

Job Hazard Analysis

Fish and Habitat Surveys

Marsh & Associates, LLC
5016 S. Ash Avenue, Suite 108
Tempe, AZ 85282

Examination Participants:

Paul Marsh
Brian Kesner
Benjamin Miller
Kurt Shollenberger
Patrick Beyhan
Jake Kelley

Operations to be Performed:

- Conduct tag implantation surgeries for tag retention and telemetry studies
- Provide care for captively held fish in hatchery facilities
- Conduct tracking of fish implanted with sonic telemetry tags via watercraft
- Deploy and maintain remote tracking stations along the river corridor and lake
- Conduct substrate and aquatic vegetation surveys
- Conduct fish sampling and/or monitoring using electroshocker, trammel netting, or other methods
- Extensive driving and towing (boats and trailers) will be conducted to complete the above activities
- Living quarters will consist of travel trailers and tents

Equipment Required:

Appropriate safety equipment will depend on the specific tasks being performed.

Appropriate gear may include but is not limited to long sleeve shirts and long pants, ear plugs, sun screen, water, flash light, personal flotation device, waders, rubber boots, hiking boots, gloves, surgical supplies (sutures, cutting needles, scalpels, hypodermic needles, antibiotics), fluids, first aid kit, fire extinguisher, boat, telemetry receiver, hydrophone, speakers, generator, pulsator, dead man switch, safety railing, insulated nets, trammel nets, gasoline, oil, propane, AAA, AA, C, D, 6V, 9V, 12V, and 24V batteries, GPS, camera, and cell phone.

Hazards and Solutions:

Specific Hazard

Solution

Transportation, driver fatigue

Ensure vehicle maintenance is kept current, stop often to avoid fatigue

Road hazards

Use caution, be alert to traffic, use vehicle emergency flashers or other appropriate warning devices.

Dust Storms

Take necessary precautions when approaching dust storms. Slow down and proceed with caution if visibility is suitable for driving. If you cannot see, pull completely off the roadway, stop and turn off lights and engine, remove foot from brake, and wait for dust storm to pass.

Unstable riprap or other uneven footing

Use caution, walk slowly, pay close visual attention to path.

Wet or slippery surfaces

Walk carefully, wear proper footwear, avoid problem areas if possible, allow reasonable distance from other personnel.

Inclined surfaces

Know when and where not to enter steep inclines. Use fall protection and be tied off securely and safely.

Weather conditions

Be prepared for the current and predicted weather conditions. Utilize rain gear, sun screen, hat, long-sleeved shirt and pants, and jacket as needed.

Dehydration

Extreme warm temperature may lead to dehydration. Come prepared with plenty of liquids and drink frequently; recommend not less than one gallon per day. When lightheaded or nauseated, proceed to a shady area, sit down and cool the body off.

Hypothermia

Dress appropriately for cold weather. Carry extra dry clothing in vehicle.

Specific Hazard

Solution

Water Hazards

Be aware when working near or above water, wear life vest when near or within water, and know the location of water rescue equipment. Avoid overhanging vegetation and strainers when operating inflatable kayaks or small boats. Float downstream feet first if thrown from boat until reconnected with boat or reach bank. Tie boats securely to boulders or vegetation when surveying a river reach by foot. Check out local flow conditions on USGS website if available.

Rough surfaces

Wear gloves when working around rough surfaces.

Trees

Be aware of falling limbs and branches. Be aware of unstable trees or broken branches during windy conditions.

Thick brush and/or thorny plants

Wear long sleeve shirts and long pants.

Snakes

Wear pants where snake activity is reportedly high. Exercise care about placing hands or feet where you cannot observe. If bitten, clean bite with soap and water. Keep arm or leg just below heart level. Splint or immobilize limb bitten. If coral snake, wrap bite site and entire arm or leg with an elastic bandage. If bitten by a pit viper and distance to antivenom source is > 1 hour, use a constrictor band to slow venom dispersal within 30 minutes of the bite. Seek medical attention. Do not apply cold/ice to snakebite or apply mouth suction. Be wary of snakes near lightly trafficked places.

Bees

Move away slowly from swarms. Avoid using bee attractant sunscreens that contain coconut oil, banana oil, or palm oil. If bitten, remove stinger by scraping it off with a hard object (not tweezers or fingers because more venom may be injected into the victim). Wash the sting site with soap and water. Apply an ice pack over the sting site to slow absorption of the venom and relieve pain. Take an analgesic such as aspirin or acetaminophen to relieve pain and itching. Take an antihistamine immediately to relieve local symptoms, although it works too slowly to counteract a life-threatening allergic reaction. For severe allergic reaction, inject epinephrine and seek medical attention.

Specific Hazard

Solution

Vector-borne and Zoonotic Diseases

Be aware of potential for contracting West Nile Virus, hantavirus, St. Louis encephalitis, plague, rabies, Lyme disease, histoplasmosis, dengue fever etc and take appropriate precautions. Take mosquito repellent, avoid enclosed areas with quantities of small mammal or bat feces.

Spiders and Scorpions

Look before placing fingers and hands on rocks and logs. If bitten, catch the spider to confirm its identity for treatment. Clean bite area with soap and water or rubbing alcohol. Place an ice pack over the bite to relieve pain and delay the effects of the venom. Seek medical attention.

Bats

Protect from possible rabies exposure by getting rabies pre-exposure shots if handling bats. Do not handle sick or injured bats. Use gloves when mist netting bats.

Contaminants

Do not handle unlabeled containers, if container is labeled as hazardous contact appropriate personnel for disposal, be aware of potential for discarded contaminants in the area.

Ongoing Construction

Report in with inspector prior to entering construction area. Be aware of location of construction equipment. Use personal protective equipment.

Electrical Hazards

Be aware of the danger associated with electricity. Avoid being within close proximity to live wires. When electroshocking wear insulated gear, use 'dead man' switch, ensure operator is CPR-certified. Use Lockout/Tagout procedures when required.

Barb Wire Fencing

Be aware of the danger associated with crossing barb wire fencing. Check condition of wire before crossing. Be cautious of the barbs as they may inflict injury. Also, be cognizant of injuries associated with stretching or stooping. Avoid crossing over where the wires are loose or weakened. If at all possible, cross under where there is a break in the fence.

Vehicle Breakdown

If on a road or freeway, use emergency vehicle reflective signs or flares and flashers. Call for assistance. If in a remote area and it is necessary to walk a long distance to get help, carry plenty of water and protective clothing and leave a note at the vehicle that includes date, time, and destination.

Specific Hazard

Solution

Remote Travel

Take cell phone. Check out local road conditions and weather reports prior to trip. Leave itinerary with Supervisor or Safety Officer. Identify nearest hospital emergency services to site.

Sharps (needles and scalpels)

Handle needles and scalpels with care, and dispose of in an appropriate sharps container.

Trailer

Check and maintain propane tanks and hoses to ensure they are operating safely and without leaks.

Towing

Check and maintain trailer hookups, safety chains, and wiring harness. Check that brake lights and blinkers on trailer are functional.

Safety Standards Requirements:

Reclamation Safety and Health Standards
Brief personnel on specific safety issues
Certified for CPR and First Aid

Emergency Services:

In the event of an emergency situation, notify Marsh & Associates, someone will contact the appropriate emergency response team. The supervisor can be contacted by telephone; dial 480-456-0801 during normal working hours or 480/229-0531 after hours, on weekends, or on holidays.

If the supervisor cannot be contacted, then emergency services can be reached by telephone by dialing 911.

Signatures of the above inspection team members indicate that they have been instructed in and understand the requirements and hazards associated with the field surveys.

Job Hazard Analysis Prepared By:

 Benjamin Miller

 Date

Job Hazard Analysis Reviewed By:

 Paul Marsh

 Date

Signature Page

This Job Hazard Analysis has been reviewed and is understood by the following examination participants:

Paul Marsh

Date

Benjamin Miller

Date

Brian Kesner

Date

Jake Kelley

Date

Patrick Beyhan

Date

Kurt Shollenberger

Date