Summer Heat Safety

Summer often is a favorite season, but working outside during the summer can be deadly. In 2013, heat related deaths accounted for 20% of all weather related deaths. Weather events such as tornados, floods, and hurricanes were all included in this statistic.

Heat related injuries also accounted for 54% of all the weather related injuries. These are staggering numbers, heat could be seen as a silent killer.

We all know the dangers of tornados, and thunderstorms, but heat is hard to see and often taken lightly. This should not be the case, as a heat-related illness as simple as a heat rash can turn to a heat stroke in a hurry.

The best way to prevent heat related injury and or death is to educate yourself on heat-related illnesses. Heat-related illnesses range from heat-rash, heat cramps, heat exhaustion, to heat stroke.

A heat rash is the first sign that you are being over exposed to the heat, and should consider taking preventative actions. Heat rash is a skin irritation from sweat not being able to evaporate from the skin.

This is a relatively common issue in hot humid work places. What should you look for when trying to diagnosis a heat rash?

Common symptoms include clusters of red bumps on the skin, usually around the neck, or areas where skin folds on itself. What can one do to try and prevent a heat rash?

(Continued on pg. 6)
Changing Storm Water Management Strategies

By: Cliff Hamilton

In the past, the traditional approach to storm water management (or rainwater, or snow melt) has been to route the water from parking lots, downspouts and other impervious areas into storm sewers, through progressively larger pipes, until it reaches a stream, lake, or river. Then it becomes someone else’s issue.

This approach was effective at keeping parking lots and streets dry; however, it does have several key disadvantages. This traditional approach also promotes a surge of water and pollutants during rain events, and provides little or no treatment to remove pollutants from the storm water before it reaches the stream, lake, or river.

These pollutants include things like salt used to melt ice, oil or other fluids dripping from vehicles, soot from tires, soil from erosion or construction activities, etc.

As this infrastructure of pipes ages, maintenance or replacement costs are also a substantial obstacle to maintenance of the traditional storm water system.

To address the concerns with treatment, surge flow during rain events, infrastructure costs and maintenance, and aesthetics, several strategies have evolved to manage storm water quality and quantity differently.

These strategies are collectively known as Best Management Practices, or BMPs. These practices are developed or selected and designed for a specific location based upon site specific needs and conditions.

Ohio Flies How High?

By: Cathie Chancellor

OHIO’s Avionics programs are often recognized throughout the industry and by aviation experts all over the country as one of the best in aviation research. OHIO’s aviation innovations and leadership contributions regularly serve to augment and even guide many federal initiatives.

These initiatives, many of which are exclusive, are led by organizations such as the Federal Aviation Administration (FAA) and the National Aeronautics & Space Administration (NASA).

Did you know that OHIO has an airport with a fleet of planes that are used for training, teaching, research, and even corporate travel? There are well over 20 planes of various makes and sizes in our fleet, and each one is insured with the help of the Risk Management & Safety Department.

OHIO’s aviation insurance is designed to protect the University against losses and exposures stemming from the use of corporate aircrafts and those planes being used as part of the flight training program.

However, there is one type of aircraft that OHIO’s insurance is not currently designed to cover.

At OHIO, and all over the US for that matter, there is another type of smaller aircraft being used. These are generally classified as Unmanned Aircraft Systems (UAS). For more than 20 years, however, OHIO has used UAVs, (unmanned aerial vehicles), for research, but most commonly media coverage refers to these smaller flying machines that are often rendered “camera-ready” as drones.

As a rapidly emerging risk exposure on the insurance industry horizon, drones pose significant risk to health, safety, privacy and security. Because of the potential for loss, insurers are quickly analyzing the problem of the unauthorized use of these devices. In fact insurers, including OHIO’s carriers, are focused on finding ways to protect against losses related to both regulated and non-regulated “drone” use.
Practically each day media coverage and journals discuss “drones”. You may know that the FAA recently issued regulations regarding the use of drones from which higher education institutions are not exempt. While OHIO remains at the forefront of advancements in flight and discovery of its own and through partnerships using UAVs in compliance with federal regulations, we are aware that some of OHIO’s activity not tied to research may include the use of drones and hobbyist machinery.

We, in Risk Management & Safety, are committed to staying ahead of all aspects of this type of risk, and support the effort to mitigate possible drone-related losses. One way to do so is to, not only inventory our known UAS fleet, making certain that it is adequately insured, but to work cohesively toward practical, safe management and identification of all use.

Another method is to facilitate safety awareness initiatives for both groups and individuals who may use drones. Finally, achieving registration of the organized, recreational usage of small flying machines affecting the campus is a high priority.

Whether your program or group uses drones collaboratively, with other groups, third parties in support of events, or exclusively for academic research you can help OHIO achieve its registration goals by knowing and adhering to all safety rules, regulations, and policies developed to protect everyone from the occurrence of mishaps related to drones.

Contact our Risk Manager, Cathie Chancellor, at chancell@ohio.edu, if your program has invested in, has plans involving the use of a drone or UAS program of some kind or if you simply enjoy the recreational use of these devices at or near any OHIO campus.

For more information, click here!

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**Chemical Spill Kits**

*By: Chris Madden*

A chemical spill kit is an essential part of every lab. Laboratories contain a variety of both hazardous and non-hazardous chemicals that need to be taken into consideration while working in the laboratory, but also when spills occur. Because each lab is unique, the spill kit requirements will also be unique to each set of working conditions.

### Who needs a spill kit?

Every laboratory that actively uses chemicals for either teaching or research needs to have a spill kit. The specific details of the kit should be tailored to the lab in which it will be located by assessing both the types and quantities of chemicals being used.

Kits are available for all kinds of chemical spills including acids, bases, solvents, mercury and aqueous. For example, an organic chemistry lab that uses large quantities of solvents should prepare a kit tailored for solvent cleanup and not for acid/base cleanup.

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<tr>
<th>Basic spill kit components</th>
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<tr>
<td>Every spill kit should contain the following:</td>
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<tr>
<td>1) Plastic container with a top to contain hazardous waste bag during cleanup</td>
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<td>-A 5 gallon plastic bucket is a good choice and allows for storage of the spill kit</td>
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<tr>
<td>2) Personal Protective Equipment (PPE)</td>
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<td>-Safety goggles, gloves, apron, lab coat and more specialized equipment depending on specific hazards</td>
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<tr>
<td>3) Tools</td>
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<tr>
<td>-Clean up tools such as a dustpan and brush made out of plastic or other non-sparking material</td>
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<td>4) Inert Absorbents</td>
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<tr>
<td>-Vermiculite, sand, clay and kitty litter are all good choices. Commercial products are also available. Wood products such as sawdust and paper towels are not inert and should be avoided</td>
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(Continued on pg. 6)
Perfect Food Safety Picnics!
No ants, no bees, no food poisoning! What better way to celebrate a beautiful summer day than with a picnic outside at the park, at the beach or even in your own backyard. Here are some tips to keep your picnic perfectly safe.

Plan ahead so you don’t forget essential items such as a food thermometer, cooler chest with ice, plenty of clean utensils, storage containers for leftovers, paper towels, and trash bags. Find out ahead of time if you’ll have running water, grills, picnic tables, and trash receptacles at the site.

In preparation for your picnic, don’t thaw meat on the counter overnight—that’s not safe. Thaw food in the refrigerator or cook from the frozen state. Cooking frozen meat or poultry will take approximately 50% longer than the recommended time for fully thawed or fresh meat and poultry.

Don’t partially cook meat and poultry ahead of time. That can be risky. It’s safest to cook meat and poultry to a safe internal temperature at the picnic.

For a worry-free picnic, place perishable foods, such as hot dogs, burgers, poultry, deviled eggs, and macaroni or potato salads in a well-insulated cooler with plenty of ice or freezer gel packs. They need to be kept cold.

When you arrive at the picnic site, the first task is to wash your hands before preparing food. If running water is not available, use disposable wet wipes or hand sanitizer to clean your hands before and after touching food.

Don’t leave foods out in the sun. At the picnic, keep the cooler in the shade. Serve food quickly from the cooler and return it fast. In hot weather, above 90°F, food shouldn’t sit out of the cooler over an hour.

Cook meat and poultry to a safe temperature as measured with a food thermometer. Just because a hamburger looks done on the outside doesn’t mean it is done on the inside. Use your food thermometer to be sure!

Serve food items from the grill on a clean platter. Don’t use the same plate and utensils for cooked food that were used for the raw food. Use a clean plate and utensil set for cooked food.

Don’t forget to unpack that cooler as soon as you return home. Refrigerate leftover meats and salads which have stayed cold; discard if they have become warm.

(Continued from pg. 2)

These practices can include things such as rain gardens (like the ones recently installed on W. Union Street in front of the old train station), filter strips, bio swales, bio retention basins, permeable pavement, and several others.

A major advantage of these Best Management Practices is the filtration of sediment and pollutants from the storm runoff prior to water entering the receiving stream or river.

Most of the BMPs also provide a source of recharge to the groundwater at the point where water falls to earth, thus also slow the rush of water into the receiving stream, and reducing the danger of flooding downstream.

Many of these BMPs are aesthetically attractive, as well as provide environmental benefits. We’ll talk more about these practices in the future.

For now, the message I want to convey is that we need to fundamentally change the way we look at storm water.

For regulatory, natural resource, and ethical reasons, we need to treat storm water as a resource to utilize and manage, instead of a waste product to be passed on to someone else downstream.

For more information, click here!
Office Ergonomics

Seating

In the easily adjustable chair, the controls that influence chair height, seat pan tilt and lumbar support should all be accessible from an upright seated position. Arm rests should also require minimal effort to adjust. Ideally, the armrest should be padded, soft and feature lateral, horizontal and vertical adjustments.

Monitor Location

The ideal location for the monitor is central to the seated position and at the viewing distance of 20-30 inches. From seated, this distance equates to approximately arms-length away. When properly situated, the screen should dictate a slight forward head tilt of 15 degrees. If you find you are tilting your head back to see the display, the screen is too high and needs to be lowered until this chin up position is eliminated.

From a height perspective, the top of the screen should align with the seated level of the nose. Use of a monitor arm to support the screen(s) is recommended as these applications permit greater ease of screen movement, and additionally free up table top space that would otherwise be occupied by the display(s).

Twin screens should be aligned in a broadened-inverted- V configuration. Such an arrangement helps reduce back and forth head movements and should permit screen viewing through simple eye scanning.

Keyboard

The proper height of the keyboard is dependent on stature. The keyboard should be situated central to the seated or standing position and at a height that encourages relaxed, close to the body arm placement, in which the forearms are perpendicular to the upper arms.

Keyboard Tray (KBT)

Many of our campus worktables do not adjust. If entry work is the principal task being performed and the table seems too high, then the simplest approach for adjusting a work level is introduction of a height adjustable keyboard tray.

Unfortunately, like our chairs, keyboards and the mouse are not all created equally and in the case of the keyboard tray most are downright lousy. The adjustable, retractable sliding keyboard tray can assist in centering the keyboard and may promote efficient entry duty recruitments.

These moveable trays also allow the keyboard to be recessed or located out of the workspace when not in use. The best designed trays are those with a single surface and ample area for side by side keyboard and mouse placement. If considering acquisition or introduction of a KBT please consider contacting the University Ergonomist for a consult.

Document Support

The document holder can be valuable piece of equipment in the computer environment. Ideally, the document holder should be centrally placed between the keyboard and monitor. Studies have demonstrated that vertical eye scanning movements, as opposed to horizontal, require less external ocular muscle activity and, therefore exact a lower work effort from the muscles that move the eyes.

This finding supports the recommended document placement in which referenced materials are tilted toward vertical and situated between the KB and screen.

If placement of a holder between the keyboard and monitor is not possible, a document holder should be located as close to the monitor as possible and at the same level. In offices with windows, the holder should be placed on the side of the monitor opposite an office window.
Encourage affected workers to drink fluids, especially water. Do not let the worker return to work that day, and give them ice packs to help bring down body temperature. Do not hesitate to take the worker to a clinic or emergency room if symptoms do not improve within an hour.

Keep an eye on employees while they are resting, also report symptoms to a manager or co-worker immediately. Heat exhaustion can lead to the deadliest form of all heat injuries, heat stroke.

A heat stroke is the most serious type of heat-related illness. The body is not able to regulate its core temperature, and sweating actually stops. Symptoms include confusion, fainting, and seizures. Contact 911 immediately.

The body’s temperature will be very high, the skin could be red, hot or even dry. Again, call 911 and wait with the person while help comes. After 911 has been called, try to cool the worker with ice, water, or air.

Loosen clothing, and place cooling substances such as ice packs in the armpit region. Provide fluids preferably water to the person in need.

Remember, if you are not a medical professional, use this as a guide, and seek medical help whenever anyone is suffering from a heat-related illness.

Neutralizing Materials

- For acid spills, these may include sodium carbonate or sodium bicarbonate. For base spills, citric acid or sodium bisulfite should be used. Materials are also available to raise the flashpoint of solvents when applicable.

Chemical resistant bags for contaminated materials

- Bags made of either high density polyethylene or polypropylene are acceptable as long as they are resistant to the chemicals that are being cleaned up.

Chemical spill kits are available from commercial suppliers such as VWR and Fisher, or can be made from suitable materials that you may already have in your laboratory. The kit should be clearly labelled and readily available to all laboratory staff.

In the event of a chemical spill, be certain to follow all safety procedures during cleanup and notify EH&S as soon as possible.

Make sure that all cleanup materials that came into contact with hazardous waste is clearly labelled as hazardous waste and disposed of properly by attaching a hazardous/chemical waste label and contacting EH&S to schedule a pickup.
Fire Safety

By: Elizabeth Boch

Between January 2000 and October 2014, fires that struck housing within a 3 mile radius of institutions in the United States claimed the lives of 126 students. Nine of those students died in on-campus housing fires specifically. This rate suggests that five deaths occur a year, at or near universities and other places of higher education. While only a fraction of these fires started in a dorm room, they account for a quarter of the injuries suffered.

Causing a fire not only puts you and others at risk but could also result in a hefty fine for the person responsible. It is also important to remember that removing fire alarms in the dorms is against the law.

Having these working devices in the buildings decreases the likelihood that one will be injured or killed in a fire. Furthermore, it is to one’s benefit to test the alarms in off campus housing to make certain that they are working properly.

Annually, there are approximately 3,800 fires that occur in or around college and university residential housing spaces nationwide. The most common cause of these fires is appliances and other equipment that require an outlet, especially those that are used for cooking.

These appliances alone account for 83% of all campus fires. Because most of these fires start as a result of electrical error, it is imperative to abide by university restrictions when bringing things from home into residential living spaces.

Compliance with the regulations allows for a decreased likelihood that a fire will ignite. Items such as candles and extension cords are a threat that endangers other students occupying a building and potentially even firefighters, should a fire occur.

Though the fire started at the Union Bar and Grill and not in a residential space, three apartment buildings were burned, leaving 40 OU students without a living space.

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The dangers of a fire were exhibited in November 2014 when four OU students, three police officers and five firefighters were injured evacuating apartments and extinguishing the fire on Union Street.
It is never our position to refuse an activity, but it is always our responsibility to ensure that all activities are performed in the safest manner possible.

On a regular basis, the Staff of RMS works with many different groups ranging from students, visitors, faculty, and staff. These interactions deal with projects and programs not just on campus but throughout the world wherever faculty and staff may travel.

Our staff have assisted with projects from the Chesapeake Bay to the Galapagos Islands, from Malaysia to Brazil, and other places across the globe.

Much preplanning goes into these projects and we are always wanting to be proactive in making these trips as safe for the participant as we can. It is amazing to think of the imprints that Ohio University students and staff make across the planet.