**Delaware Water Gap National Recreation Area**

**Job Safety Analysis**

| **General Field Work – FY-2022** | | |
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| **TASKS/PROCEDURES** | **HAZARDS** | **ABATEMENT ACTIONS: Engineering Controls \* Substitution \* Administrative Controls \* PPE** |
| **General field work** | General- all hazards | **-Goal:** Conclude every day without personal injury or damage to property.  -Participate in, and supports a safety culture of concern, where hazards are spotted, and questions are raised and addressed without fear of judgement or reprisal.  -**Safety is everyone’s primary responsibility -** all employees should take an active role in hazard identification, analysis, and mitigation.  -If at any point, a job is deemed unsafe, workers should feel entitled to stop until the appropriate PPE, engineering controls, equipment or conditions are available to make the job safe.  -Equipment, PPE, and training as per trail work responsibilities shall be provided. |
| **Vehicle Operation** | Fatigue, narrow, rough roads, poor visibility, backing, mechanical failure, weather, pedestrians, bicycles, animals, off-road driving,  getting lost | -Drive defensively and slowly, obey road speed limits, use parking brake, and do not leave vehicle while it is running.  -Always wear seatbelts, turn lights on, use mirrors and adjust to personal use.  -Ensure that you have reliable communication/radio/cell phone.  -Use spotter when backing, be aware of surroundings, back in parking spaces when possible.  -Inform supervisor/crew/ communication center of your destination and estimated time of return. Call in if plans change.  -Inspect vehicle and adhere to vehicle’s preventative maintenance schedule.  -Ensure vehicle has first aid kit and fire extinguisher.  -Secure all items in cab/bed of truck.  -Carry extra food, water, and clothing.  -Stop and rest if fatigued.  -Drive with care on unmaintained roads and trails. Watch for wildlife, fallen trees, rocks, and other obstacles. Remain on firm ground and avoid soft shoulders.  -Know when and how to use 4WD on unmaintained roads and trails.  -Drive defensively. Completion of a defensive driving course if required to operate a government vehicle  - Use map or GPS if possible, keep map in vehicle. Drivers should know location of destination. |
| **Radio Communications** | Dead spots, radio failure, absent monitoring | -Ensure radio is working properly and batteries are charged before going into the field. Carry extra battery if possible.  -Crew members should be fully trained in radio operation and protocol.  -Learn the locations of geographic dead spots and alternative transmission locations.  -Check in with communication center as applicable. Include present location and travel plans. |
| **Hiking/Inspecting/Surveying**  **Monitoring** | Poison Oak/Ivy/Sumac | -Identify crew members who are allergic and keep them out of work locations where poisonous plants are present.  -Educate crew members on plant Identification.  -Wear gloves when pulling weeds.  -Use care removing or handling gloves, tools, and other clothing that may have been in contact with poisonous plants.  -Whenever the skin contacts a poisonous plant or noxious weed, wash the area with cold water/ivy wash solution within 1 to 3 minutes or as soon as possible.  -While working in a poisonous plant environment, do not use soap and/or hot water that can remove the natural protective oils from your skin. Upon returning from the field, use rubbing alcohol to cleanse contacted skin. |
| **Hiking/Inspecting/Surveying/**  **Monitoring** | Animals/Ticks/Insects/Mosquitoes  Ticks, Spiders, Mosquitoes, Wasps, Bees | -Watch for snakes, which may be found under logs, in shady areas, or sunning on rocks.  -Be able to identify poisonous snakes  -Look before stepping over logs and rocks.  -In case of a bite, provide first-aid and seek medical attention quickly. Do not attempt to remove venom by cutting the bite area.  -Identify crew members with sting allergies and carry bee sting kits containing epinephrine.  -Be aware of potential for hives in brush or hollow logs.  -Use appropriate insect repellants on skin and clothing.  -Clothing should fit tightly at wrists, ankles, and waist. Tuck in shirt tails and pants into socks. Wear light colored clothing if appropriate.  -Search yourself, especially hair and clothing, for ticks and insects frequently.  -Bathe and/or change clothes after each work day.  -Remove embedded ticks properly, follow DEWA tick identification protocol and DEWA tick SOP. |
|  | Tree Hazards | -Look overhead for dead limbs and dead hung-up limbs (widow-makers).  -Look for root-sprung trees and snags (standing dead or dying trees). |
|  | Heavy Brush/rusty barbwire | -Wear protective clothing such as long-sleeve shirt, long pants, helmet, work gloves, and protective eye wear.  -Watch for others when discarding brush.  -Throw brush out of sight from the trail.  -In heavy undergrowth, lift knees high to clear obstacles. |
|  | Unstable, slippery, and off-camber surfaces | -Wear appropriately sized boots and socks.  -Take into account the terrain, the work, and the weather.  -Crouch down to lower the center of gravity.  -Use a wide stance  -Avoid walking on wet, mossy, or snow/ice covered rocks. |
|  | Sun Exposure | -Wear protective clothing including long-sleeve shirt, long pants, and full brimmed hat  -Use sun block and lip balm. |
|  | Dehydration, heat stroke, heat exhaustion, heat cramps | -Increase fluids on hotter days or during extremely strenuous activity.  -Drink as much as 1 quart of water per hour when the temperature is above 80 degrees.  -Take frequent rest breaks in the shade, observe extreme heat advisories.  -Observe team members for signs of dehydration and heat exhaustion and treat immediately. Know symptoms of heat stress injuries.  -Heat stroke is a medical emergency requiring immediate evacuation. |
|  | Hypothermia/cold injuries | -Wear proper clothes, dress in layers  -Drink warm fluids/soups.  -Know symptoms of frostbite/hypothermia  -Monitor air temperature, wind speed and wind chill factors, observe cold alert advisories.  -Maintain good nutrition to prevent cold injuries. |
|  | Fatigue | -Take breaks as needed. Avoid over exertion.  -Maintain good nutrition.  -Regulate body temperature – avoid extreme heat or cold.  -Be aware at the end of the day when fatigue is most likely to occur. |
|  | Getting Lost | -Identify safe routes and local conditions.  -Maintain radio contact, carry whistle for emergency use. |
|  | Weather | -Know the weather forecasts, and be prepared.  -Consider rescheduling field work if inclement weather/storms are forecasted.  -Be watchful throughout the day for changing weather.  -Take appropriate gear and additional clothing. |
|  | Lightning | -Evacuate to safe place when you hear thunder. If you can hear thunder you are in danger.  -Fully enclosed buildings provide the best protection. Sheds, picnic shelters, tents, etc. do not protect you from lightning. If sturdy building is not available, get into hard topped metal vehicle and close all windows.  -Stay in safe place until 30 minutes after the last rumble of thunder.  -Know how far a safe place like your car is from the work site (1 mile = 5 seconds from flash to boom).  -Keep away from metal tools and open water.  -Avoid large or lone trees, the tops of ridges, hilltops, wide-open spaces, ledges, outcrops of rocks.  -If caught in open country, assume a low crouching position with feet together.  -lf caught in forested areas, seek shelter in: a dense grove of trees, a stand of young growth, a depression in the ground, a deep valley. |
| **Tool/Equipment Use** | Carrying tools/equipment | -Carry tools on the downhill side.  -Carry tool with scabbard.  -Carry sharpened edge of tool downward and away from your body.  -Be aware of others around you and communicate with each other.  -Tools will be securely lashed to backpacks. |
| **Tool Use** | Personal Protection | -Wear gloves, hardhat, safety glasses, and boots. |
| **Tool Use** | Power Tools | -Wear hearing protection and protective eyewear.  -Must be trained in how to use power tool before using.  -If equipped with guards, they should remain in place at all times.  -Should be equipped with 3-pronged grounding plug to prevent electric shock. |
| **Tool Use** | Sharp Tools | -Metal heads: burrs, mushrooms, etc. should be filed or ground down.  -Edges should be sharp and covered when not in use. |
| **Tool Use** | Back Injury | -Use proper lifting techniques when picking up items: bend knees, not back; lift straight.  -Work with a partner.  -Always ask for assistance when performing tasks involving heavy lifting  -Use mechanical advantage when possible. |
| **Tool Use** | Training | -Each employee will be provided training on the safe and proper use of tools and equipment required for the task or work activity.  -The right tool for the job should always be used to decrease the chances of injury to an employee. |
| **Tool Use** | Chainsaws | -Only authorized personnel may operate chainsaws.  -Chainsaw operators will follow standard NPS felling and bucking procedures (NPS chainsaw operation certification protocol).  -Review DEWA chainsaw operation JSA. |
| **Field Work During Hunting Season** | User conflicts, fire-arm safety | -Wear Hunter’s ORANGE or any high visibility vests and hats during hunting seasons.  -Post signs near work sites to warn hunters of employee and crew locations.  -Reschedule jobs to work outside of hunting season dates, when possible. |
| **Visitor Contacts** | Assault/conflict. Random acts of violence | -Learn the warning signs of a potential assault.  -Avoid confrontations with potentially hostile individuals.  -Don’t antagonize a possible assailant. Quickly and quietly leave the area.  -Request assistance if necessary. Contact Park Communication Center with location, notify supervisor and other crew members if possible.  -Be watchful when entering/exiting trailheads and parking areas or areas of concentrated use. Report any suspicious behavior after leaving area. |
| **Visitor/employee contacts** | Exposure to Covid-19 | -Review DEWA Covid-19 Prevention JSA |

Reviewed by/Date: Phil Morgan 1/20/2022

Volunteer Signature/Date: