base placed a distance from the vertical wall equal to $\frac{1}{4}$ the working length of the ladder



**EXAMPLE OF A TOWER
YOU SHOULD NOT CLIMB**

- ♦ Standard caged ladder is NOT provided.
- ♦ Fixed Ladder with ladder safety devices provided. DDW Employees are not trained nor are they provided with the proper equipment to use ladder safety devices.



**EXAMPLE OF A TOWER
YOU CAN CLIMB.**

- ♦ Standard caged ladder is provided with built-in pull down safety ladder to access caged ladder; and
- ♦ A wrap-around top guardrail system is provided to allow access to top landing surface.



**EXAMPLE OF A RESERVOIR
YOU SHOULD NOT CLIMB**

- ◆ Standard portable ladder is NOT provided.
- ◆ Ladder is not properly secured and does not extend beyond the top edge.



**EXAMPLE OF A RESERVOIR
YOU CAN CLIMB**

- ◆ Standard portable ladder is provided.
- ◆ Ladder is properly secured and extends beyond the top edge.
- ◆ Does extend beyond the top edge.

LIFTING

DDW staff should not be lifting anything possibly strenuous during a field inspection. Any possible lifting should be completed by the Public Water System Employee. DDW staff may assist but should stop to consider the principles detailed below before proceeding.

Most back problems occur over a period of time. Careful attention to lifting on the job and at home and regular exercise to maintain fitness and strength will help you maintain a healthy back. The following principles will assist in lowering your risk of back injury due to lifting.

1. Size up the load.

Test it to see if you can lift it safely. Can you grasp it securely? Good handholds (cut-outs, handles) will make the load easier to lift. Make sure the load is balanced in your hands.

2. Get as close to the load as possible before lifting it, and keep it close once you've lifted it. If possible, slide the load towards you before picking it up.

3. Keep the load as close to your body as possible. If the load is large and cannot be placed between your knees as they are bent, bend at the hips and waist with your knees relaxed. It is more important to keep the load close than it is to bend your knees.

One solution to lifting a larger load is to get another person to help you. A better solution is to use mechanical assistance (hand trucks, carts) to avoid lifting altogether.

4. Make sure your footing is secure. Do not lift objects that obscure vision and footing. Plan ahead and make sure that your travel path is clear of obstructions and that there are no slip hazards.

5. Do not twist while lifting! Move your feet so that they point in the direction of the lift as you turn.

6. Lift smoothly and slowly. Do not jerk the load.

7. Organize the work so as to avoid lifting from the floor or above shoulder level. Items to be handled should be between knee and shoulder height.

Source: Washington State Dept. of L&I Publication 415-055-909

8. If you have a lot of lifting to do during the day, try not to do it all at once. Alternate lifting tasks with lighter work to give your body a chance to recover. Remember, mechanical assistance is just as important for repetitive lifting as it is for heavy lifting.

9. Use the same principles when lowering or placing the load after lifting.

10. Try to avoid carrying the load more than 10 feet without getting mechanical assistance. Use a dolly, cart, etc.





PERSONAL SAFETY

Sometimes you may be working in remote areas that could potentially put you at risk of getting lost or hurt. You should take the following steps to ensure you can work safely when conducting sanitary surveys and field visits in remote locations:

Plan Ahead

1. Notify your supervisor or a fellow worker that you will be working in a remote area.
2. Have a check-in time set up before you leave. A check-in/check-out procedure can be used so that it is known where you are and when you have safely returned at the end of the day.
3. Carry a fully charged cell phone (available for checkout).
4. Know your site's emergency call-in number or your supervisor's pager/cell phone number.
5. Always wear your ID badge to clearly identify yourself.
6. Wear appropriate footwear for the conditions, such as non-slip soled shoes for rough trails, mossy or slippery rocks, uneven or slippery floors, ladders, etc.
7. Your supervisor will schedule initial safety training and periodic field safety training.
8. If you are injured or involved in an accident, follow DEQ / DDW accident reporting procedures.



Helpful Tool: Report of a Workplace Accident/Incident

Injuries occurring on the job need to be reported to Kimberly Diamond- Smith, or the current Human Resources Specialist for DDW in the Human Resource office, as soon as possible. Minor illness or injury should be reported no later than 2 working days after the occurrence. Serious injury or illness must be reported within 8 hours. If you need assistance determining minor vs. serious, please contact Kimberly Diamond-Smith at 801-536-4285. Initial medical care must be by a Worker's Compensation Fund approved provider. A current list of providers can be accessed at www.wcf-utah.com. Employee should inform the medical provider that the injury is work related and give them the name of Kimberly Diamond-Smith at 536-4285, 195 N 1950 W, Box 4801, Salt Lake City, UT 84116 as the contact. Any information given to the employee concerning the injury and treatment should be forwarded to Kimberly Diamond- Smith, or the current Human Resources Specialist for DDW for Workers Compensation purposes.

In the Event of an Assault

If you are attacked or threatened you have the right to defend yourself in any manner necessary proportionate to the threat. How you choose to defend yourself will depend on the circumstances of the assault and your abilities. Consider that you could be attacked and think about what you can or are willing to do to protect yourself. There is no one guaranteed method of defense. You will need to consider alternatives and optional responses.

Trust Your Instincts

If you are feeling uncomfortable or unsafe, cancel the visit, reschedule, or request back-up from police, security, or other DDW staff.

If you are in a tight situation:

1. Don't show fear. Watch their body language.
2. Try not to show any facial expression.
3. Control your breathing.
4. Speak slowly and lower the pitch of your voice, talk from your diaphragm.
5. Watch your hands so they don't move nervously. Maintain personal space.
6. Maintain eye contact, but don't try to stare anyone down.
7. Don't challenge, but be assertive, especially if lewd comments are made.
8. Check your watch, say you need to call your office because they are waiting for your call.
9. Repeat what you are there for.
10. Stand up and leave.

HAZARDOUS TERRAIN

Public Water System facilities, such as features springs and tanks, are often in mountainous or elevated areas. Access to said areas often requires strenuous hiking in hazardous terrain. Staff should not proceed beyond anywhere they do not feel comfortable walking safely at any point during field work.

Hazardous terrain includes conditions such as long distances, steep slopes, loose terrain, wet terrain, uneven footing, or any area where there is a debris falling, slipping or tripping hazard potential. Hiking in hazardous terrain includes risk of injury including:

- Tripping
- Sprains
- Breaks



A steep slope hazard area is an area with slope gradients. A steep slope is any gradient in which hiking from the toe to top of the slope staff exerts strenuous effort.

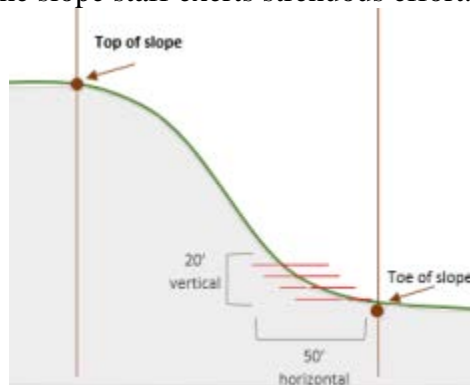


Figure 1. Definitions of slope gradient

DDW staff should stop and assess their ability and preparedness before attempting any long hiking or climbing any steep slopes. Hazards of hiking in steep terrain include an increased risk of sprains or injury from:

- rolling debris,
- loose soil rocks that create poor footing,
- high levels of exertion, and
- tripping,
- falling down.

DDW staff should proceed at a pace they are comfortable with and take breaks as necessary to maintain sound footing. Appropriate foot wear and hiking tools should be considered to reduce the risk of injury. Staff should consider if they have brought enough water for hikes that may be several miles. Staff should note any areas of high erosion and avoid the area as said area is more prone to landslides and instability. The current and recent weather should also be considered when hiking in steep terrain as recent rains could cause loose soil conditions. DDW staff should

also consider proper hydration and heat exhaustion when hiking. In the event staff is not completely prepared for such hiking, the inspection should be postponed.

DDW staff should use tools like Google Earth to look at aerial photography of sites they are unsure of to identify if there are any steep slopes possibly present for areas they are not familiar with. Figure 2 below shows an example of a steep slope at site that is clearly visible from the aerial photos.



Figure 2: Aerial photo of a steep slope at a field site.

DDW staff will not complete inspections on steep terrains during thunderstorms due to the increased risk of landslides and lighting hazards.

WEATHER AND HEAT STROKE/HEAT EXHAUSTION

Staff often completes field work during the summer months. Due to the Utah climate it is important for staff to stay hydrated to avoid heat exhaustion and heat stroke. It is equally important for DDW staff to know the difference between heat stroke and heat exhaustion:



In the event of heat stroke, staff should contact 911 immediately. Staff should contact their supervisor and DEQ HR contact to initiate the proper report and notification forms required for worker compensation.

Proper hydration and planning ahead can help reduce the risk of heat exhaustion. Staff should not feel they need to work past their personal comfort level to complete field work that would place them in a scenario where staff could experience heat exhaustion.

RESOURCES

- **Field Safety Hazard Identification Matrix**
- **DDW Field Safety Checklist**
- **Site Visit Safety & Equipment Checklists**
- **Workplace Incident Report Form Links**
- **Accident/Incident report Form Instructions**
- **DDW Workplace Safety Protocols**
- **Safety Resource Contacts**
- **Safety References (UOSH)**

FIELD SAFETY HAZARDS IDENTIFICATION MATRIX

How to use this matrix: This matrix is a tool to help you identify workplace hazards and assess risk in preparation for conducting a sanitary survey or field visit. Each hazard identified in the matrix is dealt with in the Field Safety Hazards Section. Carefully consider each hazard and then review the information and follow any directions noted in the specific section. This matrix is by no means all-inclusive and you should check with your supervisor if you need clarification.

Field Activity	Animal Hazards	Chemical Hazards	Confined Spaces	Construction Safety	Defensive Driving/Vehicle Safety	Electrical Safety	Equipment Safety	Hazard Com	Ladder Safety	Lifting	Personal Safety	Hiking Safety	Weather and Heat Stroke/Heat Exhaustion
SOURCE													
General Appearance	X						X				X	X	
Well Pits	X		X			X	X		X		X	X	X
Well House	X					X	X				X	X	X
Chemical Storage		X						X			X	X	
Well drilling		X		X			X	X			X	X	X
Spring Box	X										X	X	X
Lids and Hatches	X										X		
Remote Areas	X				X						X	X	X
Construction Site				X			X		X	X	X	X	
STORAGE FACILITIES													
Elevated Reservoirs									X		X	X	X
Control Vaults	X		X			X			X		X		
Lids and Hatches	X									X	X		
Construction Site	X			X							X		
PUMPS/PUMING FACILITIES													
Wells/Booster Pumps							X				X	X	X
Pressures Tanks			X			X					X		
Valve Pits	X		X								X		
Turbine/Belts							X				X		
Chemical Storage		X						X			X		
Generator Fuel and Oil		X						X			X		
TREATMENT													
Chemical Storage		X						X			X		
Filtration			X						X		X		
Catwalks/Ladders									X		X		
Controls											X		
Disinfection		X						X			X		
Treatment Chemical Process		X						X			X		
DISTRUBTION SYSTEM													
Construction Site	X	X		X		X	X		X			X	
PVR/Air Relief Valves	X		X						X				
Excavations		X	X	X					X				
GENERAL													
Traffic Safety					X						X		

DDW FIELD SAFETY CHECKLIST

This field safety checklist serves as a tool to document your hazard assessment, communication plan, and emergency procedures. DDW staff should identify hazards, as well as precautions and actions taken to address and mitigate those hazards. Completed forms should be saved in the respective water systems Site Visits- Field Safety folder in edocs.

Site Information		
DDW Inspection Staff:	<i>Names of DDW completing inspection</i>	
District Engineer and/or County Health Department	<i>List contact information of District Engineer and County Health Department whenever applicable.</i>	
Date(s) of Travel:	<i>Start date, duration, expected return to DDW</i>	
Site Information	<i>PWS number inspected, Facility ID number, and/or site description as applicable</i>	
Purpose of Inspection:	<i>Type, length, and purpose of activity (e.g. Sanitary Survey, 4 hours, hiking)</i>	
Site Access	<i>Are there any particular restrictions or challenges to accessing site? Note any alternate routes or suggested parking areas; gate access codes, etc. Make special note if isolated or remote.</i>	
Environmental Hazards	<i>Describe any dangerous wildlife, insects, endemic diseases, poisonous plants, etc. that participants may encounter. Note intended mitigation measures; discuss prior to trip.</i>	
“NO GO” Criteria (See page 9 of this manual)	<i>Was the water system alerted to our policy on “NO GO” Criteria? DDW staff should be familiar with alternative methods to verify required data, see “NO GO” Criteria chapter of this Field Safety Manual for details regarding the level of information expected.</i>	
Expected Weather	<i>Note extreme conditions that could impact the trip or require additional planning, (e.g. high heat, wind, rain, snow, approaching storm).</i>	
Emergency Services and Contact Information		
Local Contact	<i>Name, address & phone #, may be a local operator, USFS office, etc.</i>	
Emergency Medical Services	<i>Procedures for contacting emergency medical services if 911 isn't available.</i>	
Equipment and Activities – Consult with EH&S for specific training and requirements.		
Field Transportation	<i>Check Tire Pressure</i>	<input type="checkbox"/>
	<i>Check Fuel Level</i>	<input type="checkbox"/>
	<i>Is a Window Scraper in the vehicle?</i>	<input type="checkbox"/>
	<i>Is a vehicle jack in the vehicle?</i>	<input type="checkbox"/>
	<i>Other concerns (please detail)</i>	
Inspection Tools	<i>Have you completed the appropriate site visit safety and equipment checklist? Yes/ No</i>	
Personal Protective Equipment	Required—e.g. boots, safety glasses, hardhats, etc. Recommended – e.g. walking sticks, gloves, long pants, hats, insect repellent, sunscreen	

Site Visit Safety & Equipment Checklists
SANITARY SURVEY FIELD EQUIPMENT

Sanitary Survey Field Equipment		
Required Equipment	ITEMS	In Field Bag
	Duffle Bag/Backpack	<input type="checkbox"/>
	Work Gloves	<input type="checkbox"/>
	DDW Field Safety Manual	<input type="checkbox"/>
	First Aid Kit	<input type="checkbox"/>
	Tire Gauge	<input type="checkbox"/>
Recommended Optional Equipment	Long Pants	<input type="checkbox"/>
	Long Sleeve Shirt	<input type="checkbox"/>
	Sunblock	<input type="checkbox"/>
	Insect Repellent	<input type="checkbox"/>
	Flashlight	<input type="checkbox"/>
	Mirror	<input type="checkbox"/>
	Steel Toes	<input type="checkbox"/>
	Camera	<input type="checkbox"/>
	Safety Vest	<input type="checkbox"/>
	Ear Plugs	<input type="checkbox"/>
	Safety Glasses	<input type="checkbox"/>
	Hard Hat	<input type="checkbox"/>
	Cell Phone	<input type="checkbox"/>

CONSTRUCTION FIELD EQUIPMENT

Construction Field Equipment		
	ITEMS	In Field Bag
Required Equipment	Duffle Bag/Backpack	<input type="checkbox"/>
	Work Gloves	<input type="checkbox"/>
	DDW Field Safety Manual	<input type="checkbox"/>
	First Aid Kit	<input type="checkbox"/>
	Steel Toes	<input type="checkbox"/>
	Safety Vest	<input type="checkbox"/>
	Ear Plugs	<input type="checkbox"/>
	Safety Glasses	<input type="checkbox"/>
	Hard Hat	<input type="checkbox"/>
	Tire Gauge	<input type="checkbox"/>
Recommended Optional Equipment	Long Pants	<input type="checkbox"/>
	Long Sleeve Shirt	<input type="checkbox"/>
	Sunblock	<input type="checkbox"/>
	Insect Repellent	<input type="checkbox"/>
	Flashlight	<input type="checkbox"/>
	Mirror	<input type="checkbox"/>
	Cell Phone	<input type="checkbox"/>
	Camera	<input type="checkbox"/>
	Derma Shield	<input type="checkbox"/>

WELL GROUT WITNESS FIELD EQUIPMENT

Well Grout Witness Field Equipment		
Required Equipment	ITEMS	In Field Bag
	Duffle Bag/Backpack	<input type="checkbox"/>
	Work Gloves	<input type="checkbox"/>
	DDW Field Safety Manual	<input type="checkbox"/>
	First Aid Kit	<input type="checkbox"/>
	Steel Toes	<input type="checkbox"/>
	Safety Vest	<input type="checkbox"/>
	Ear Plugs	<input type="checkbox"/>
	Safety Glasses	<input type="checkbox"/>
	Hard Hat	<input type="checkbox"/>
	Tire Gauge	<input type="checkbox"/>
Recommended Optional Equipment	Long Pants	<input type="checkbox"/>
	Long Sleeve Shirt	<input type="checkbox"/>
	Sunblock	<input type="checkbox"/>
	Insect Repellent	<input type="checkbox"/>
	Flashlight	<input type="checkbox"/>
	Mud Scale	<input type="checkbox"/>
	Camera	<input type="checkbox"/>
	Cell Phone	<input type="checkbox"/>
	Viscosity Funnel	<input type="checkbox"/>
	Derma Shield	<input type="checkbox"/>
	Pressure Gauge	<input type="checkbox"/>
	Chlorine Test Kit	<input type="checkbox"/>

Utah Department of Environmental Quality
Division of Drinking Water
Accident/ Incident Report Form Instructions

Worker Compensation

Injuries occurring on the job need to be reported to Kimberly Diamond- Smith, or the current Human Resources Specialist for DDW in the Human Resource office, as soon as possible. Minor illness or injury should be reported no later than 2 working days after the occurrence. Serious injury or illness must be reported within 8 hours. If you need assistance determining minor vs. serious, please contact Kimberly Diamond-Smith at 801-536-4285. Initial medical care must be by a Worker's Compensation Fund approved provider. A current list of providers can be accessed at www.wcf-utah.com. Employee should inform the medical provider that the injury is work related and give them the name of Kimberly Diamond-Smith at 801-536-4285, 195 N 1950 W, Box 4801, SLC, UT 84116 as the contact. Any information given to the employee concerning the injury and treatment should be forwarded to Kimberly Diamond- Smith, or the current Human Resources Specialist for DDW for Workers Compensation purposes. The online employer accident reporting form is available at:

<http://www.laborcommission.utah.gov/IndustrialAccidents/Forms/Form%20122.pdf>

Vehicle Accidents

If you are involved in a motor vehicle accident during work hours you need to immediately notify Kimberly Diamond-Smith at 801-536-4285. If you are cited, or there are any injuries a drug test will be administered. DEQ / DDW Fleet Operations accident report is a paperless Access on-line accident report form available at:

<https://webapps.fleet.utah.gov/Accident/>

DDW WORKPLACE SAFETY PROTOCOLS

DDW workplace safety protocols follow the general DEQ building safety protocols including the following:

- MASOB/DEQ Building Security Policy
- MASOB/DEQ Building Emergency Evacuation Plan
- MASOB/DEQ Emergency and Disaster Response Plan

The purpose of this Building Security Policy is to safeguard our workplace and employees.

- All DEQ employees will be required to display their official DEQ Identification Badge at all times while inside the MASOB secure areas. This can be done by lanyard, belt clip or any other means, just as long as the badge is visible at all times.
- Failure to display an Identification Badge may result in a reprimand by management and noted in the employee's personnel file.
- When an employee forgets their badge or their badge is lost, they should call their manager to let them in so they can then obtain a temporary badge from their division support staff. If their management is not available, they can get a 'visitor' badge from the front reception desk to be allowed into the secured area. This will be in effect even if the employee has left the secured area to use the restroom, go out for lunch, etc. An employee is not to expect another employee to allow them access without the proper identification.
- If an Identification Badge is lost, the employee must pay \$5 for a new badge.
- All visitors to the building must display either a State Agency Identification badge or a 'visitor' badge.
- Employees must escort their visitors the entire time they are inside of the secured areas.
- Employees are not to let others 'Piggy Back' in behind them at any of the secured entrances.
- It is acceptable for an employee to question anyone attempting to enter a secured area without proper identification, i.e. DEQ Identification Badge, other State Agency Badge, or visitor badge. The employee can direct the individual back to the DEQ main reception desk to obtain the proper identification credentials.
- It is acceptable for the Building Security personnel to question any employee not displaying a proper Identification Badge and ask the employee to direct him/her to their supervisor for employee verification.
- It is advisable that employees do not activate the 'Handicap' entrance mechanisms unless they cannot open the door freely because of

carrying multiple items or an actual physical handicap. These doors remain open anywhere from 15 – 20 seconds after they have been activated.

The MASOB building evacuation plan with the most up to date evacuation procedures can be found on the DEQ Innerweb at:

<https://deqinnerweb.utah.gov/?s=evacuation>

Staff should always watch for any potential safety hazards such as slip, trips and falls when entering the build. Extra caution should be given in the winter months when there is the potential for ice in the walk ways. When Staff is working before or after typical work hours, extra attention should be paid when entering and exiting the build to stop non DEQ staff entry. If at any point staff feels unsafe, build after hours security can be reached at:

After Hours Building Security 801-884-7019

The afterhours security will walk you to your car and have a flashlight in the event it is dark outside and you are uneasy about walking alone at night.

If staff is working on the weekend and has any safety concern with building, such as a water leak, DFCM is on call for weekend building issues and can be contacted at:

DFCM for Weekend building issues: 801-297-7754

Staff is expected to be familiar with these and any other DEQ safety policies, which can be found on the DEQ InnerWeb.

The DEQ Emergency and Disaster Response plan can be found on the DEQ inner web located here or by searching for Emergency and Disaster Response Plan:

<https://deqinnerweb.utah.gov/building/masob-emergency-information?highlight=Emergency%20and%20Disaster%20Response%20Plan#evacuation>

The plan located on the InnerWeb is updated annually by the DEQ risk management team.

Safety Resource Contacts

DEQ/DHRM Contact

Department of Environmental Quality, Human Resources Division
Kimberly Diamond-Smith
195 N 1950 W, Box 4801
SLC, UT 84116
Telephone: 801-536-4285
Fax: 801-536-4273
Email: kdiamondsmith@utah.gov

UTAH OCCUPATION SAFETY & HEALTH (UOSH)

160 East 300 South 3rd Floor
Salt Lake City, Utah 84114-6650
Telephone (801) 530-6901
Fax (801) 530-7606
Website <https://laborcommission.utah.gov/divisions/UOSH/>

Rocky Mountain Center for Occupational and Environmental Health

391 Chipeta Way Suite C
University of Utah
Salt lake City Utah 84108
801-581-7182 / 801-581-4055

Utah Safety Council

1574 West 1700 South,
Salt lake City, UT 84104
801-746-7233

Safety References

- **Confined Space Recognition**
29 CFR 1910.146
- **Chemical Safety**
29 CFR 1910.Subpart Z
- **Electrical Safety**
29 CFR 1926.400
29 CFR 1910.335
- **Employee Rights**
R 614-1-10
- **Excavation Safety**
29 CFR 1926 Subpart P
- **Fall Protection and Ladder Safety**
29 CFR 1926.503
29 CFR 1926.1060
- **Hazard Communication Standard**
29 CFR 1910.1200
- **Lifting**
R614-1-5-D (3)
- **Lock Out & Tag Out**
29 CFR 1910.147
- **Personal Protective Equipment (PPE)**
29 CFR 1910 Subpart I