

# Felsburg Holt & Ullevig

## FIELD SAFETY INSTRUCTIONS

### Outfall Surveys

The Field Safety Instructions (FSI) will be kept onsite during field inspection activities and will be reviewed by CDOT Staff and consultants working on this project. These instructions must be completed prior to site activities with information provided by the client or owner of the site. These FSI are provided to ensure that CDOT personnel and their contractors are made aware of and understand the health and safety requirements applicable to stream/wetland walk-through activities. All personnel and contractors must comply with the requirements listed in these instructions.

**CLIENT:** Colorado Department of Transportation

**PROJECT/SITE NAME:** Illicit Discharge Support Program

**FHU MS4 PROJECT MANAGER/OFFICE:** Steve Dole/Centennial

**PROJECT NO:** 07-223

**DESCRIPTION OF SPECIFIC TASKS TO BE PERFORMED:** Inventory outfall facilities for the Colorado Department of Transportation.

## Project Organization

<u>Client Contacts:</u>	Rick Willard Becky Sturgeon	Phone: (303) 757-9343 Phone: (303) 757-9788
<u>Project Manager:</u>	Kate Baird/FHU Program Lead	Phone: (720) 721-1440 ext. 8990
<u>Field Lead:</u>	Kevin Ritter	Phone: (303) 782-0164 ext. 108
<u>Human Resources Department:</u>	Jody Tunheim	Phone: (720) 721-1440 ext. 8917

## Project Responsibilities

- All of the project staff are responsible for performing work in a safe manner and in accordance with the requirements specified in these instructions.
- Project staff are to identify site-specific hazards and precautions with other staff and with the client.
- The project manager is to ensure that staff are following these instructions.
- The project manager is to ensure that these instructions are current and are updated for all conditions as they change.
- The Human Resources Department is to provide assistance in evaluating concerns, reporting injuries, and supplementing the requirements in these instructions should tasks, in addition to walk-throughs, be added.

## Hazard Controls

This section provides information on safe work practices and control measures used to reduce or eliminate potential hazards.

## Restricted Areas/Activities

The following areas/activities are not covered and must not be entered/performed under these instructions. If any of these areas/activities must be entered/performed, contact the RHSPM FHU Project Manager or CDOT Contact for assistance.

- Confined space entry
- Entry into Construction/Demolition work zones
- Entry into excavations deeper than 4 feet
- Barricaded areas (unless with prior approval from client representative)
- Areas presenting exposed energized electrical equipment (unless accompanied by a qualified individual)
- Areas where there is an unprotected (e.g., no guardrail) fall exposure greater than 4 feet
- Areas where cranes, earth-moving equipment, or other heavy machinery are being operated
- Areas exposed to public vehicular traffic that require traffic control
- Areas where health hazards exist above action levels
- Activities requiring respiratory protection
- Activities requiring personal protective equipment that personnel have not been trained to use
- Activities requiring the use of scaffolding, aerial lifts, or hoisted personal platforms
- Any other areas where special access or requirements exist (e.g., training, medical monitoring, security, etc.)
- It is important to make every possible effort to obtain access permission on properties that must be crossed in order to reach your final destination.

## General Health and Safety Hazards and Precautions

Physical Hazards	
Hazard	Safe Work Practice & Precautions
Extensive field surveys present simple hazards that are similar to those encountered during hiking. Staff should be aware of these hazards and implement preventative measures to protect themselves. All field surveys on this project will be conducted using the buddy system. Staff members are to conduct surveys with at least one other person. "Buddies" should remain in constant visual or voice range of one another and are responsible for observing their partner for symptoms or for exposure to site hazards, as well as being immediately available for assistance.	
General Operations	<ul style="list-style-type: none"> <li>• Wear sturdy and comfortable footwear appropriate for site walk activities (i.e., hiking boots or work boots).</li> <li>• Observe the work area for tripping hazards.</li> <li>• Park vehicle in location where it can be accessed easily in the event of an emergency. If this is not possible, carry a cellular phone.</li> <li>• Pay attention, constantly observe the work area for hazards, and implement every effort needed to protect FHU personnel from onsite hazards.</li> </ul>
Steep slopes/Uneven Ground/Rock and Shale Slopes	<ul style="list-style-type: none"> <li>• Always avoid these areas whenever possible. "Climbing" in these areas should be minimized and limited to activities that do not require the use of climbing equipment.</li> <li>• Exercise caution when relying on rocks and trees/tree stumps to support yourself - many times they are loose.</li> <li>• Whenever possible, switchback your way up and down steep areas and maintain a slow pace with firm footing.</li> </ul>

## Physical Hazards

Hazard	Safe Work Practice & Precautions
Water Crossings	<ul style="list-style-type: none"> <li>• Traversing streams presents significant hazards, including drowning, hypothermia, and abrasions.</li> <li>• When crossing streams, seek out the safest route – narrow, low flow, shallow, and not immediately upstream or just the opposite.</li> <li>• Avoid areas where there are submerged or partially submerged trees/tree branches – these can create entanglement hazards during a crossing or a “swim”.</li> <li>• Streams should be crossed while facing upstream, stepping side to side, and using a sturdy walking stick.</li> <li>• If streams are crossed that are deeper than 3 feet, staff must use either ropes or wear chest waders.</li> <li>• Ropes should be tied off on one side, and held by the person crossing. Once across, the rope should again be tied off so that the second person can hold on to a secure line.</li> <li>• Streams that are deeper than mid-chest deep should not be crossed – find a crossing that is less deep.</li> </ul>
Working Over Water	<ul style="list-style-type: none"> <li>• Fall protection should be provided to prevent personnel from falling into water. Where fall protection systems are not provided and the danger of drowning exists, U.S. Coast Guard-approved personal flotation devices (PFDs), or life jacket, shall be worn.</li> <li>• Inspect PFDs prior to use. Do not use defective PFDs.</li> <li>• A life-saving skiff must be provided for emergency rescue.</li> <li>• A minimum of one ring buoy with 90 feet of 3/8-inch solid-braid polypropylene (or equal) rope must be provided for emergency rescue.</li> <li>• Use sampling and other equipment according to the manufacturers' instructions.</li> </ul>
Parking Lots and Public Roads	<ul style="list-style-type: none"> <li>• Walk along the edge of parking lots and roads, or in designated pedestrian walkways to avoid vehicles.</li> <li>• Remain vigilant for vehicular traffic.</li> <li>• Always obey traffic signs and speed limits</li> <li>• Drive within delineated traffic areas</li> <li>• Park vehicles away from designated traffic areas</li> <li>• Each person should act as a “lookout” A lookout’s responsibility is to watch traffic for signs of potential trouble and notify endangered workers.</li> </ul>
Blisters	<ul style="list-style-type: none"> <li>• Blisters most commonly occur on the feet, especially if someone uses inappropriate socks, wet socks or boots, or boots that do not fit or are not broken in.</li> <li>• Preventing blisters is the most important first aid: if you feel a "hot spot" starting (from friction between the skin and the boot), stop immediately and do something about it. Place a thin layer of moleskin or duct tape on the affected area. If you don't take care of the hot spot, it will become a blister. If you already have a blister, use the moleskin with a hole cut in it so that you don't place adhesive directly over the blister. Minimize pressure on the blister by building up protective padding around it, but not too much or you'll cause more problems. Generally, you should not pop blisters because they can become infected and because they may become more painful as you continue to walk.</li> </ul>

<b>Physical Hazards</b>	
<b>Hazard</b>	<b>Safe Work Practice &amp; Precautions</b>
Sunburn	<ul style="list-style-type: none"> <li>• Sunburn can increase the risk of cancer. By the time a person feels sunburned, it's too late. This is especially true in winter, when people don't feel hot even though the sun beats down on them and reflects off the snow into their faces.</li> <li>• You can best prevent sunburn by covering up and by frequently applying copious amounts of sunblock with a high SPF rating (16 or higher).</li> <li>• First aid is the same as for any burn: if the skin is blistered, cover it with a loose sterile gauze dressing.</li> </ul>
Headaches	<ul style="list-style-type: none"> <li>• Headaches can result from dehydration, sunlight, tension, and many other factors.</li> <li>• You can best treat the headache by treating the cause, if you know it.</li> <li>• If you have a headache, take aspirin, acetaminophen (e.g., Tylenol), or ibuprofen (e.g., Advil), drink water, eat a little, and, if possible, take a rest break.</li> <li>• Wearing sunglasses may prevent headaches caused by too much sunlight.</li> </ul>
Nosebleeds	<ul style="list-style-type: none"> <li>• Nosebleeds occur more often in cold than in hot weather because of the very dry air.</li> <li>• If you get a nosebleed, try to stop the bleeding by pinching the nostrils with your fingers.</li> <li>• Be patient, because nosebleeds often take a while to stop.</li> <li>• If pinching the nostrils doesn't work, you may insert a small, clean pad of gauze into the affected nostril, and pinch it again.</li> <li>• If you are prone to nosebleeds, especially in cold weather, it may help to wear a bandanna over the nose and mouth. As you breathe out, the bandanna traps some warmer, moist air, which may be enough to prevent a nosebleed.</li> </ul>
Fainting	<ul style="list-style-type: none"> <li>• Fainting results from loss of blood from the brain and is best treated by lowering the head in relation to the heart.</li> <li>• If you feel faint, sit down or lie down (on a sleeping pad or some other insulation, if possible) until you feel better.</li> <li>• Stand up slowly only when you feel able.</li> </ul>
Cuts and Scrapes	<ul style="list-style-type: none"> <li>• For minor cuts and scrapes, take the time to wash the wound with soap and water or an antiseptic towelette.</li> <li>• Cleaning the wound immediately will help prevent infection later.</li> </ul>
Cramps	<ul style="list-style-type: none"> <li>• If you experience muscle cramps, lie down and relax.</li> <li>• Massage and stretch the sore muscle slowly, gently, and carefully.</li> <li>• Drink water, eat a little, and start again slowly.</li> <li>• Drinking a sports drink like Gatorade will help replace salts that are lost because of sweating. Replacing these salts may help reduce the muscle cramps and prevent them from recurring.</li> </ul>

<b>Physical Hazards</b>	
<b>Hazard</b>	<b>Safe Work Practice &amp; Precautions</b>
Sprains	<ul style="list-style-type: none"> <li>• If the sprain is minor, the victim may be able to walk with little or no assistance.</li> <li>• To reduce the swelling of a minor sprain, you must put ice on the injury (of course, be careful of frostbite and hypothermia in cold weather).</li> <li>• You will also need to tape the injured joint using sports tape or an ace bandage.</li> <li>• The injured person should take ibuprofen (only if they are not allergic to aspirin), if they intend to walk out.</li> <li>• Major sprains may appear to be fractures and should be treated as such. Splint the injury and plan the best way to get the victim to medical care.</li> </ul>
Drinking Water	<ul style="list-style-type: none"> <li>• Never drink untreated water from streams or lakes.</li> <li>• Many areas are prone to natural contamination (e.g., giardia).</li> <li>• All drinking water must be packed in or properly treated.</li> </ul>
Lightning	<ul style="list-style-type: none"> <li>• Avoid working during thunderstorms.</li> <li>• If caught in one, seek shelter among densely wooded areas.</li> <li>• Avoid lone trees as shelter.</li> <li>• Avoid open, bare areas.</li> <li>• Do not cross water bodies.</li> <li>• If caught in an open area, place your feet close together and crouch down as small as possible, without lying on the ground.</li> <li>• Ground strikes are known to be initiated by “leaders,” or charges, from the earth making a connection to the charge in the clouds. This may cause your hair to stand up. Since you do not want to be part of a leader that makes the connection to form a cloud-to-ground strike, immediately crouch as described above.</li> </ul>
Snakes	<ul style="list-style-type: none"> <li>• Snakes typically are found in underbrush and tall grassy areas.</li> <li>• If you encounter a snake, stay calm and look around; there may be other snakes.</li> <li>• Turn around and walk away on the same path you used to approach the area.</li> <li>• If you are bitten by a snake, wash and immobilize the injured area, keeping it lower than the heart if possible.</li> <li>• Seek medical attention immediately. <b>DO NOT</b> apply ice, cut the wound, or apply a tourniquet.</li> <li>• Try to identify the type of snake. Note color, size, patterns, and markings.</li> </ul>

## Physical Hazards

Hazard	Safe Work Practice & Precautions
Ticks	<ul style="list-style-type: none"> <li>• Ticks typically are found in wooded areas, bushes, tall grass, and brush.</li> <li>• Ticks are black, black and red, or brown and can be up to one-quarter inch in size.</li> <li>• Wear tightly woven light-colored clothing with long sleeves and pant legs tucked into boots; spray <b>only outside</b> of clothing with permethrin or permethrin and spray skin with only DEET.</li> <li>• Check yourself frequently for ticks.</li> <li>• If bitten by a tick, grasp it at the point of attachment and carefully remove it.</li> <li>• After removing the tick, wash your hands and disinfect and press the bite area(s). Save the removed tick. Report the bite to Human Resources Department and the Program Manager or Supervisor.</li> <li>• Look for symptoms of Lyme disease or Rocky Mountain spotted fever (RMSF). Lyme: a rash that looks like a bullseye with a small welt in the center. RMSF: a rash of red spots under the skin 3 to 10 days after the tick bite. In both cases, chills, fever, headache, fatigue, stiff neck, and bone pain may develop. If symptoms appear, seek medical attention.</li> </ul>
Poison Oak/Ivy	<ul style="list-style-type: none"> <li>• Poison oak is typically found in brush or wooded areas and is most commonly found in moist areas or along the edges of wooded areas.</li> <li>• Become familiar with the identity of this type of plant.</li> <li>• Wear protective clothing that covers exposed skin and clothes.</li> <li>• Avoid contact with plants and the outside of protective clothing.</li> <li>• If your skin contacts a poison oak plant, wash the area with soap and water immediately.</li> <li>• If the reaction is severe or worsens, seek medical attention.</li> <li>• Products are available that are very effective in preventing a poison oak reaction. These products include Ivy Block and TECNU Cleaner, which are available at most grocery stores.</li> </ul>
Bloodborne Pathogens	<p>Exposure to bloodborne pathogens may occur when rendering first aid or CPR or when coming into contact with landfill waste or waste streams containing potentially infectious material.</p> <ul style="list-style-type: none"> <li>• Hepatitis B vaccination must be offered before the person participates in a task where exposure is a possibility.</li> </ul>
Bee Stings	<ul style="list-style-type: none"> <li>• Bees and other stinging insects may be encountered almost anywhere and may present a serious hazard, particularly to people who are allergic.</li> <li>• Watch for and avoid nests. Keep exposed skin to a minimum. Carry a kit if you have had allergic reactions in the past, and inform the SSC and/or your buddy.</li> <li>• If you are stung, remove the stinger (if present) carefully with tweezers. Wash and disinfect the wound, cover it, and apply ice.</li> <li>• Watch for allergic reaction, and seek medical attention if a reaction develops.</li> </ul>

## Personal Protective Equipment (PPE)

PPE consistent with hazards should be worn, and could include:

- Hard hat (Esp. in CDOT right-of-way)
- Work boots or steel-toe work boots
- Safety glasses
- Ear plugs or muffs
- Reflective vest
- Rain gear
- Nitrile gloves

## Incident Notification and Reporting

### ***FHU:***

***Jody Tunheim (Human Resources)***

***303-721-1440 ext. 8917***

### ***CDPHE:***

***Environmental Release and Incident Reporting Coordinator***

***1-877-518-5608***

- Upon any project incident (i.e., fire, spill, injury, near miss, death, etc.), immediately notify the Project Manager.
- For FHU work-related injuries or illnesses, contact and help the Human Resources administrator complete an Incident Report Form (IRF). An IRF must be completed within 24 hours of the incident.
- For FHU subcontractor incidents, complete the Subcontractor Accident/Illness Report Form and submit it to the FHU Project Manager.
- Notify and submit reports to the client as required in the contract.

## Emergency Telephone Numbers

Police/Ambulance/Fire Department: 911

## Metro Area Hospitals

### ***Central Denver***

Presbyterian/St. Luke's Med Ctr  
1719 E 19th Ave  
Denver, CO 80203  
(303) 839-1000

Exempla St. Joseph Hospital  
1835 Franklin St  
Denver, CO 80218  
(303) 837-7111

University of Colorado Hospital  
4200 E 9th Ave  
Denver, CO 80262  
(303) 372-0000

Swedish Medical Center  
501 E Hampden Ave  
Englewood, CO 80110  
(303) 788-5000

Kindred Hospital Denver  
1920 High St  
Denver, CO 80218  
(303) 320-5871

Rose Medical Center  
4567 E 9th Ave  
Denver, CO 80220  
(303) 320-2121

St. Anthony Central  
4231 W 16th Ave  
Denver, CO 80204  
(303) 629-3511

Porter Adventist Hospital  
2525 S Downing St  
Denver, CO 80210  
(303) 839-6000

## **East**

Medical Center of Aurora  
700 Potomac St  
Aurora , CO 80011  
(303) 695-2600

SCCI Hospital-City Park  
700 Potomac St  
Aurora , CO 80011  
(720) 857-8333

Medical Center of Aurora  
1501 S Potomac St  
Aurora , CO 80012  
(303) 695-2600

University of Colorado-Anschutz  
12605 E. 16th Ave.  
Aurora, CO 80045  
(720) 848-0000

## **West**

Exempla Lutheran Medical Center  
8300 W. 38th Avenue  
Wheat Ridge, CO 80033  
(303) 425-4500

## **North**

Avista Adventist Hospital  
100 Health Park Drive  
Louisville, CO 80027  
(303) 673-1000

North Colorado Medical Center  
1801 16th St.  
Greeley, CO 80631  
(970) 352-4121

North Suburban Medical Center  
9191 Grant Street  
Thornton, CO 80229  
(303) 451-7800

## **South**

Sky Ridge Medical Center  
10101 RidgeGate Parkway  
Lone Tree, CO 80124  
(720) 225-1000

Littleton Adventist  
7700 South Broadway  
Littleton, Colorado 80122  
303-730-8900

Parker Adventist Hospital  
9395 Crown Crest Blvd  
Parker, CO 80138  
(303) 269-4000

## **Other Emergency Contacts**

Colorado State Patrol 24-Hour  
Hotline and Dispatch  
303-239-4501

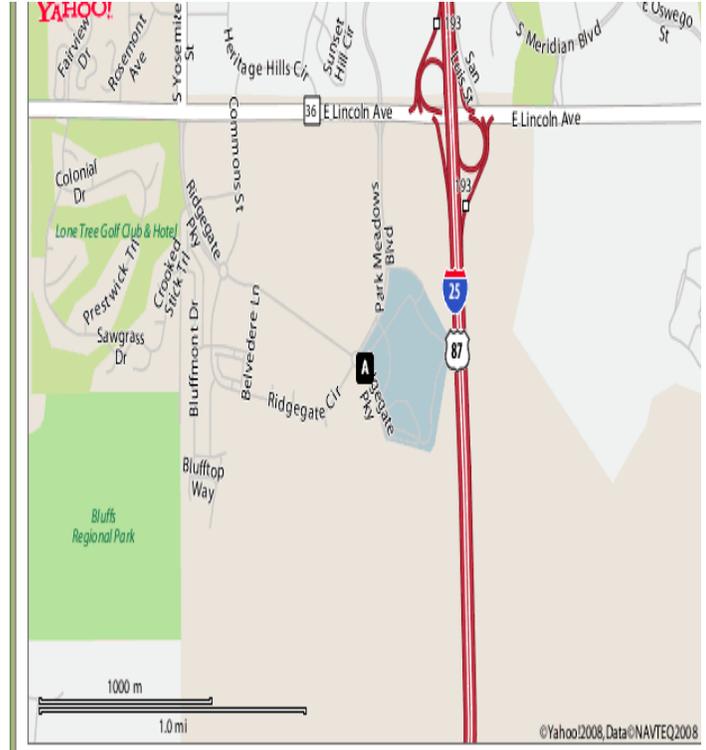
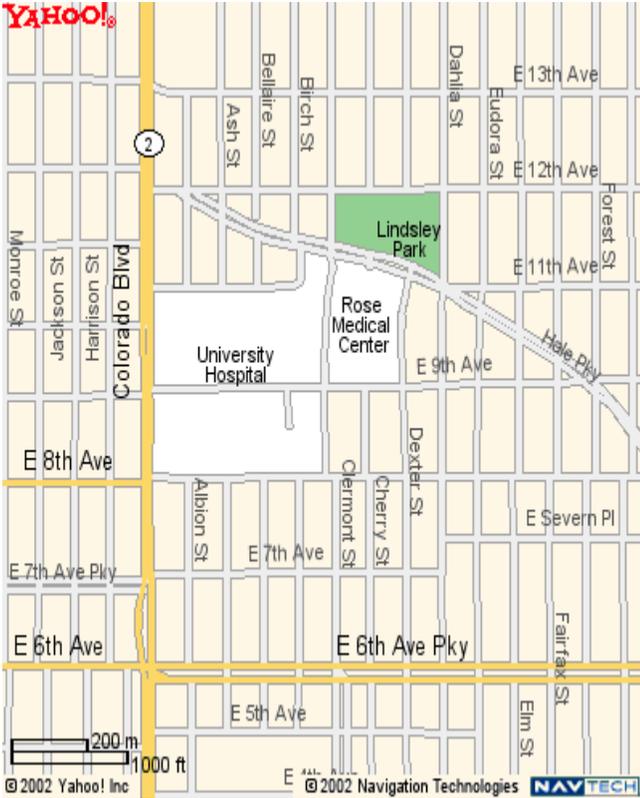
CDOT 24-Hour Environmental  
Emergency Spill Reporting  
1-877-518-5608

National Response Center  
24-Hour Hotline  
1-800-424-8802

Englewood , CO 80110  
(303) 788-5000

Sky Ridge Medical Center  
10101 RidgeGate Parkway  
Lone Tree, CO 80124  
720-225-1000

University of Colorado Hospital  
4200 E 9th Ave  
Denver , CO 80262  
(303) 399-1211



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