

U.S. Department of Agriculture Forest Service	1. WORK PROJECT/ACTIVITY <b>Volunteer Activities- combined</b>	2. LOCATION <b>30239 S State Route 53 Wilmington, Illinois 60481 423-6370</b>	3. UNIT <b>Midewin National Tallgrass Prairie</b>
<b>Job Hazard Analysis (JHA)</b> References- FSH 6709.11 and -12	4. NAME OF ANALYST	5. JOB TITLE <b>Volunteer Coordinator</b>	6. DATE PREPARED <b>11/15/2016</b>
7. TASKS/PROCEDURES	8. HAZARDS	9. ABATEMENT ACTIONS (Engineering Controls * Substitution * Administrative Controls * PPE)	

**Immediately Respond to Medical Emergencies by calling 911 first, then the Supervisor's Office (815) 423-6370.**  
*Injuries must be reported to the volunteer coordinator within 24 hours.*

*Volunteers are never advised to work alone. In the rare circumstance that this is approved, volunteers must notify the program manager, volunteer coordinator, family member and/or friend of the time and location that work will be performed. Certain volunteer activities, underlined in sections below, are forbidden to be performed alone. You must also carry a phone or radio.*

## Section One: Applies to ALL Volunteer Activities

(Read all additional sections that apply to your position)

- S1- ALL Volunteer Programs
- S2- General Seed Processing
- S3- Fence Construction or Removal
- S4- Handheld Gasoline Powered Tools (not chainsaws)
- S5- Water Quality and RiverWatch Monitors
- S6- Equestrian Tour Leaders
- S7- Bicycle Tour Leaders
- S8- Working with Herbicide
- S9- Volunteers Driving Government Vehicles

S1	<b><u>ALL VOLUNTEERS MUST READ SECTION ONE</u></b>	<b>Extreme cold conditions, frostbite, hypothermia</b>	First consider Avoiding exposure by planning work around extreme conditions. Recommended best practices include wearing insulated gloves, hat, extra layers of warm dry, comfortable clothing, taking frequent warm-up breaks and being able to recognize signs of hypothermia and frostbite. Be observant of the well being of others around you. See link to left for more information.
		<b>Extreme heat conditions, sunburn, sunstroke, heat exhaustion</b>	First consider Avoiding exposure by planning work around extreme conditions. Recommended best practices include drinking sufficient water, wearing light-colored and breathable clothing that protects skin from exposure, wearing sunscreen, hat, and sunglasses, taking frequent breaks in the shade and being able to recognize signs of heat-related injuries and stress. Be observant of the well being of others around you. See link to left for more information.
S1		<b>Adverse weather conditions (sudden storms, tornadoes)</b>	Decrease exposure by planning field activities to avoid adverse conditions, but be prepared for unexpected weather conditions and know where shelter is located. Carry a cell phone/radio and appropriate foul weather gear to worksite. Shelter from rain storms will most often be in a vehicle, nearby building or bunker. Shelter from a tornado will be in a ditch (away from vehicles) OR in the bathroom facility in the headquarters buildings.

	<a href="#"><u>Lightning</u></a>	If you can hear thunder, you are in striking distance and <u>Must seek shelter</u> . Move to vehicle, depression, ditch or other shelter. Do not go beneath trees or power lines; Avoid the tallest objects. If no cover is available, crouch on the ground on tip toes, making as little body contact as possible. Avoid ridge lines, hill tops, open spaces, rock outcrops, and other likely lightning targets. Discard metal tools and Never use radios or other electrical devices during an electrical storm. See link to left for more information.
S1	<b>Inexperience or unfamiliarity with work site</b>	Get familiar with the area of travel prior to the trip and/or bring an experienced volunteer or staff member. Maps are available. Let someone know of your location and carry a radio or cell phone. Check site for potential hazards. If applicable, locate vehicles; equipment; materials; and gear prior to starting work. Be aware of the nearest first aid kit and communication gear. <u>Never</u> go out alone after dark.
	<b>Unfamiliarity with work site for conducting ecological surveys at night for nocturnal animals</b>	Prior to night time surveys, familiarize yourself with the survey sites during the daylight hours to identify travel routes and potential hazards on the road and in the field. <u>Never go into the field alone at night</u> . Your volunteer position description states that, at night, it is required to work with a partner or small group for your volunteer agreement to be valid. Volunteer agreements are available on the Midewin volunteer webpages and in Volgistics for additional partners to sign and turn in to the volunteer coordinator.
S1	<b>Improper footing</b>	<u>Must</u> wear sturdy field shoes or boots with good traction for various terrain (no exposed feet). Do not rush and watch where you step. Be aware of steep, muddy, rocky and uneven ground. Carry any hand tools on the down hill side with sharp edges towards the ground. Give a verbal warning to others of observed or potential hazards.
	<b>Getting Lost</b>	Plan travel routes before you leave for the field. Get familiar with the worksite in advance and/or bring an experienced volunteer or staff member. Maps are available. Be familiar with multiple entrance and exit routes. <u>Never go into the field alone at night</u> . Always let someone know of your location and carry a radio or cell phone. If all else fails and you are lost, head towards a road or other man-made structure.
S1	<b>Poor Physical Conditioning</b>	Know your limits and do not exceed them. Know where you are going, the physical challenges you will be exposed to and the estimated time you will be at a worksite or on a task. Always have plenty of water available. <u>Speak up immediately</u> if there is a health and safety concern. Be observant of the well being of others around you. Your volunteer agreement is not valid if you are doing activities against doctor's orders or recommendations. Talk to the volunteer coordinator about other options until your condition improves.
	<b>Fatigue</b>	Take frequent breaks and drink liquids to reduce dehydration. Switch tasks with other workers. Be able to recognize signs of fatigue in yourself and others.
S1	<b>Serious injury or illness</b>	A first aid kit will be located at the work site and should be readily available at all times. Additional first aid kits and supply bags are available to check out. The first aid kit should be complete and updated on a regular basis. 911 will be called immediately and then personal emergency contacts listed on your volunteer agreement.
	<b>Back or muscle strain</b>	Be aware of your physical limits. Use tools or work as a team instead of using brute force to accomplish task. Use the appropriate tools properly. Lift heavy items using mostly leg strength, not back strength. Take frequent breaks when working in a kneeling or bent over position. If you are tired or dehydrated you are more susceptible to injury
S1	<a href="#"><u>Poisonous and Injurious plants</u></a>	Recommended best practices include being able to identify common, local poisonous plants, especially poison-ivy, wild parsnip and stinging nettle so you can avoid them. We recommend protective gear such as gloves, long-sleeve shirts, pants, boots, head and eye protection when working around poisonous or injurious plants. Proper clothing will also help protect against punctures, scratches, cuts and skin irritation from plants such as ragweed, wild roses, osage-orange, thistles and teasel. Clean off tools after trimming or cutting poisonous plants. Use poison-ivy cleaner or soap within 20 minutes after coming into contact with poisonous plants. See link to left for more information.

S1	<b>Working near cattle</b>	Plan field work to avoid or minimize contact with cattle. Cattle can vary greatly in temperament, depending on breed, gender, season, etc. Don't become complacent even if animals have been tolerant, gentle or friendly. Bulls (including yearlings) can be aggressive, and cows with young calves can be very protective. Recognize aggressive or warning behavior. When working in an occupied pasture, be aware of cattle's location at all times and plan escape routes to safety. Don't leave vehicle to lead cattle off road; use horn instead. Don't attempt to 'bump' cattle with vehicle because it may result in damage to vehicle, driver, and animals!
S1 <b>Litter Pick-up</b>		Some modern garbage is obvious and can be removed. If it is sharp (needles or blades) or contains liquid, you <u>Must</u> leave it alone. Because of Midewin's land use history with historic farmsteads and an ammunition plant, some items may be historic and <u>Must</u> be left in place. Other items may be evidence of illegal activity. When in doubt 'Leave it Alone and Pick up the Phone.' At this point we report to Law Enforcement and/or the Archeologist.
	<b>Sharp objects/glass</b>	When removing litter, you <u>Must</u> wear thick gloves if there is a chance the litter could come in direct contact with your hands. Carefully pick up glass or plastic. Grabbers and scoops should be available for certain tasks. Never handle needles or blades.
S1 <b>Avoiding &amp; Treating Bites/Stings</b>		<b><u>Let project leader(s) and fellow volunteers know of any allergies to insect bites or stings. If severe allergies are known, carry a sting kit and/or a prescription EpiPen. These <u>Must be self-administered</u>. Report any reactions immediately, even if mild.</u></b>
	<b><u>Tick bites: Lyme Disease, Rocky Mountain Spotted Fever, West Nile Virus, etc.</u></b>	Insect repellent may be used as a barrier. The following are recommended best practices: Wear light colored clothing that fits tightly at the wrists, ankles and waist. Tuck in loose clothing such as shirt and pant legs. Search your body regularly, especially hair and clothing. Ticks generally do not attach for the first couple of hours. If a tick becomes attached, use tweezers to grasp it at the point of attachment, pull straight out with gentle, steady pressure. Wash skin and then cleanse with rubbing alcohol. Place the tick in a container (with the date) for later identification if a reaction occurs. If you can not remove the full tick with the head attached, you may consider seeking medical advice. Research and watch for reactions that may occur within two weeks. See link to left for more information. Tick bites can be reported to the USFS staff or volunteer coordinator within 24 hours just like other injuries.
S1	<b>Bees/Wasp stings: Allergic reactions, painful stings</b>	Be alert to hives in brush, hollow logs or underground. Watch for insects traveling in and out of one location. Keep long sleeve shirts and pants tucked in. Bright colors and metal objects may attract bees. If you are stung, cold compresses may bring relief. If a stinger is left behind, scrape it off the skin. Do not use tweezers which squeezes the venom sack into your skin. Call 911 immediately in case of hives, asthmatic breathing, tissue swelling or a drop in blood pressure.
	<b>Mosquito bites: Skin irritation, encephalitis</b>	The following are recommended best practices: Wear long sleeves and pants. Insect repellents may be worn by following the application instructions on the product container. You may provide your own after-bite medication to reduce skin irritation.
S1	<b><u>Snake bites</u></b>	Do not reach into dark cracks, crevices or in holes. Use caution when moving or sitting on rocks and logs. See link to left for more information.
	<b><u>Spider bites/ Being bitten by a venomous spider</u></b>	There are many non-aggressive spiders in Illinois. A spider may bite in self defense, so do not disturb them. Most bites may feel similar to a mosquito bite or bee sting at most. There are two types of spiders, extremely rare in this area, that some people have reactions to: the female black widow spider and the brown recluse spider. These spiders are generally found in dark, hidden spaces, such as basements, garages, barns, woodpiles, gardens, and under stones or logs. The most common venomous spider bite symptom is a severe migraine headache that may persist up to a week. Other symptoms include nausea, weakness, tiredness, temporary loss of memory, and vision impairment. In this case, seek medical care immediately. See link to left for more information.
S1 <b>Visitor Contact</b>	<b>Dangerous or uncooperative visitors</b>	Speak to visitors with a controlled, even voice and avoid shouting. Refer those who disagree with a Forest Service policy to the Supervisor's Office or to the project leader if necessary. Avoid contact with a visitor if that person acts abnormally or shows signs of drug or alcohol use. If the visitor does not respond to your request or question, do not be persistent and do not delay in letting them leave the area. Never approach any strangers that are in their vehicle while in a parking area.

S1	<b>Personal injury or death</b>	At anytime during the visitor contact, if you feel threatened or uncomfortable, excuse yourself from the visitor and walk to your own vehicle. Immediately call for help on the radio or cell phone. Even if you are in an area where you cannot transmit, you can give the impression that you are in contact with authorities. Never force a vehicle to stop. If someone is not slowing down, do not attempt to stop them in order to make contact. <u>Never</u> get into a stranger's vehicle. If you are stranded, call for help. Stay in your car until help arrives.
S1	<b>Witnessing Illegal Activities</b>	Immediately leave the area if you encounter any illegal activities such as theft or drug/ alcohol use. Contact your program leader or the volunteer coordinator to report observations. <u>Never</u> put yourself at risk. Trust your instinct.
S1	<b>Selecting, Inspecting and Maintaining Tools</b>	Pinches, Cuts, Splinters, Concussion injuries
	Wear eye protection, foot protection, and gloves as appropriate. Ensure the tool you are reaching for is free if reaching into a trash can full of long-handled tools to remove it. Never "yank" or swing tools free from a box, bin, drawer, or bucket. Visually inspect tools to ensure that handles are firmly affixed and burr and splinter free. Ensure that tools are free of oil, grease mud, or anything that would need to be cleaned before using to ensure a good grip in the hand or on working contact surfaces (a light coat of oil is frequently applied to metal tools before returning to storage). Ensure multi-part tools are complete, well-functioning, and tight; examples would include ratchets, pliers and vice grips. Clean rust off of metal tools with sandpaper or emery cloth before use. Ensure tools with blades are sharp and not gouged or pitted and with no missing or bent teeth or blades. Examples would include hand saws, chisels, and screw drivers. Check to ensure that hammer and mallet heads are firmly attached to their handles, that the striking surface is intact and not cracked or deeply gouged and that the handle is in good condition and not splintered or cracked.	
	<b>Selecting the right tools for the job</b>	Pinches, abrasions, puncture wounds, barked knuckles.
	Anticipate the job to be accomplished from start to finish. Most Forest Service tool cribs are well stocked and it is both dangerous and unnecessary to put your hand into machinery to tighten a screw while the longer shafted screwdriver lies in the bin, back at the shop. Remember to "take two": when you need to tighten a nut you may need a second wrench to hold the bolt head in place. Use the right tool for the job. Some phillips head screws, for example, have heads that can also be driven with flat head screwdrivers, but that is neither the safest nor the most secure way to fasten something. Saws, hammers, chisels and pry bars come in many configurations each with a specific application. If you don't know which saw to use, ask. Selecting the right tool also extends to the right work piece as well. Use the right screw, bolt, nail, etc. for the job to achieve the best results, the most safely.	
S1	<b>Using hand tools</b>	Eye injury, abrasions, cuts, puncture wounds, pinches
	Always wear eye protection, foot protection and work gloves. When approaching the work ensure the tool grips the work securely, whether the work is a screw, a nail, or a piece of wood to be sawn. Use or create guide lines and holes whenever possible: drilling pilot holes for nails and screws will ensure the nail or screw drives snugly and securely with less chance of spall or splinter. Use fids to line up holes before inserting pins. Guide cuts on wood will keep the saw blade securely in place when pressure is applied for production cuts. Select the most appropriate and most securely fitting tools: sockets over wrenches and vice grips, over pliers wherever possible. Don't use metric sockets or wrenches on imperial bolts or nuts; they are likely to slip and possibly cause injury. Anchor work whenever and however possible. Clamps and vice grips can be used to increase both efficiency and safety when holding work in place. Start nails before driving. Only use purpose-made extensions. Using a shaft extension on a ratchet keeps your hands safer and the work more efficient; extending a ratchet handle with a length of pipe to increase leverage is neither safe nor efficient. Ensure work is well supported if possible. Move the work to you on a work bench, saw horse, etc., rather than doing the work in-place if at all possible. In some cases it may require disassembly of something else before you can start the work, but the results will be better and safer. An example would be removing a carburetor from an engine to work on it while it is clamped onto a work bench. This will always be a better and safer choice than hanging over an engine compartment. In some cases this is, of course, not possible. But always choose the most secure, easiest to reach and best-lit environment to use hand tools. It will almost always be the safest and most effective way to work.	
S1	<b>Environment for using hand tools</b>	Getting hair, jewelry, clothing, skin caught in machinery. Being struck by loose, thrown, tools or material.
	Always consider not just the work to be accomplished with the hand tool but the environment as well. Tools are often used around moving parts of machines. Think through the job before physically approaching it. Stop, block, secure or disable other equipment nearby as you are about to work. Removing that screw may free a washer to fly into a moving belt for example. Focusing solely on the job at hand may cause one to become careless about the environment around you, which may be full of hazards of its own. Remove watches and jewelry. Secure hair out of the way, ensure your eye protection is close-fitting. Take care with loose clothing around moving machine parts.	

S1 <b>Cleaning up and putting tools away</b>	Tripping, cuts, pinches, concussive injuries	When finishing a job using hand tools ensure you have collected all tools, debris and extra work pieces. Loose sockets, screws, shims, and extra pieces of wood, can all become as dangerous as loose tools themselves, both for you and the next person on the work site, or the next person to turn on the machine you just fixed. It is common to lose track of a screwdriver bit or unused nails. They can become sharp metal projectiles. Tools left around can be trip hazards or can fall off wherever they are placed and injure hands, feet, or heads. Use the "top to bottom" principle when finishing a job using hand tools. Start at the highest place you may have set down a tool or piece of work, carefully inspect from that highest shelf, ledge, plank, or whatever, and inspect side to side moving slowly down to the ground or lowest place something could have fallen in to. Clean, dry, and replace tools in a manner that you, or the next user, can remove them without yanking them free of a tool box, drawer or pail.
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## Section Two: Seed Processing

S2 <b>General Seed Cleaning</b>	<b>Dust inhalation</b>	Various types of filter masks for dust are available. When using the seed cleaning machines, make sure the dust collection system is on and report to program leader if it is off. Work in a well-ventilated area. Keep doors closed between break area/office and the seed cleaning machinery. Slightly open the garage doors to aid in disbursing dust, if necessary. You may consider taking short breaks outside or discontinue working if you are uncomfortable in the workspace.
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	<b>Splinters, cuts</b>	Wear gloves, especially when changing machine screens.
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S2	<b>Tripping, stumbling</b>	Keep walking lanes and work area clear of obstacles. Be aware of surrounding work area and activities going on. Keep electrical cords and air hoses away from walking lanes and mark locations to warn other workers. Put shop vacuums and other cleanup equipment away when not in use.
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	<b>Inexperience or unfamiliarity with work site</b>	Walk work location before beginning tasks, check for potential hazards; locate vehicles, equipment, materials, and gear so as to minimize hazards. All members of crew should be aware of location of the first aid kit and communication gear, and these should be accessible to all crew members if needed.
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S2	<b>Hearing loss/injury</b>	Wear hearing protection at all times when working with or near noisy equipment or equipment with warning signs ('Hearing Protection Required').
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	<b>Eye loss/injury</b>	Wear eye safety protection devices such as safety glasses, goggles or shields appropriate for task. Know location of first aid kit and eye wash station in horticulture building.
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S2 <b>Operating and Working Around Seed Processing Equipment.</b>	<b>Direct physical injury from body part being caught in moving machine or parts or from breakage of machine parts.</b>	Operation <u>Must</u> be by trained personnel only. Review the operation of machine, know the location of safety switches and off switches. Be aware of location of all moving parts of machine. Do not put hands into entry hoppers, instead push uncleaned seed heads in with wooden or bamboo stick. Thoroughly check uncleaned seed lots before they are transferred into hoppers, to avoid dumping clippers or other foreign objects into equipment. Avoid wearing loose clothing that could get caught in the machine. Secure long hair to avoid getting caught in machinery. Operate machines with all safety guards, such as shields, in place. Read all warning labels on machine prior to use. Make sure machine is securely attached; if on wheels, chock the wheels. Shut down, switch off, and/or unplug machines (including shop vacuums) before cleaning or changing screens/brushes. <u>Never</u> operate the plot thresher seed cleaning machine alone; work in pairs on this machine.
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	<b>Carbon Monoxide poisoning</b>	<u>Always</u> use gasoline and diesel fueled machines outside or in well ventilated area with both overhead doors of horticultural building open.
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S2	<b>Skin or eye injury</b>	When using pneumatic hose be aware of location of other workers. Never point and release air towards the eyes or onto other exposed body surfaces of yourself or another person. Use protective eyewear when operating pneumatic hose.
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## Section Three: Fence Construction or Removal

	<b>Stretching fence wire</b>	Wire breaks under tension or wire wrap slips causing wire to whip outward, wire stretcher catches fingers or hand	Keep gloved hands on stretched wire if necessary to stand near it, wear safety glasses. All individuals should be familiar with proper wire stretcher operation. Be alert for damaged, kinked, or defective wire. Do not attempt to stretch damaged or defective wire. Malfunctioning wire stretchers should be repaired or replaced immediately. Follow all manufacturers instructions for use. Keep bystanders at least 20 ft from wire or stretcher.
S3	<b>Removing old barbed wire</b>	Wire springs up while cutting or while rolling up causing cuts or abrasions	Cut old wire next to a post. Hold the unconnected end firmly with gloved hand while cutting so that it can't spring up. Roll up wire carefully keeping it taut keeping other workers away. Wear long sleeve shirt, safety glasses, hardhat and gauntlet type gloves.
S3	<b>Handling and carrying fence wire</b>	Eye injury from wire returning to the coiled position, cuts and abrasions, muscle or back injury from lifting wire rolls, injury to hands or feet	Wear heavy duty gauntlet type gloves, eye protection, hardhat, and long sleeve shirt. Follow proper lifting procedures. Bend at the knees and keep the load close to your body. Know your limits and get assistance with the lift and carry.
S3	<b>Manual fence T-post driver</b>	Injury to head, back, hands or feet. Hearing loss	Practice good lifting techniques when mounting the driver on the fence post, wear gloves, hard hat, ear, and eye protection. Take frequent rest breaks and know your limits.
S3	<b>Hydraulic post driver</b>	Post driver operator can be caught under tractor wheels, injury to hands or arms from driver mechanism, hearing loss	Operator must receive proper training and review operating manual. Hands should be clear of driver mechanism. Gloves, long sleeves, hard hat, hearing and eye protection should be worn at all times. Operator shall maintain visual contact with the tractor or skidsteer operator at all times.
S3	<b>Tractor, skidsteer, and other heavy equipment</b>	Bystander caught under equipment wheels or tracks, hearing loss, injury to body extremities or death	Operation by qualified and approved personnel only. Never approach equipment unless under the direction of the operator insuring that the operator can see you and eye contact has been made. Individuals working near equipment should receive proper training and be familiar with the operating manuals. Wear gloves, hard hats, long sleeves and hearing protection at all times.
S3	<b>Installing gate or fence across a road, railbed, or other traveled way</b>	Vehicle damage, injury to travelers	Gates or fences that cross a traveled road shall be marked with highly visible, permanent, reflective material at the time of installation. Follow Forest Service standards for closing a road. Use these standards for closing an abandoned railbed, or other traveled way. Markings shall provide full visibility from each direction of travel.
S3	<b>Stapling wire to wood posts</b>	Eye injury if staple flies free, injury to the head, neck or chest if hammer flies free or falls from post	Keep safe distance from hammer, wear gloves, hard hat, long sleeves and eye protection at all times. Do not leave hammer lying on post or brace.
S3	<b>Installing wood posts</b>	Explosion or electrocution from cutting underground utilities, back injury from lifting and setting posts or using a manual post hole tool, injury to body extremities from power auger and other equipment	Check with J.U.L.I.E. (Joint Utility Locating Information for Excavators at 1-800-892-0123) before digging. Watch footing, keep hands and feet clear of auger, wear comfortable but not baggy clothing; follow proper lifting and carrying techniques. Get assistance if possible for the lift and carry.
S3	<b>Removing wood or steel posts</b>	Injury to fingers or hands and ankle and leg injuries	Be familiar with operation of handyman jack or post puller. Follow all manufacturer recommendations for use. Keep hands and fingers clear of chain or puller. Mark empty hole with warning flags if not filled in immediately. All holes should be filled in as soon as possible.
S3	<b>Removing fence wire</b>	Wire whipping loose, causing eye injury, cuts, or abrasions, muscle strain or sprain from lifting wire bails or pulling wire up	Keep both hands on wire while rolling into balls or when cutting wire, make tight, compact, rolls of used wire to prevent wire from flying loose. If possible get assistance to move large wire rolls. Keep safe working distance from others, communicate actions with crew members. Wear safety glasses, hard hat, leather gloves long sleeves and long pants at all times

S3	<b>Communications</b>	Slow or no outside response to emergency situation. Inability to carry out an evacuation	Radio or cellular communication shall be maintained with the administration office or with other staff at all times. If possible the supervisor will plan work to prevent individuals from working alone. The administration office must know the location of the work site and be prepared for an evacuation.
S3	<b>Fuel driven equipment</b>	Burns, poisoning, fumes	Permit equipment to cool before refueling, turn off engine before refueling, Operate in areas with proper ventilation. Never start or operate equipment closer than 10 feet from the fueling site.

S4 **Section Four: Handheld Gasoline Powered Tools (not chainsaws)**

S4	<b>Using Powered Tools such as, but not limited to Trimmers, Seed Strippers, Mowers, Rototillers, Augers, Seed Planters, Weed Whippers, among others</b>		<b><u>Never work with power tools alone.</u> Never approach an operator from behind and make sure the operator sees you and acknowledges your presence.</b> Read instructions and familiarize yourself with equipment before using. Have communication gear and first aid available. Use appropriate protective gear such as gloves, boots, eye and ear protection and helmet. <i>Ask a staff member if you are unclear which Personal Protective Equipment is necessary.</i>
S4	<b>Inexperienced users</b>		First time users should read instruction manual prior to operation. First time operators <u>Must</u> work with an experienced operator until they have demonstrated an ability to handle the tool safely. Make sure the tool is safe to use. If safety or proper functionality is questionable, you <u>Must</u> let a staff member know, so one of you can place it in the broken tool area with an explanation tag and date. The designated broken tool area is in the workshop in the horticulture building.
S4	<b>Carbon monoxide poisoning</b>		Do not use tool in an enclosed area. If tool is being used indoors, make sure the area is well ventilated. If dizziness occurs, shut off tool and move to an area with fresh air immediately.
S4	<b>Hearing/ear damage</b>		Wear hearing protection when operating or working near gas powered equipment.
S4	<b>Entanglement</b>		Secure all loose clothing and long hair before operating equipment.
S4	<b>Eye injury</b>		Wear eye protection when operating or working near gas powered equipment.
S4	<b>Shin/leg/foot injury</b>		When operating brush saw wear plastic shin guards. Wear toe guards when operating augers. Wear boots at all times.
S4	<b>Head injury</b>		Wear hardhat with face shield (when appropriate) when operating gasoline powered tools.
S4	<b>Vibration and hand injury</b>		Wear heavy duty gloves (with shock absorbing palm/fingers if possible). Take frequent breaks when working for an extended period.
S4	<b>Fire</b>		<u>Always</u> make sure tool is cool before attempting to refuel. Fill tank on bare ground with proper fuel mix.
S4	<b>Fuel spray</b>		<b>Allow the engine to cool for 15 minutes before removing fuel cap.</b> Remove gas cap slowly, wear gloves and eye protection when removing gas cap. Wipe off any spilled fuel and <u>Never</u> restart within 20 feet of fueling area. Use fresh fuel mix – Do not use fuel older than one month. Gasoline purchased in winter months is more volatile and boils at a lower temperature. Do not use fuel that has a strange odor.
S4	<b>Improper fit</b>		If applicable to the equipment you are using, adjust the harness and handle(s) to suit your height.
S4	<b>Hand-Arm Vibration Syndrome</b>		Take regular breaks. Take 10-15 minute break for every hour using vibrating tools. Limit the hours per day and week that vibrating tools are used when possible. Keep hands warm and dry. Wear adequate clothing to keep body temperature stable, since low body temperature reduces blood flow to extremities. Keep grip as loose as possible while still keeping control of tool. This reduces vibration that passes from tool to body. Don't use full throttle unless necessary. Maintain tool because older tools vibrate more if rotating parts become unbalanced or due to cutting parts become dull. Keep tools sharpened.

S4	<b>Obstacles and dangerous surfaces</b>	Check the floor of your workplace. Remember there is a risk of slipping on wet surfaces, uneven terrain or on freshly stripped wood (bark). Watch out for obstacles: take care not to trip over tree stumps or roots.
	<b>Flying debris</b>	Do not operate brushcutter/trimmer if anyone at distance closer than 15 meters( 16 yards). Otherwise they may be injured by flying objects. Keep the same distance from objects such as vehicles or windows to avoid damaging property.
S4	<b>Refueling</b>	<b>Fire</b> <b>Move 20 feet or more from any heat source before removing the fuel cap. Allow the engine to cool for 15 minutes before removing fuel cap.</b> Fill tank on bare ground with tank pointed away from you and with proper fuel mix. Use fresh fuel mix – Do not use fuel older than one month. Gasoline purchased in winter months is more volatile and boils at a lower temperature. Do not use fuel that has a strange odor. Wipe off any spilled fuel and do not restart within 20 feet of fueling area. Be sure to use appropriate fuel type.
S4	<b>Equipment malfunction</b>	Use proper fuel mix to ensure that tool works properly.
	<b>Extended use</b>	<b>Operator fatigue</b> Take breaks as often as needed, rotate with another operator.
S4	<b>Maintenance</b>	<b>Dull blade</b> Wear gloves and protective eyewear and train all users in proper sharpening techniques and reassembling of equipment.
S4		<b>Damaged protective devices</b> Examine protective devices (cutting tool guard, rider plate) for any signs of damage or wear. Replace any defective parts.
		<b>Improper fit of attachments</b> The cutting tool or attachment must be fitted correctly, secure and in perfect condition
S4		<b>Improperly working controls</b> The master control/stop switch must move easily to STOP or 0. The throttle trigger lockout (if installed) and throttle trigger must move easily and the throttle trigger must return to the idle position automatically.
	<b>Storage of Fuel</b>	<b>Unidentified containers</b> Be sure that the containers holding materials are labeled so as not to be confused with something else. <u>Do not</u> use products in unlabeled containers and <u>Always</u> report this to the project leader.
S4		<b>Fire in storage facility</b> Liquids should be stored in an NFPA-approved storage cabinet and labeled "Flammable--Keep Fire Away." There should be no more than 60 gallons of Class I or Class II liquids in a storage cabinet.
S4		Know the location of fire extinguishers near places that store flammable liquids.  <u>Never</u> smoke while handling or near flammable materials.
S4		<b>Spilling, leaking or damage to equipment</b> Do not store more than a one day supply of gasoline or other flammable liquid on equipment, unless the vehicle is a fuel supply truck that is properly placarded, labeled and designed for that purpose.
S4		<b>Leaking or combustible storage containers</b> Always use an NFPA-approved safety container for storing and dispensing small quantities of flammable liquids. The approved container for this purpose shall have no more than a 5-gallon capacity, shall have a spring-closing lid and a spout cover, and shall be designed so it safely relieves internal pressure when subjected to fire exposure. Do not use a safety container that leaks when upright or leaks more than 4 drops per minute when inverted.
	<b>Dispensing of Fuel</b>	<b>Unexpected fires or combustion</b> Always be sure that all handling and dispensing of flammable liquids is done in a well-ventilated area free of sources of ignition, and provide bonding (to mitigate static discharge hazards) between the dispensing equipment and the container being filled.
S4		<b>Static electricity</b> Set container on the ground when filling or be sure the item being filled is on the ground so as to not cause static electricity. Do not use static-generating materials to wipe up spilled gasoline or flammables.

S4

**Accidental spilling or leaking**

Use dispensing pumps when available. Contact project leader and wipe up spilled liquids immediately. Use sand, dry earth or a special oil-absorbent compound to soak up spills. Do Not use sawdust for fuel spills.

## Section Five: Working in Streams

S5

**General Stream Requirements**

At least two people are needed to conduct in-stream activities.

People entering water Must know how to swim. If not, you Must stay out of the water regardless of the depth.

Rescue rope Must be taken to every stream site.

S5

Wader use is optional, but Must be worn when temperatures are cold. If waders are worn, a wader belt Must be used to secure the top of the waders. This will slow the water entry if you fall in the stream.

Wading staff is recommended for entering and moving in the stream. This is provided by Midewin.

S5

People entering stream Must be in unanimous agreement that it is safe to do so at each location.

**Working in Streams**

**Slipping or Tripping**

We recommend using a wading staff to assist with entering and exiting stream to aid in balance. Use care placing feet. Be sure of footing before moving your other foot. Move slowly.

S5

**Sharp Rocks, Foreign Objects and Glass**

Wear closed-toe shoes such as wading shoes, waders, tennis shoes, or boots. Never enter the water barefoot or with footwear that leaves any part of your foot exposed.

S5

**Cold Water Temperatures**

Dress in warm layers for expected stream and weather conditions. Must wear waders in cold water.

**High or Fast Water, Flooding**

All people entering stream Must unanimously agree it is safe to do so at each location. If one person does not think it is safe to enter water, conduct activities from a bridge location, if feasible, or reschedule for another day. Be aware of weather activity upstream that may result in flooding.

**Falling into Stream, Water Filled Waders**

Don't panic. If you have trouble standing, move toward the shoreline and then stand up. Do not attempt to remove waders in the stream. Get assistance from other people with the rescue rope.

## Section Six: Equestrian Program Leaders

S6

**Horseback Riding**

**Unqualified Riders**

Only staff members and volunteers with experience riding horses may lead equestrian tours at Midewin. Never ride alone. Always bring an experienced partner for tours and events.

**Group Safety Awareness**

If working with a group, volunteer leaders should lead a safety session at the start of each volunteer day, event or tour. Volunteers should be made aware of safety procedures. Before riding, address each horse's habits and characteristics to other riders.

S6



**Right-of-Way uncertainty from other users encountering horses**

When meeting or passing other horses, hikers, bicycles on the trail know who has the right of way. Hikers have the right of way over everything except horses. All trail users are supposed to yield to the horse. Ask the other trail users to make their presence known to the horse by talking to let the horse know that they are "humans" as opposed to "trail goblins". In some instances, even though you have the right of way you may be better positioned to yield to another trail user -- be considerate. Sometimes common sense and courtesy can be more important than who has the right of way.



S6	<b>Falls from horses</b>	Wear riding boots, field boots or work shoes that will not hang up in stirrups. Recommended best practices include wearing protective head gear designed for riding horses that meets American Society for Testing and Materials (ASTM) and Safety Equipment Institute (SEI) standards. Watch for unexpected hazards on the trail. Be alert for animals, insects, vehicles, people and nearby activities that may spook horses.
	<b>Low branches and thorns</b>	Be aware of field conditions. Recommended best practices include wearing appropriate clothing such as long sleeves and pants, gloves, safety glasses and helmet. Please report trail hazards to Midewin staff so they can be handled.
	<b>Trail User Conflicts</b>	Be aware of other users on the trail – pedestrians, bicyclists and vehicles. <u>Never</u> assume that other trail users are experienced around horses. Slow down or stop until other users have passed by. Address other users about horses habits if necessary. Do not run the animals fast on multi-use trails. Be alert.
	<b>Communication</b>	Be familiar with the emergency plan one page one of this Job Hazard Analysis. After calling 911, contact the Supervisor's Office immediately.
S6	<b>Handling Horses</b>	
	<b>Uncontrollable horses</b>	Animals that display dangerous characteristics, such as uncontrollable bucking, are Never allowed to proceed with the event or tour. If dangerous habits are discovered, remove the animal from service. Select appropriate horses for the specific work project or activity. Bridle stock before mounting. Do not wrap or tie reins around the saddle horn. Do not tie the lead rope around the lead horse's saddle horn or wrap the rope around your hand. Maintain control of the reins at all times.
	<b>Complacency around horses, Getting kicked or knocked over</b>	When working around horses, always speak to an animal when approaching from any direction. Be alert of the animal's movements. When near the rear of horses, stay close, maintain contact and talk to the animal to alert the animal to your presence.
	<b>Equipment deficiencies</b>	Check the animal's shoes for excessive wear and looseness. Hooves should be checked and cleaned, if needed, at the beginning of each day. Inspect the saddle and equipment (tack) to ensure it is in good condition.
S6	<b>Securing horses</b>	
	<b>Spooked or escaped horses</b>	Halter all animals under the bridle and fasten the animal's heads securely. Do not use bridle reins to tie horses. Do not tie the animal to a wire fence. When near the rear of horses, stay close, maintain contact, and talk to the animal. Be alert for hazards or objects in the area that may spook the animal.
	<b>Entanglement</b>	When tying horses, clear away debris and tie the lead rope at least 4 feet above the ground to prevent entanglement. Tie the animal to an object using a rolling slipknot. Where possible, tie the rope to an object that the animal cannot walk completely around. After tying the horses, do not cross under the lead rope. Halter all animals under the bridle.
S6	<b>Loading horses into Trailer</b>	
	<b>Head Injuries</b>	Never ride horses into a trailer.
	<b>Being kicked, knocked over, or squeezed against trailer when loading</b>	Only staff members and volunteers with proper experience may load horses into trailers. Always stand to side of horse when loading and unloading. Never walk into trailer ahead of horse when loading. Use halters and tie horses firmly when in motion and transit.
S6	<b>Equipment failure</b>	Check brakes, lights, safety chains, ramps, gates, etc. to ensure they are functioning and secure.

## Section Seven: Bicycle Program Leaders

S7	<b>Bike Riding</b>	<b>Improper Personal Protective Equipment (PPE)</b>	<u>Always</u> wear proper PPE including helmet (ANSI Z90.1 standard, SNELL, or AMSE approved), leather palmed gloves, and safety glasses (ANSI Z87.1-2003). PPE <u>Required</u> on the bike includes rear-facing red reflector and/or red lamp on back of bicycle; colorless or amber reflector in the spokes of the front wheel; and an amber or red reflector in the spokes of the rear wheel. A first aid kit is also <u>Required</u> .
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<b>Working near moving vehicles/collision with vehicle</b>	Be aware of your surroundings including traffic and other trail users. Wearing bright, reflective colors to make you and your bike more noticeable is highly recommended. You <u>Must</u> yield the right-a-way to vehicles and ride with traffic.
<b>Right-of-Way uncertainty when encountering other trail users</b>	When meeting or passing other horses, hikers, bicycles on the trail know who has the right of way. Hikers have the right of way over everything except horses. All trail users are supposed to yield to the horse. Ask the other trail users to make their presence known to the horse by talking. In some instances, even though you have the right of way you may be better positioned to yield to another trail user -- be considerate. Basically, whoever can get off the trail easiest should do so. Common sense and courtesy are much more important than who has the right of way.
<b>Interference with other users</b>	Be aware of hunting seasons, other users and animal interference. Remember that you may potentially startle horses or resting animals that may be on your route. Make your presence known when approaching others users from behind.
<b>Poor Bike Maintenance</b>	Bicycle guides should caution bike riders that hybrid or fat tires are highly recommended for Midewin's trails. Before each ride check tire pressure, brake cables, chains and sprockets. Ensure that the bike properly shifts through all gears and make sure tire pressure reflects the desired riding conditions. Check that tires are on tight and adjustable seat is secure. It is recommended for bicycle guides to carry a portable air pump for tires.
<b>Loose clothing</b>	Loose clothing may get caught in chains or other moving parts of the bike. Tuck loose pant legs into shoes or secure with a rubber band and/or tape.
<b>Unfamiliar with or ill fitted to bike</b>	Become familiar with a new bike or refamiliarize with an old bike. Know its braking capabilities and adjust the seat to a comfortable level. Never assume that all bikes ride the same.
<b>Low hanging objects</b>	<u>Never</u> ride under overhanging limbs/trees/wires unless there is at least one foot of clearance for your head. Walk bike under these obstacles if you are uncertain. Report low hanging or broken limbs above trail to your program leader immediately.
<b>Objects in or near the path of travel</b>	Always scan in the direction of travel for objects that may be in the way. There may be unexpected ruts, culverts may be out, sticks or branches may be in the way, and slick or wet areas may be present. Keep an eye on the person in front of you as they may be unintentionally thrown into your path. Be aware of vehicles, cattle, pot holes, loose gravel and other trail users that may be nearby.
<b>Riding for long periods of time</b>	Recommended best practices include taking breaks when needed; walking around; stretching legs, back, arms and hands; sitting for brief periods of time; traveling with plenty of water and snacks.
<b>Communication</b>	Be familiar with the emergency plan on Page One of this Job Hazard Analysis. After calling 911, contact the Supervisor's Office immediately.

S7 **Loading/Unloading Bikes**

<b>Head injury/cuts/scraps/muscle strain</b>	Make sure bicycle is secured for traveling. Unstrap/unlock bicycles before unloading. Be aware of where you are lifting and setting the bicycle before unloading equipment. When lifting a bicycle bend and lift cautiously. Ask for assistance when necessary.
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## Section Eight: Herbicide Storage and Application

(must be licensed by the Illinois Department of Agriculture)

Invasive species are a threat to prairie restorations and along trails therefore Midewin will train, supervise and pay for herbicide license fees for any volunteers that are committed to controlling invasives with herbicide at Midewin. Midewin will pay annual license fees for certified *Applicator's* for those that choose to mix, transport, handle and apply herbicide. Midewin will pay annual license fees for certified *Operator's* for those that Only Agree to apply herbicide under direct supervision. Midewin will Not continue to pay license renewal fees if they are not used or herbicide safety and procedures are violated.

S8 **General Herbicide Safety**  
(non-restricted use herbicides  
only)

**Exposure to herbicides**

Always wear proper Personal Protective Equipment (PPE) when inspecting, inventorying, handling, mixing, transporting or applying herbicides, per label. Avoid contact with eyes, skin, clothing. Required PPE for herbicides used on Midewin include long-sleeved shirts and pants or coveralls, rubber chemical-resistant gloves, rubber/chemical-resistant footwear, protective eyewear (specifically using protective eye goggles during mixing, rinsing and disposal) and protective headgear (such as a hardhat). Always rinse/wash gloves and footwear before removing.

PPE should be stored away from general use areas to minimize the possibility of unintentional exposure

Always wash exposed skin thoroughly with soap and water after handling or applying herbicides. After using, wash hands before eating, drinking, chewing gum, using tobacco, using bathroom facilities, driving or handling/using communication equipment to avoid contamination.

Only certified individuals (with Federal certification or State of Illinois Applicator's/Operator's license) will handle or apply approved herbicides.

Conduct frequent inspections of storage facilities, application equipment, herbicide containers, and mixing/loading sites.

Check herbicide containers regularly for leaks, tears, or loose lids. If containers are in poor condition, put contents in similar sturdy container and label properly or report to a staff program leader.

Be aware of location and use of spill kits, first aid kits, eyewash stations, and contact numbers in case of spill or accidental exposure. Bring a portable eye-wash kit (provided by Midewin) and spare set of clean clothes with into the field in case of leaks or contamination.

All Safety Data Sheets (SDS) are filed on-site for each herbicide.

Always ensure good ventilation while handling herbicides.

Label tools, PPE, sprayers, and other equipment used during handling "For Herbicide Use Only" and store in the appropriate location.

Triple rinse empty containers. Dispose of all rinse water (rinsate) generated during the cleaning or rinsing of containers used to store, transport, or apply herbicides according to EPA regulations (or label directions).

A recommended best practice for persons regularly handling or applying herbicides is to have an entire set of clean clothes available for changing in case of exposure from spills.

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**Midewin/USDA Forest Service:**  
**Mark Roe- Safety Officer/Coordinator**

Office: 618-253-1020  
Cell: 618-499-7613

**Bill Mains- Hazardous Material Spill**

Office: 815-423-2137  
Cell: 630-204-6017

**Wilmington Fire Department**

911 or 815-476-6675

**Wilmington Police Department**

911 or 815-476-2811

**Illinois State Police**

911

**Illinois Poison Center**

911 or 800-222-1222

S8 **Herbicide Storage** (non-  
restricted use herbicides only)

**Unintended exposure through  
improper herbicide storage  
practices**

Store herbicides in appropriate facilities according to label specifications. All herbicides are stored in the horticulture building at Midewin.

Keep herbicides in original containers and tightly sealed (when not possible follow directions below). Display the EPA approved label. Do not cut or weld storage containers. Containers used for storage or mixing are to comply with label directions for the specific herbicide.

If transferring herbicides or storing mixed herbicides in containers other than the original, mark containers with appropriate information, including type of herbicide (contents), date mixed, EPA registration number, and approximate volume remaining in container. Include precautionary label statements and registration number of the herbicide to enable prompt and accurate transmission of information in case of accident or illness.

Whenever reasonably possible, use all mixed/diluted herbicides and Never store in application equipment longer than your shift. It is recommended to mix a smaller amount, when in doubt, than to over estimate the amount of herbicide needed for the day. If you must, store unused/leftover herbicide portions in temporary, approved storage with leak or spill containment. Label containers as indicated above. Never store unused portions in food, feed, medicine, or beverage containers.

S8

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		<p>During <i>exceptional</i> situations when mixed/diluted herbicides must be stored <u>Briefly</u> in application equipment, depressurize equipment and store tanks, hoses and wands within containment.</p>
S8		<p><u>Never</u> cross-contaminate herbicides. Keep herbicides adequately separated according to type. Segregate and store each herbicide formulation with a label containing the name, EPA registration number, and other information of the formulation (as outlined above on line 134).</p>
S8		<p><u>Always</u> store herbicides away from food, animal feed, and water.</p> <p>When accessing storage cabinets, regularly check for leaking containers and notify your program leader or resolve the situation following proper procedures above.</p>
S8	<p><b>Please notify your program leader if you notice that Midewin may be out of compliance for any of these legal rules and regulations.</b></p>	<p>The U.S. Forest Service staff abides by storage regulations in the following ways. Store in an appropriately designed cabinet, labeled as to contents ("Pesticides" or "Herbicides") with internal spill containment. Protect herbicides from freezing temperatures, rain, and flooding. Do not store herbicides or place storage cabinet near heat source or open flame. Never store in direct sunlight if combustible. Where applicable (flammable or combustible herbicides) store in accordance with National Fire Protection Association (NFPA) 30 &amp; 395 (flammable/combustible) or NFPA 43A (oxidizing agents) and recommended storage procedures outlined in 40 CFR Part 165.</p>
S8		<p>U.S. Forest Service staff will post warning signs ("Caution Pesticide Storage") on outside of all exterior walls and/or doors of facility.</p> <p>U.S. Forest Service staff will maintain up-to-date list and inventory of all herbicides on premises. Notify your program leader of any inventory requests or concerns.</p>
S8	<p><b>Transporting Herbicides (non-restricted use herbicides only)</b></p>	<p>Transport only the kinds and quantity of herbicide needed for the day's operations from the transport facility.</p>
S8	<p><b>Exposure through spillage during transport</b></p>	<p>Try to avoid transporting herbicides in application equipment. If you overestimated the quantity needed and there is leftover herbicide in application equipment at the end of the treatment, then depressurize and transport equipment in spill-proof container such as leak proof bucket or tub.</p>
S8		<p>Do not transport communication equipment in the same compartment with herbicides.</p>
S8		<p>Transport herbicides and application equipment in trailers or pickup beds separate from passengers.</p>
S8		<p>When transporting containers with herbicides, secure containers from movement to prevent spillage.</p>
S8		<p>Legibly label containers used to transport herbicides other than original containers with name, EPA registration number, name and percentage of active ingredient, and signal words from registered label ("Warning" or "Caution").</p>
S8		<p>Securely close herbicide containers and protect from spills or breakage during transportation. Never transport open containers.</p>
S8		<p>Place ripped or punctured containers in plastic bags or otherwise contain, to prevent leakage.</p>
S8		<p>Periodically check containers while transporting for spillage. Ensure that the outside of the containers are not contaminated.</p>
S8		<p>Protect herbicides from extended exposure to direct sunlight during transportation and field use.</p>
S8		<p>In case of vehicle accident, notify responders of which herbicides are in the vehicle. Travel with the contact list and herbicide labels with EPA #'s.</p>

<p><b>Application of Herbicides (non-restricted use herbicides only)</b></p>	<p><b>Exposure during application of herbicides</b></p>	<p>All applications will be in strict accordance with label instructions. Know and follow state laws regulating pesticides.</p>
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S8		Prior to application, test equipment and calibrate spray nozzles with water. Run water through pressurized equipment before use to check for leaks or weak connections not detected during inspection process. Ensure hose connections, seals, and lids are tight. Check straps and handles to ensure that they will not fail during application and that the equipment fits securely. <u>Never</u> over pressurize equipment.
S8		Avoid breathing vapors or spray mist. Spray upwind of target area to avoid unnecessary herbicide drift.
S8		When applying herbicides on foot with handheld or backpack sprayer, back out during application to minimize the amount of herbicide on footwear, clothing or other PPE.
S8		Carry sufficient clean water into field for washing and rinsing.
S8		When applying herbicide on warm or hot days, take frequent breaks to keep cool. During breaks, remove PPE, wash or rinse with clean water, and drink potable water.
S8		When using a backpack sprayer, <u>Never</u> bend over to adjust PPE, identify target plants or pick up equipment. You <u>Must</u> squat or kneel to keep sprayer upright or remove the backpack sprayer before bending over.
S8	<b>Herbicide Leaks, Spills and Accidents</b> (non-restricted use herbicides only)	<p>Exposure to other staff, contractors, partners, volunteers, public, and non-targeted property or natural resources</p> <p>To minimize drift, <u>Only</u> apply herbicides when wind speeds are less than 10 mph. Apply herbicides at recommended rates (on label) for specific targets and weather conditions.</p>
S8		Whenever feasible, use the lower nozzle pressures and larger droplet sizes recommended on the label (FSH 2109.14,522).
S8		Avoid applying certain herbicides during days of high temperature (greater than 85 degrees F.), as the heat could cause some herbicides to volatilize and drift to areas outside the site of application. Herbicides subject to volatilization are indicated on the label.
S8		You <u>are required</u> to post notices near all areas that have been treated. Midewin will provide labeled pin flags with warnings for this purpose. Remove notices when treated areas are considered safe or request a staff member to remove them for you.
S8		Obey reentry times to treated areas listed on herbicide label. Recommended duration of avoidance will vary according to specific herbicide label directions.
S8		When applying herbicides on foot with hand-held or backpack sprayer, back out during application to avoid herbicide on PPE that may be transferred to non-target organisms or contamination of surfaces, vehicles or equipment used by others.
S8		<u>Never</u> apply herbicides near or over open water unless specifically registered for aquatic use.
S8		Use designated mixing sites.
S8	<b>Disposal of Unused Herbicide, Containers and Contaminated Materials</b> (non-restricted use herbicides only)	<p>Exposure through leaks, accidents and spills</p> <p>Wear required PPE when disposing of used containers, cleaning up spills, and disposing of contaminated materials.</p>
S8		Maintain up-to-date list of key personnel and/or agencies for physicians, Forest Service Safety Officer, designated hazardous spill coordinator, fire department, state and local police, and herbicide manufacturer for any needed technical assistance.
S8		Have on hand name, address, and telephone number of the nearest Poison Control Center and physician to be called.

S8	If ingested, call Physician or Poison Control Center immediately. Have specific herbicide label on hand for directions on first aid measures for ingestion.
S8	If inhaled, get to fresh air immediately, get medical attention and call local Poison Control Center for advice.
S8	Have an eyewash station or portable eyewash equipment available at storage (including temporary) facilities, mixing areas, and work project locations. If herbicide gets in eyes, immediately flush with water and continue for 15 minutes; seek medical attention. Midewin will provide eyewash bottles.
S8	Keep at least 10 gallons of clean, labeled water available at storage facilities for emergency decontamination purposes.
S8	It is highly recommended to carry an extra set of clothing in case of a spill. Remove clothing immediately if herbicide gets inside clothing, then rinse/wash body thoroughly and put on clean clothing. If persistent skin rash irritation follows, get medical attention. Dispose of contaminated clothing before reuse (check herbicide label directions).
S8	Maintain herbicide spill kits for accidental spills. Label contents and place where spills are likely to occur, such as storage facilities, loading and mixing sites, and in vehicles used to transport herbicides.
S8	In the case of incidents (minor spills, non-target application, unusual drift occurrence, adverse effect on wildlife or other environmental component), contact your program leader to prepare an incident form (FS-2100-D, Pesticide Accident and Incident Report).
S8	Know the location of the spill kits in the horticulture building. For small spills, use the spill kit. Or you may use, if available inert materials such as sand or absorbent clay to absorb herbicide. Recommended material will be included in label instructions for specific herbicides. Have these materials available at designated mixing site.
S8	Spills on floors or other hard surfaces should be contained or diked to prevent farther spread of herbicide during cleanup.
S8	For ground/field spills follow instructions on herbicide label.
S8	One or more ABC-type all-purpose fire extinguishers must be readily visible and available at the storage facility.
S8	In case of large spills, immediately contact safety officer and hazardous materials spill coordinator at the numbers listed at the end of this document.
S8	<b>Exposure during herbicide disposal activities</b>
S8	Dispose of all contaminated water as excess herbicide (see label directions).
S8	If applicable, clearly date herbicides for disposal by the end of the manufacturer-recommended shelf life.
S8	Clearly mark empty containers for disposal of herbicides: "This product is for disposal only" with registered product label. If ingredients are unknown, a label to that effect is required. Label must supply name, address, and phone number of person to call in case of emergency.
S8	Dispose of or recycle containers per state law or Forest Service Handbook guidelines (FSH 2109.14.41.11). Dispose of wastes in a landfill approved for herbicide disposal and according to federal, state, and local laws and regulations. Handle empty herbicide containers per label directions until cleaned, or destroyed, as empty containers may contain vapor and product residue.
S8	Do not allow empty containers to accumulate prior to disposal. Never bury empty herbicide containers.

# Section Nine: Driving Government Vehicles

(must be approved and trained to obtain a government ID card)

S9		<p><b>Must Follow Illinois Rules of the Road.</b> Review this link <a href="http://www.cyberdriveillinois.com/publications/pdf_publications/dsd_a112.pdf">http://www.cyberdriveillinois.com/publications/pdf_publications/dsd_a112.pdf</a></p>	
S9	<b>Driver Qualifications and Requirements</b>	<p><b>Insufficient training on operating vehicles, property damage, injuries.</b></p>	<p>You are required to have the following training, license and/or certifications to operate Forest Service vehicles:</p> <ul style="list-style-type: none"> <li>• A valid State Driver's License</li> <li>• A current U.S. Government Motor Vehicle Operator's Identification Card, (Optional Form-346, (good for 4 years)</li> <li>• Defensive Driving is every 3 years</li> <li>• Completed a check-ride with the supervisor</li> <li>• Special licensing is required to operate motorcycles, ATV's, 4x4 vehicles, towing trailers and all specialized equipment</li> <li>• State issued CDL's for operating vehicles with a 26,001 or higher GVWR</li> <li>• Volunteers must learn how to use and communicate on Midewin's radio system</li> </ul>
S9			
	<b>Planning and Notification</b>	<p><b>Getting lost; being injured; having a vehicle break down; a local emergency i.e. wildfire in your area and no one knows your location</b></p>	<p>Develop a plan and make it known. When using a U.S. Forest Service vehicle, a full-time staff project manager or Welcome Center Host should know your route or site location and the approximate time you expect to return.</p> <p>Locate your destination and route on a map prior to driving. It is recommended to inquire about conditions or closures prior to leaving.</p>
S9	<b>Operating Vehicles Pre-Trip</b>	<p><b>Break downs; poor visibility; being injured or killed by flying objects; inability to control vehicle; not being able to warn others of danger; distracted driving; clutter; collisions</b></p>	<p>Observe the 'Circle of Safety' rule, by walking around the vehicle to check for things on this list. By doing this pre-check, you may avoid some difficulties and safety issues later.</p> <ul style="list-style-type: none"> <li>• Check, all fluid levels, tire condition and pressure (especially on trucks with dual tires)</li> <li>• Look for any obvious leaks under the vehicle</li> <li>• Clean windshield</li> <li>• Check lights and emergency flashers</li> <li>• Make sure spare tire is inflated (The spare tire should be the best tire on the vehicle)</li> <li>• Walk around vehicle and check for any body damage</li> <li>• Check cab for loose tools and equipment and secure or store as needed</li> <li>• Check under seats for loose objects that can slide or roll forward</li> <li>• Clean off the dash board, don't use for storage</li> <li>• Checks to make sure fuel tank/s are full</li> </ul> <p>Check vehicle Owner's Manual for any questions on how to operate, locate or use any of the vehicles options or tools. This will tell you where the tire change tools are and where to check your fluid levels if you are not familiar with the vehicle. It also tells you how to operate the options on your vehicle i.e., how to put the vehicle in 4-wheel drive.</p> <p>Pickups and SUV's will not haul cargo and tools in the passenger carrying area unless they are secured</p> <ul style="list-style-type: none"> <li>• SUV's are required to have a screen between the cargo and passenger carrying area</li> <li>• Extended cab and crew cab pickups will not haul cargo or tools in the passenger carrying area unless they are tied down</li> <li>• All hand tools will have blade guards and be secured by tool holders or stored in a toolbox.</li> <li>• First aid kits and fire extinguishers should be installed using the brackets provided in an easily accessible area</li> <li>• Chock blocks will not be stored in the passenger carrying area</li> <li>• Make sure the FS two-way radio works and you have a frequency chart and know how to use it</li> </ul>
S9			

	<b>Driving Forest Service vehicles on public roads or Midewin internal roads.</b>	<b>Accident resulting from heavy traffic</b>	Drive at a safe speed and distance from other vehicles to allow for sudden stops; buckle up your seat belts and turn lights on. ALWAYS wear your seat belt, No exceptions! NEVER use your cell phone or the USFS radio system while driving. Do Not read a map while driving. Find a safe place to pull over first.
S9		<b>Accident due to rapid accel/deceleration required by the increased speed on IL 53</b>	Make sure traffic is clear when merging onto IL 53, utilize median if it is clear of other vehicles, merge into right lane if unoccupied – if occupied wait for traffic to clear. When exiting off IL 53, slow down gradually and turn signal on early.
S9		<b>Inclement weather may result in poor traction may result in skidding, sliding, loss of vehicle control</b>	<b><i>When weather/road conditions are bad, postpone your trip until conditions improve. There is no meeting, project or even emergency that is so important as to endanger your life or the lives of others.</i></b>
S9			If you determine a safe trip is possible, Clear all snow and ice from windows, head lights and tail lights. Brush loose snow from hood to prevent it from causing poor visibility. Use defrosters to prevent condensation from forming on the windows
S9			Drive at a speed safe consistent with the existing weather condition; allow extra time for accelerating and decelerating; allow extra space between vehicles for sudden stops or traffic slowdowns. If roadway is slick from snow or ice, do not slam on brakes, rather pump them (Anti-lock Brake System (ABS) will do this for you). Check the vehicle manual if in doubt about the type of brake system present. Drive with lights. Turn off cruise control when driving on wet, ice, or snow covered surfaces.
S9			Make it a practice that you turn your head lights on so you will be seen by other drivers. Beware of other vehicles and watch for slow moving trucks or snow plows
S9			Know how to put your vehicle into 4 wheel drive and ask a staff member to show to how so there is no doubt.
S9			<p style="text-align: center;">What to do if you become stranded or slide off the road:</p> <p>Stay with the vehicle. Do not leave the vehicle unless it is not safe to stay. Remember that the vehicle is your only protection from the elements. Contact the Midewin Supervisor's Office, stay put, and wait for help to arrive. Depending on your location, it may be helpful to tie something bright colored to the vehicle antenna</p>
S9			If you are not on the roadway and it is safe to do so, get back to the roadway and put out your reflective triangles or flares. If visibility is poor don't leave the vehicle, wait until it improves
S9			If the vehicle still runs, you may use it for heat, make sure the tail pipe is clear, keep a window partially open and run the engine for ten minutes for every hour to keep the vehicle heated and the battery charged.
S9		<b>Improper crossing of tracks or poor judgment may result in a collision with a train.</b>	Never drive around a signal; slow down when approaching tracks and look both ways before crossing (automatic signals are not foolproof); <u>Never</u> try to beat a train – an optical illusion exists which underestimates the train's travel speed and overestimates its distance.
S9		<b>Accidents in construction zones resulting from irregular traffic pattern or collision with equipment or workers</b>	Give the construction zone a brake; anticipate slow moving or awkward equipment entering the roadway at any moment. Give construction workers as much room as possible. Obey any temporary traffic control device or personnel. Coordinate any roadside work with the Engineering staff for their dispersal to all staff, contractors, permittees, and volunteers.

S9	<b>Vehicular damage and/or accident resulting from potholes, washboards, etc.</b>	Reduce speed in rough road sections. Anticipate potholes early in order to avoid hitting them or making sudden swerves which may result in loss of vehicle control.
S9	<b>Blind spots; unfamiliar country; fatigue; steep and/or rough terrain; inattentive driving; interstate travel; collisions with vehicles/animals/ objects; flying objects kicked up by other vehicles e.g. rocks; vehicle wear and tear</b>	<p>Driver fatigue is a major concern, symptoms include drowsiness; eye strain; daydreaming; and the vehicle may feel too warm. NOTE: If you experience these signs pull off the road and switch drivers if possible, walk around or in extreme cases take a catnap</p> <p>Driving between the hours of 5 AM to 10 PM is authorized. Travel outside those hours must be approved either verbally or in writing by your supervisor.</p> <p>Drive defensively, keep head lights on and keep a defensible space between you and other traffic, don't drive in other vehicles blind spots</p> <p>Follow other vehicles at a safe distance, use the 3 second rule</p> <p>When on dirt roads, drive on the right side of the road. Many of the Forest dirt roads do not have a full two car width travel surface. When off road do not follow other vehicles so closely that your visibility is impaired by their dust trail</p> <p>Drive at speeds that are suited for the road conditions i.e. gravel surfaces wash board surfaces or slick surfaces if it has rained</p> <p>When driving on two track roads beware of obstacles on the side and center of road. Whenever in doubt get out of the vehicle and look first to make sure it is safe to continue</p> <p>If traveling slower than other vehicles, you may consider pulling over to the right, when safe, and allow them to pass</p> <p>When backing either have a crew member get out and spot you or if by yourself get out and look at the area you are going to back into</p> <p>Drive on main roadway, avoid soft shoulders and be aware of the ground clearance on vehicle you are driving.</p> <p>Use 4-wheel to stay out of trouble, not get into trouble.</p> <p>If you must turn, make a U-turn on a narrow forest road, find a straight stretch of road with the best visibility, always back into the up-slope, and pull forward towards the down-slope. Do not back towards the down-slope</p> <p>Do not try to drive over large rocks or debris in the roadway If possible get out and clear the road before continuing. If trying to remove a tree cut into small pieces that are easy to remove and remember to use proper lifting techniques.</p> <p>If traveling on a two way undivided highway and a vehicle traveling in the opposite direction swerves or drifts into your lane, coming at you head on, pull to the right side of the roadway or even leave the roadway to avoid a head on collision. It is better to take a glancing blow than hit head on at 65 mph. Under NO circumstances should you swerve into the oncoming traffic lane</p>
S9	<b>Collision with another vehicle resulting in injury to any or all passengers</b>	First seek emergency/medical aid immediately. Call 911 in a life threatening situation. Then inform your program leader and/or the Supervisor's Office. Never attempt to control traffic unless imminent danger and need exist. Always seek police assistance for accident investigation. Ask attending police officer for copy of the accident investigation. Your project leader will follow USDA Forest Service accident reporting procedures.
S9	<b>Vehicular damage and/or accident</b>	Try and avoid driving off road. Reduce speed and anticipate potholes, ruts, washboards, depressions, etc. Often hazards are hidden by vegetation. Try and avoid driving in unfamiliar, off road areas, otherwise walk through first to identify hazards. Make sure the vehicle is capable of going off road and compatible with the road conditions you may encounter. Engage 4-wheel or all-wheel drive if the vehicle is capable (4-wheel drive reduces the tire slippage that causes wash boarding of gravel or native surface roads).

	<b>Improperly closed roads may result in vehicular damage or accident</b>	Comply with all closed road signage. Any closed roadway will be marked according to the USDA Forest Service <b>Sign Installation Guide (EM-7100-15)</b> .
S9	<b>Lack of traffic control on Prairie roads and unmarked intersections may result in collisions due to failure to yield or stop.</b>	Maintain a safe, conservative speed on Midewin roads and anticipate merging vehicles from crossroads; significantly reduce your speed or stop when approaching crossroads; before proceeding through intersections ensure all crossing travel ways are clear. When merging onto Midewin roads from fields always approach the road slowly and do not merge until a thorough visual check reveals a clear road. <u>Never</u> assume the roadway is unoccupied.
S9	<b>Collision with pedestrians or other vehicles in parking areas</b>	Do not exceed <b>10 mph</b> inside the Supervisor's Office property. Anticipate pedestrians or other autos veering in your path. Follow all traffic control patterns, devices, or signs. Do not hesitate to use your horn as a passive communication tool.
	<b>Collision with pedestrians, equestrians or other vehicles through recreation areas</b>	Do not exceed <b>20 mph in recreational areas or on interim trails/roads unless otherwise posted</b> . Approach any equestrian or pedestrian slowly and avoid sudden accelerations/decelerations in order to not startle the individual and/or horse.
S9	<b>Colliding with wildlife or horses may cause harm to all involved.</b>	If you observe any wildlife, cattle or horses near the road assume that it will cross your path and reduce speed significantly. Be aware of active wildlife patterns such as dusk and dawn for deer. Often if one deer (or other animal) crosses the road more will follow. Be patient and ensure it is safe to proceed. It is not advised to swerve to avoid hitting wildlife, it may be better to hit an animal than lose control of the vehicle.
	<b>Mechanical breakdown of vehicle</b>	<b>Stranding of passengers; collision with a moving vehicle.</b> Before even entering the vehicle conduct a walk around inspection checking for tire wear, inadequate pressure or any other flaw. Check the vehicle radio before leaving the Supervisor's Office. Report any problems to you program leader or Fleet Manager.  If you must bring the vehicle to a stop because it presents an imminent danger, exit the vehicle and retreat to safe ground. If the surrounding environment presents risks and the vehicle is stopped in a safe location away from moving traffic, stay in the vehicle. Contact your program leader, the Supervisor's Office, a law enforcement officer, or an emergency agency.
S9	<b>Vehicle fire causing serious injury, burns</b>	Do a pretrip check of the vehicle for a full fire extinguisher. In case of a vehicle fire, pull off to the shoulder and shut off the engine as soon as possible. Never attempt to extinguish a fire beyond your capability. Instead move a safe distance from the vehicle and seek help. Never attempt to restart a vehicle if you are successful at extinguishing the fire. Have the vehicle checked by a professional mechanic.
S9	<b>Low fuel</b>	Volunteers are not required or permitted to refuel vehicles. This requires a pin code. You <u>Must</u> notify a staff program manager or the volunteer coordinator when the tank is below a half tank.
	<b>Parking vehicles</b>	<b>Minor collisions with other vehicles, parked or otherwise.</b> When parking larger vehicles or other equipment (trailers, tractors, etc.) use a single spotter. Ensure mirrors are in proper position and working order. Make sure there is adequate room for parking the vehicle and any peripherals.  <b>Vehicle rolls from parking on steep grade.</b> Set parking brake when parking on significant grades. Be sure to release the parking brake before driving off.

<b>10. LINE OFFICER SIGNATURE</b>	<b>11. TITLE</b>  <i>PRAIRIE SUPERVISOR- MNTP</i>	<b>12. DATE</b>  <i>2017</i>
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Previous edition is obsolete