



Safety
is my
Responsibility.

**New Braunfels Utilities
General Safety Handbook**

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INTRODUCTION

Safety is an important part of New Braunfels Utilities and must never be compromised. The purpose of this manual is to introduce and summarize some of the safety requirements for New Braunfels Utilities. It does not provide detailed information about every job or operation. The contents constitute general safety requirements to assist employees in the safe performance of their daily duties regardless of daily responsibilities.

Your division manager will provide you with further detailed and regulatory rules that apply to your division and should be used in conjunction with this general safety manual.

Take time to read this handbook even though some sections may not apply to an individual employee's work, all employees must familiarize themselves with all the contents so that they may be able to identify and report unsafe and/or hazardous conditions.

SAFETY PRINCIPLES

1. Make safety first – both on and off the job!
2. Develop your own sense of safety. As with your other senses, recognize it as a natural and vital part in the prevention of accidents, which can cause injury to personnel, customers and/or damage to material and equipment.
3. All NBU employees have (STOP AUTHORITY FOR ANY UNSAFE ACT OR CONDITION). We have to STOP, PLAN, and PERFORM all work safely, no job is too important!
4. Working safely is a condition of employment, careless acts And safety policy violations will be addressed at the appropriate level.
5. The same safety standard and expectations apply to everyone.

NBU's Safety Policy Statement

The health and safety of our employees and everyone affected by our activities is fundamental to the success of our business. Nothing we do is so important that it cannot be done safely. Our policy is to create an environment in which no one is harmed. Employees at all levels will embrace safety and demonstrate a passion for continuous improvement and cascade that message throughout our organization.

We will set the highest standard of care for our employees so they will go home at the end of each work day in the same condition as they arrived. We will do this out of care and concern for each other, for those we serve, and for those who love us, care for us, and depend on us. Our choice to work safely is an act of humility where we choose to put others first.


NBU will have a culture where each employee knows “SAFETY IS MY RESPONSIBILITY”. The principals of this culture are:

1. Each employee understands that working safely is a condition of employment.
2. Each leader owns the safety performance of their employees, contractors, vendors and visitors for which they are responsible.
3. Each leader begins each meeting with a safety message.
4. Each leader models the behavior we expect to achieve within a **Safety is my Responsibility** culture.
5. There is no job or operation so important that we cannot take the time to do it safely.
6. We are proactive to intervene and pull a co-worker out of harm's way.
7. All employees are provided training to do their work in a safe manner.
8. Each employee has the right to question the safety of work before proceeding.
9. We all agree to conduct peer to peer safety observations.
10. Taking short-cuts is prohibited.

NBU's Safety Covenants

I will:

1. Maintain a “Safety First Mindset” at work and at home 24/7/365.
2. Promote safety on and off the job.
3. Know and follow all applicable safety procedures and policies.
4. Communicate professionally and with respect to everyone.
5. Assist fellow employees at every opportunity.
6. Challenge anyone, at any level, who is not being safe and accept the same challenge from my co-workers.
7. Understand all job tasks and requirements before work begins and ask questions if unclear.
8. Identify, correct, and report any and all unsafe acts or conditions.
9. If needed, call for a time out and have a safety huddle to determine the best way to continue.
10. Stay true to the NBU Core Values: Safety, Integrity, Team, and Stewardship.



Ian Taylor

Chief Executive Officer

SAFETY RESPONSIBILITIES

1. Officers, Executives, Directors:
 - a. Ensure safe working conditions
 - i. Review safety investigations and/or audits and related actions as needed.
 - b. Visible Leadership and Direction
 - i. Attend safety meeting routinely and personally present safety messages.
 - ii. Ensure sufficient resources are made available to achieve and implement safety plans.
 - iii. Consistently attend Safety Steering Committee meetings.
 - c. Ensure consistent safety practices
 - i. Ensure managers are responsible for consistent safety practices across divisions.
 - ii. Review follow up actions by their managers on incidences and the recommended corrective actions resulting from internal decisions or SSC discussions, including any documented conversations or discipline, formal or informal.
2. Managers:
 - a. Ensure safe working conditions
 - i. Perform on the spot safety audits of work areas, tools and equipment used by respective department to ensure a safe working environment.
 - ii. Ensure all employees are trained appropriately in their job duties.
 - b. Visible Leadership and Direction
 - i. Ensure that any documented or reported safety discrepancies are addressed.
 - ii. Visibly recognize good safety and health behavior.
 - iii. Ensure departmental safety meetings are routinely held and present a prepared safety message.
 - c. Ensure consistent safety practices
 - i. Know safety requirements and hold fellow employees accountable for unsafe actions and violations of safety guidelines.
 - ii. Ensure supervisors are held accountable for inconsistent safety practices.
 - iii. Review all follow up actions by their supervisors on all incidences and the recommended corrective actions resulting from internal decisions or SSC discussions.
 - iv. If assigned to the Safety Steering Committee, routinely attend monthly meetings.
3. Supervisors:

- a. Ensure safe working conditions
 - i. Review team tailboards on-site for consistency and address any discrepancies.
 - ii. Report and/or correct any unsafe conditions.
 - b. Visible Leadership and Direction
 - i. Attend safety meetings and present a prepared Safety message or training.
 - ii. Ensure sufficient resources are made available to achieve safe working conditions for NBU employees.
 - iii. Always wear appropriate PPE.
 - c. Ensure consistent safety practices
 - i. Know all safety requirements and hold employees responsible for unsafe actions and violations of safety guidelines.
 - ii. Review all follow up actions from incidences under area of responsibility and the recommended corrective actions.
4. All Employees:
- a. Ensure safe working conditions
 - i. Ensure safety briefings/tailboards are performed prior to working.
 - ii. Ensure safety is always at the forefront of your everyday work.
 - iii. Always wear appropriate PPE.
 - b. Visible Leadership and Direction
 - i. Attend safety meetings and as directed present a Safety message or training.
 - ii. Ensure needed resources are requested to achieve a safe working environment.
 - c. Ensure consistent safety practices
 - i. Always bring safety concerns to the attention of your leadership.
 - ii. Know all safety expectations and accept personal responsibility with safety.
 - iii. Advise/Assist/Coach fellow employees on unsafe actions and violations of safety guidelines.
 - iv. Understand and demonstrate that working safely is more important than just getting the job done.

ALL EMPLOYEE SAFETY RESPONSIBILITIES:

All employees bear a certain amount of responsibility in any safety program. You must be aware that your actions, mental state, physical condition, and attitude directly affect the safety of yourself and your fellow employees. All employees will make safety a personal responsibility and:

1. Carefully study those safety rules that apply to your duties. Know your job, follow instructions and think before you act.
2. Personal Protective Equipment (eye protection, hard hats, gloves, etc.) must be worn on the job site to protect against unforeseen potential hazards.
3. Work according to good safety practices as posted, instructed, and/or discussed.

4. Refrain from any unsafe act that might endanger yourself or your fellow workers.
5. Utilize all necessary safety devices required for your protection.
6. Report any unsafe situation or act to your supervisor immediately.
7. Assume responsibility for thoughtless or deliberate acts that may cause injury to yourself or your fellow workers.
8. Abide by all policies, procedures, rules, etc. associated with New Braunfels Utilities Safety Program.
9. Never operate equipment that you are unfamiliar with or not trained to use.
10. Refrain from using equipment that is in need of repair.
11. Report all accidents/incidents to your supervisor as soon as they occur.
12. Near miss accidents/incidents must be reported and are crucial in continuing development of safety policies and the safety program.
13. Keep your workplace clean and orderly.
14. Obtain clarification of any work that is not understood or for conditions not covered by safety guidance.
15. Assume responsibility for the proper care of tools, equipment, and materials.

MANAGEMENT'S SAFETY RESPONSIBILITIES:

Management is responsible for providing a place of employment that is free from recognized hazards that could result in injuries or accidents. Since it is impossible for managers to personally observe all employee activities, managers must assure that all supervisors are trained and are aware of their safety responsibilities. Other safety responsibilities include:

1. Provide visible leadership and direction concerning safety activities.
2. Continuously evaluate the safety culture of your department and address any adverse trends with the coordination of the NBU Safety Manager.
3. Set goals concerning safety performance within your divisions.
4. Review losses for potential trends on a regular basis.
5. Enforce all safety rules, ensure all employees are adequately trained, provided and utilizing the required personal protective equipment.
6. Perform and Participate in facility and work site safety audits.
7. Participate and support all accident investigation activities.
8. Review completed accident reports and ensure corrective action is taken.
9. Ensure that monthly safety meetings/trainings are scheduled and attended.
10. Meetings and all safety training shall be documented and forwarded to the NBU Safety Manager.
11. Provide safety orientation to all new employees to address the hazards of their position, safety rules, policies/procedures, equipment, etc., that are applicable to the new employee's area of assignment.

GENERAL SAFETY RULES

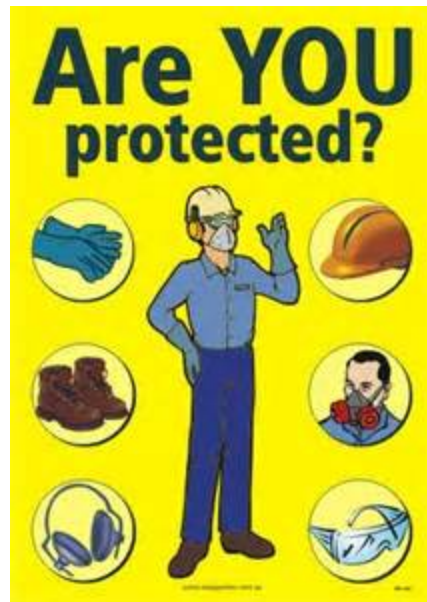
1. Each employee shall be required to understand and abide by the NBU Safety Program and guidance provided.
2. All accidents and near misses, no matter how minor, shall be reported immediately to your Division Manager or Supervisor.
3. All hazardous conditions, actions and/or practices shall be reported to your Division Manager or Supervisor.
4. Work areas, including the inside and outside of vehicles and buildings, shall be kept clean and orderly at all times.
5. Employees shall only operate equipment/tools that they are trained and authorized to operate.
6. Employees shall smoke only in designated areas.
7. Employees shall use all safety devices and personal protective equipment required for their protection.
8. Employees shall wear clothing and shoes suitable for the particular work they are doing.
9. Employees shall use assisted lifting devices or obtain assistance from a coworker when lifting heavy objects.
10. Safety Guards shall never be removed except when authorized to make repairs or adjustments. Replace guard immediately upon completion of repairs or adjustments.
11. Before starting work on any machine or equipment that is out of service, employees shall render the equipment or machine inoperative and attach a lockout device to the equipment control.
12. The use of drugs or alcohol is prohibited. Any employee reporting for work under the influence of alcohol or controlled substances shall be subject to disciplinary action.
13. Any employee taking prescription drugs or over-the-counter drugs that could impair assigned work shall report this fact to the supervisor as required by the NBU Drug and Alcohol Policies.
14. Employees shall not engage in practical jokes or horseplay.
15. Employees shall not ignore or bypass a *danger, warning, caution or notice* sign.
16. Under NO circumstances shall safety be sacrificed in order to complete a job/task faster.
17. When possible employees shall call a "Time Out or Safety Stop" when an unsafe act is observed or attempted.
18. Unreported accidents or attempts to cover up accidents or influence investigations will constitute a violation of policy and subject any person involved to disciplinary action up to and including termination.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

1. Prior to using any PPE, employees shall be trained in the proper use, inspection, limitations, maintenance and storage according to manufacturer's recommendations.
2. All employees shall wear clothing suitable for their particular type of work. Loose clothing shall not be worn while working around or near moving machinery or equipment.
3. All NBU approved special protective clothing or protective devices shall be used by employees when their use is required and when hazards are known or anticipated.
4. Clothing that is soiled by oil or chemicals should be avoided to prevent skin irritations.
5. When work is performed in the vicinity of exposed energized parts of equipment, employees shall remove all exposed conductive articles, such as key or watch chains, rings, wristwatches or bands, if such articles increase the hazards associated with inadvertent contact with the energized parts.
6. Rings or jewelry shall not be worn while climbing on or off structures or vehicles while performing any task where the ring might get caught under or snagged by a projecting item. In addition, rings and wristwatches with metal case and watchbands shall not be worn while working on or near energized equipment or lines.
7. NBU approved gloves shall be provided to and worn by all employees when work site operations could cause injury to the hands.
8. Gloves and long sleeve 100% cotton shirts shall be worn to protect hands and arms when handling cement, brush, sharp objects, hot materials, acids and other chemicals, or when there is a possible exposure to any skin irritating foliage, such as poison ivy/poison oak.
9. NBU approved head protection must be worn when working, on the job site to protect against unforeseen potential hazards such as impact, falling or flying objects, or from electrical shock and burns.
10. Employees must wear NBU approved eye and face protection when working, on the job site upon commencement of work to protect against injury from flying objects, glare, liquid splashes, weed eaters, edgers, chemicals, grinding, sandblasting, and welding. Eye protection shall be kept in a sanitary and usable condition and shall be replaced when it becomes warped, scratched, or pitted. If you require prescription safety eyewear, please contact the Division Manager for further details regarding the NBU subsidized prescription safety eyewear program.
11. NBU approved hearing conservation devices shall be provided to and worn by all employees working in areas where a danger of noise exposure exceeds acceptable levels (up to 85dba for 8 hours is acceptable rate).
12. Employees shall wear footwear suitable to the type of work being performed. Safety boots or shoes shall be worn when required. Wearing of sandals, thongs, tennis shoes, loafers or similar footwear shall not be acceptable during working hours for employees serving in labor, maintenance, construction, or inspection positions.
12. NBU approved life jackets or buoyant work vests shall be worn by all employees when working over or near water where the danger of drowning exists.
14. NBU approved respiratory protection shall be worn in areas where dangerous air contamination,

chlorine, gasses, vapors, fumes, dust, or other hazardous contaminants exist.

15. Employees required to work in or near the roadway shall wear high visibility clothing, garments, or reflective vests as stated in the Work zone and Traffic Control Policy.
16. NBU approved fall protection devices, such as harnesses, lanyards, etc., shall be used by all employees when working in an overhead position which may require use of both hands and when there is a danger of falling 5 feet or more.



MOTOR VEHICLE & EQUIPMENT OPERATION

1. Employees who are authorized to operate New Braunfels Utilities vehicles or personally owned vehicles on NBU business must have a valid Texas Driver's license for the class vehicle they operate and must notify their supervisor immediately should the license be suspended or revoked. NBU driving privileges will be suspended until the problem is resolved.
2. It shall be the responsibility of the employee to inform their supervisor as soon as practical, but not later than five (5) days, of any moving traffic citations received or accidents in which the employee is involved while driving on NBU business.
3. Motor vehicle record checks will be conducted annually on all employees who have driving or motorized equipment operation responsibilities. Should a routine record check be made that does not coincide with the information supplied to the employee's supervisor, the employee may be placing both his job and career with NBU in jeopardy.
4. The Certificate of insurance coverage and other required documents should be carried in all NBU owned vehicles.
5. All drivers of NBU vehicles must be familiar with and abide by all applicable state, federal and local traffic regulations.
6. All drivers/operators shall be responsible for the proper care and use of vehicles and motorized equipment. This includes maintaining vehicle/motorized equipment interiors and exteriors, regularly servicing these items and reporting maintenance needs to the supervisor/fleet department.
7. A driver/operator shall not permit any unauthorized persons to drive, operate or ride in or on a NBU vehicle. Riders shall not be allowed on running boards, tailgates, fenders, bumpers, atop cabs, beds, on tow bars or towed equipment. (Exceptions to unauthorized persons) may include operator trainees and mechanics sharing operator positions.)
8. Every incident/accident involving personal injury or property damage shall be reported to NBU Control Center Operations immediately. Any employee who knowingly avoids such reporting will be subject to disciplinary action up to and including termination.
9. NBU vehicles must be equipped with seat belts (when applicable). Seat belts must be used by the driver and any passenger(s) when the vehicle is in operation. The size of the vehicle or equipment does not excuse the operator from the seat belt requirement. It shall be the responsibility of the driver to see that passengers wear their seat belts at all times.
10. All vehicles shall be equipped with the appropriate safety and emergency equipment, such as fire extinguisher, first aid kit, traffic cones, signs and reflectors. Equipment on all NBU motor vehicles must conform to state, federal, and Department of Transportation (DOT) regulations.
11. Extreme caution shall be exercised when backing any vehicle. If another employee is present, he/she shall act as a "Guide" to assist the driver in backing safely. Drivers shall stop immediately if they lose sight of the "Guide".
12. Back-up alarms are a useful warning device and should be used when possible, especially on larger vehicles and equipment that may severely restrict your view to the rear of the vehicle. If an alarm is not present, the operator should honk their horn to warn others of the moving vehicle.
13. Unsafe and discourteous driving practices such as disregarding the rights of pedestrians,

violating traffic regulations, and deliberate recklessness of any kind are prohibited.

14. Entering or exiting vehicle/mobile equipment while it is in motion is prohibited, as is riding anywhere on the vehicle/mobile equipment not designed for passengers. Do not get out of vehicle/mobile equipment and leave the motor running, or drive/operate with a door ajar.
15. Personnel should maintain three-points of contact with mobile equipment when entering and exiting to help in maintaining balance if a slip occurs. Many injuries occur as a result of slips and this should help control that exposure. In addition, the condition of handrails, steps, etc. should be inspected regularly.
16. Smoking is prohibited in all NBU vehicles/ mobile equipment and facilities.
17. Gasoline must not be carried inside passenger cars or the cabs of trucks. Gasoline shall be transported in approved safety containers and sealed tight to prevent the leakage of gasoline or gasoline vapors.
18. Garage doors must be opened for ventilation whenever a motor vehicle engine is running to help prevent the accumulation of carbon monoxide gas.
19. Keys shall be removed from unattended vehicles and equipment. Doors should be locked for security purposes when applicable.
20. Driving a vehicle under the influence of alcohol or any controlled substance will not be tolerated (refer to NBU Drug & Alcohol Policy).
21. Never attempt to operate NBU vehicle/mobile equipment while taking over the counter medication or prescription drugs that may impair your ability. (Notify supervisor or manager to discuss)
22. Picking up hitchhikers is prohibited.
23. Before starting out in your vehicle in the morning, clear all windows of any frost, ice or dew. Cleaning only a small place on a windshield does not allow for proper visibility.
24. Employees must perform a "walk-a-round 360 vehicle check" prior to driving off. Ensure loose items are secured or stowed away, and all vehicle components are securely fastened and there are no hazards that you may encounter upon your departure.
25. Driving is a full time job. NO DATA USAGE, NO TEXTING AND DRIVING, (ONLY hands-free use of any cellular device is authorized). Drivers will not engage in any other activities while driving or while operating a NBU vehicle. The vehicle shall be pulled safely off the road and stopped before performing any other activity.
26. Driving at the maximum-posted speed limit can be too fast for safety in some situations. The drivers of all vehicles must use good judgment and proceed at a pace suitable to conditions of the vehicle, road, traffic and weather.
27. All vehicle cabs should be kept clean to reduce distractions to drivers and interference with the operation of the vehicle or equipment.
28. Trucks equipped with mechanical hoists and hydraulic tailgates require special driver instructions and crew cooperation. The supervisor will provide training in the use of such equipment to prevent accidents, injuries, and property damage.

29. Before leaving the starting point, all operators must check the materials to be transported to avoid shifting, breaking, or falling of the material. Weight should be properly distributed. Material projecting beyond the body of the truck shall have a red flag. At night, a lighted red lantern must be used.
30. When any type of trailers such as, equipment trailers, air compressors, etc., are being pulled by an NBU vehicle, DOT requirements must be met.
31. Employees operating NBU vehicles must complete smith driver system training or other equivalent training as soon as possible, it is the employee's responsibility to notify leadership if this training has not been provided prior to operating NBU vehicles.

INSPECTION OF VEHICLES AND EQUIPMENT

1. Drivers/operators shall utilize vehicle and/or equipment checklists to inspect vehicles and equipment daily. Check windshield wipers, signals, horn, lights, reflectors, tires, fluid levels, etc. to determine if they are in good operating condition prior to operating the vehicle.
2. The driver/operator shall determine that brakes are in good operating condition before using the vehicle or equipment. If brakes are not working properly, they must be corrected before use.
3. The driver/operator shall report all defects promptly to maintenance personnel. Items that affect safety shall be repaired prior to continued use.

OPERATION OF VEHICLES AND EQUIPMENT

1. Prior to operations of any vehicle or equipment employees will perform a walk-a-round 360 vehicle check" prior to driving off. Ensure loose items are secured or stowed away, and all vehicle components are securely fastened and there are no hazards that you may encounter upon your departure.
2. The operator of a motor vehicle shall clearly signal intention of turning, passing, or stopping. Upon a signal from a vehicle approaching from the rear, the driver of a Utility vehicle shall yield the right-of-way to that vehicle.
3. Drivers shall be prepared to stop and yield the right-of-way in all instances when necessary to avoid an accident.
4. The driver of a vehicle shall be courteous toward other operators and pedestrians. The vehicle shall be operated in a safe manner, and the driver shall yield the right-of-way to pedestrians and other vehicles when failure to do so might endanger any person or another vehicle.
5. The driver shall maintain sufficient distance behind another vehicle to safely stop the vehicle in the clear distance ahead.
6. Drivers shall exercise added caution when driving through residential and school zones.
7. When entering or leaving any building, enclosure, alley or street where vision is obstructed, a complete stop shall be made and the driver shall proceed with caution.
8. Trucks on which derricks or booms are erected above traveling height shall not be moved except under the immediate direction of a designated employee, who shall give his undivided attention to the movement.

9. Before a vehicle is driven under or adjacent to energized equipment, especially in substation areas, the clearance shall be checked, especially that of the radio antenna, in order to ensure that proper clearances will be maintained between the vehicle and energized equipment.
10. All ignition systems shall be turned off and no smoking permitted while refueling.
11. When proceeding down grade, the clutch shall not be disengaged. Trucks, particularly if heavily loaded, shall be in a lower gear on steep grades.

PARKING

1. When vehicles must be parked on the roadway, they shall be parked on the right-hand side facing in the direction of traffic flow, whenever possible.
2. When parking on a roadway, vehicles shall park off the traveled road surface, whenever possible. When vehicles must park closer than 10 feet to the traveled road surface, appropriate warning devices shall be used.
3. Trucks or trailers stopped on any public roadway shall be protected by proper warning lights, reflectors, or red flags in accordance with state or local requirements.
4. Vehicles shall not be parked on bridges or over culverts except when necessary for work.
5. When it is necessary to park on an incline, the driver shall make sure the vehicle is left in a safe position. The engine shall be turned off, the vehicle placed in the lowest gear or "park" position, and the parking brake set. The front wheels shall be cut into the curb if a curb is present.
6. When possible, park so that backing is not required.
7. When parking an NBU vehicle it is a requirement that a traffic safety cone be placed at the front or rear of the vehicle on the side of the vehicle facing traffic. The use of a safety cone for a parked vehicle reminds the driver and the occupants to perform a "walk-a-round 360 vehicle check" prior to driving off, Ensure loose items are secured or stowed away, and all vehicle components are securely fastened and there are no hazards that you may encounter upon your departure.

STOPPING ON ROADWAYS

1. When it is necessary to stop on the roadway, extreme caution shall be used.
2. A beacon shall be used if so equipped.
3. Tail lights/emergency flashers shall be used if the vehicle/mobile equipment is not equipped with beacons.
4. If work is in progress, safety cones and other applicable traffic control devices shall be used in accordance with the Texas Manual on Uniform Traffic Control Devices, Part VI. Please see additional information in the Work Zone Traffic Control section of this manual.

VEHICLE BACKING

1. Avoid backing whenever and wherever possible. Plan routes to eliminate the need for backing.
2. When available, use parallel rather than head in parking.

3. If practical, pull around an area (or block) in the forward direction, rather than risk a blind backup.
4. When a guide is available, all truck drivers including drivers of pick-ups with side boxes, shall use one and only one guide for all backing situations. The driver will require the guide to use hand signals in a position visible to the driver's side mirror. Drivers must check all clearances in any case of doubt about the guide or signals. Should the guide be lost from mirror view, the driver should stop immediately. The driver and guide will both be held responsible in any backing incident.
5. If a guide is not available, or the driver has any doubt of the guide's instructions, or is not familiar with the area or possible obstructions, he/she should walk around the vehicle prior to backing.
6. Drivers shall not back around corners unless no other means of changing location is available.
7. Drivers shall back slowly and only as far as necessary.

The proper and safe operation of any NBU owned equipment is the sole responsibility of each employee in close proximity of operation and/or riding with the NBU driver or operator of that piece of equipment.



Stop, Think, Act

GENERAL ELECTRICAL SAFETY

1. Consider all wires as dangerous and do not permit any object being handled to come in contact with electrical lines. The insulation on the wire is no guarantee that it will not cause instant death. Employees other than electricians must never attempt to determine if a wire is energized.
2. All NBU electrical tools, equipment, extension cords etc. shall be inspected on a regular basis. All faulty equipment shall be reported immediately to your supervisor. Lockout or tag the equipment so that others are aware the equipment is damaged. The tool, equipment or cord shall not be used if it has any defects, such as bad insulation, missing grounds, loose prongs, etc.
3. All electrical equipment shall be properly grounded.
4. Extension cords should not be used in wet or damp areas. For adequate protection, a Ground Fault Circuit Interrupter (GFCI) should be used to protect employees in wet or damp locations.
5. All circuit breakers shall be identified as to use. Maintain clear access to electrical panels and main power sources at all times. Electrical panels and boxes should be securely fastened.
6. All electrical panel boards, boxes, disconnects, switchgears, etc. shall be covered or isolated to prevent accidental contact with energized parts and to protect equipment and wiring from potential contamination.
7. Before work begins at a work site, the location of electrical lines (underground and above) shall be determined and precautions taken to prevent accidental contact.
8. Electrical Lockout/Tagout procedures shall be used when circuits or electrical equipment are being worked on.
9. Electrical cables passing through work areas shall be covered or elevated to protect them from damage, which could create a shock hazard.
10. Metal ladders shall not be used when working near electrical circuits.
11. Exposed light bulbs or fluorescent tubes shall be guarded or recessed in reflectors to prevent accidental breakage.
12. To aid in the prevention of electrical shock, 120-volt, single-phase, temporary receptacles used at work sites should be used with a GFCI. If a GFCI is not available, assured equipment grounding conductor program may be used for added protection. Another option in protection from electrical shock involves the use of double-insulated equipment.
13. Because electrical shock can stop the heart and lungs from operating efficiently, be sure that workers involved in activities around hazardous energy levels know cardiopulmonary resuscitation (CPR) and rescue procedures. Any victim of electrical shock should be administered CPR immediately after the electrical shock if heart or lung failure is suspected. The CPR should be continued until the person is revived or medical personnel arrive at the site.
14. In addition to the NBU safety manual, operation employees are subject to the APPA manual for more detailed, job specific safety procedures and guidance.



LOCKOUT/TAGOUT PROCEDURES



DEFINITIONS

Lockout and tagout are methods of preventing equipment from being set in motion unexpectedly, which in turn may endanger workers.

Lockout is the placement of a lockout device on an energy-isolating device to ensure that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout device is a device that utilizes a positive means such as a lock, either key or combination type, to hold an energy-isolating device in the safe position thus preventing the equipment from being accidentally energized.

Tagout is the placement of a prominent warning device, such as a tag, on an energy-isolating device to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed. This method does not offer the physical protection of lockout.

An **energy-isolating device** is a mechanical device that physically prevents the transmission or release of energy. These devices can include, but are not limited to, electrical circuit breakers, disconnect switches, block valves, slip blinds, slide gates, etc.

Energy source refers to any sources of electrical, mechanical, hydraulic, pneumatic, chemical, thermal or any other energy.

An **affected employee** is an employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.

An **authorized employee** is a person who uses locks and/or tags on machines or equipment while performing service or maintenance activities. An authorized employee and an affected employee may be the same person when the affected employee's duties also include performing maintenance or service on a machine or equipment, which must be locked and/or tagged.

EMPLOYEE RESPONSIBILITIES

All NBU equipment should be locked out or tagged out to protect against accidental or inadvertent operation when such operation could cause injury to personnel. Employees should never attempt to operate any switch, valve, or other energy-isolating device that is locked or tagged out. Employees should be trained on the importance of lockout/tagout procedures. Only authorized employees who have been trained in the procedures should be allowed to apply lockout or tagout.

PREPARATIONS FOR LOCKOUT/TAGOUT

Obtain the lockout/tagout procedures for the equipment. After a review of the procedure, determine if changes may be necessary in the procedure.

Identify all affected employees that may be impacted by the impending lockout/tagout.

Obtain necessary supplies, such as locks, tags, etc. that may be needed during the lockout or tagout.

SEQUENCE OF EVENTS TO IMPLEMENT LOCKOUT/TAGOUT

1. Notify all affected employees that servicing or maintenance is required on a machine or equipment and that the machine or equipment must be shut down and locked out to perform the servicing or maintenance.
2. The authorized employee should refer to NBU's written procedures to identify the type and magnitude of the energy that the machine or equipment utilizes. After identifying the type of energy source, the authorized employee should assure that he/she understands the hazards of the energy source and knows the methods to control the energy source.
3. If the machine or equipment is operating, shut it down by the normal stopping procedure (depress stop button, open switch, close valve, etc.).
4. De-activate the energy isolating device(s) so that the machine or equipment is isolated from the energy source(s).
6. Use lock(s) and/or tag(s) as necessary to prevent the accidental or inadvertent operation of the energy isolating device(s).
7. Any stored or residual energy (such as that in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, air pressure, steam pressure, gas pressure, etc.) must be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, etc.
8. To ensure that the equipment is disconnected from the energy source(s), the authorized employee should follow these listed steps: (a) Check to make sure that no personnel are exposed to possible hazards; (b) Verify the isolation of the equipment by operating the push button or other normal operating control(s) or by testing to make certain the equipment will not operate; and (c) Return the operating control(s) to the "neutral" or "off" position after verifying the isolation of the equipment.
9. The equipment or machine should now be locked out.

SEQUENCE OF EVENTS TO RESTORE MACHINE OR EQUIPMENT TO NORMAL OPERATIONS

1. Check the machine or equipment and the immediate area around the machine or equipment to ensure that nonessential items have been removed and that the machine or equipment components are operationally intact.
2. Check the work area to ensure that all employees have been safely positioned or removed from the area.
3. Verify that the controls are in the "neutral" position.
4. Remove the lockout and/or tagout devices and reenergize the machine or equipment.
5. Notify affected employees that the servicing or maintenance is completed and the machine or equipment is ready for use.
6. Return or file used lockout and/or tagout devices.

EMPLOYEE TRAINING REQUIREMENTS

Employees shall understand the purpose and function of the energy control program and that the knowledge and skills required for the safe application, the employees acquire usage and removal of the energy controls.

Each authorized employee should receive training in the recognition of applicable hazardous energy sources, the type and magnitude of the energy sources, and the methods and means necessary energy isolation and control. Each affected employee should be instructed in the purpose and use of the energy control procedure.

Other employees, whose work areas may or may not be in an area where energy control procedures may be utilized, should be instructed about the procedure, and about the prohibition relating to attempts to restart or reenergize machine or equipment which are locked out or tagged out.

BLOODBORNE PATHOGEN/BIOLOGICAL HAZARD SAFETY

1. Due to potential hazards associated with bloodborne pathogens, bacteria, fungi, parasites and viruses that can cause infections and diseases such as hepatitis and AIDS, care shall be taken by NBU employees to eliminate contact with blood and body fluids and minimize exposure to sewage.
2. Universal precautions (treating all body fluids as potentially infectious) must be observed at all times.
3. Preventative immunizations and vaccinations shall be offered to affected employees as required by Texas Civil Statutes.
4. Use of appropriate gloves and eye protection may be necessary to prevent potentially infectious materials from passing through or reaching an employee's work clothes, street clothes, undergarments, skin, eyes, mouth or other mucous membranes. *A specialized mask for administering CPR shall be used.*
5. Employees shall wash hands and other contaminated body areas and remove all contaminated clothing immediately after administering first aid or contact with sewage.
6. Employees shall immediately report all exposures to blood and body fluids to their supervisor so post-exposure care can be initiated.
7. Contaminated work surfaces shall be decontaminated with an appropriate disinfectant after completion of procedures, or contact with blood or potentially infectious materials. Tools and materials should be decontaminated after use.
8. Infectious waste generated by rendering first aid shall be placed in closable, leak-proof containers with proper labels and must be disposed of in a proper manner.
9. Cuts and abrasions shall be promptly treated using appropriate first aid measures.



ACCIDENT/INCIDENT INVESTIGATIONS

All work-related accidents or incidents that result in or could potentially have resulted in injury or property damage must be investigated.

1. NBU Employees will report all injuries, illnesses or incidents. Failure to do so will constitute a violation of policy and subject the involved parties to disciplinary action up to and including termination.
2. An NBU employee will contact 911 for Medical Treatment as necessary and the NBU Control Center immediately, secure the scene and ensure injury treatment is rendered if needed. Work should stop until instructed to proceed by Safety or other management, unless leaving the scene is unsafe or could cause other safety concerns.
3. The safety manager or designee will conduct an investigation immediately and release the scene as soon as possible.
4. The final accident investigation, statements and information should be completed within 72 hours of the incident, when applicable.



FIRST AID EQUIPMENT

First aid kits are supplied at each main facility and in most NBU vehicles. NBU employees shall be familiar with the location, contents, and the instructions given with the first aid kit. Each employee shall learn how to use this equipment so they can render treatment when needed.

The contents of the first aid kits shall be inspected each quarter and expended items replaced. Personal medication shall not be kept in first aid kits.

Where the eyes or body may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided for emergency use.

AED Automatic External Defibrillators

AED are placed in selected areas throughout NBU. Employees will be familiar with the location, contents and will learn how to use this equipment so they can render treatment when needed

TREATMENT

Each NBU division has personnel qualified to administer First Aid and CPR. If an injury requires outside medical attention, arrangements for promptly obtaining that care and treatment are normally made by the supervisor if possible. Serious injuries and illnesses will be treated at the most appropriate and accessible hospital.



WORKING ALONE

The term "Working Alone" can be defined as:

Any person working alone in any environment where there are no other workers present and who are not available to respond effectively to assist during any emergency.

Supervisors shall review each worksite under their control to identify individuals who work alone and ensure all reasonable and practical steps are taken to protect the health and safety of those workers.

The steps that follow should be adhered to by employees when working after-hours and/or weekends.

1. Employees shall notify NBU Dispatch at the beginning of a job and provide the following information:
 - Unit number
 - Method of communication (cell phone, radio, pager, etc.)
 - Location and duration of job (If there is a change in the location or duration employee shall contact NBU Control Center. If several locations are to be made, a list should be provided to NBU Control Center in the order the employee will make each location and contact made after all locations have been made)
2. If an employee does not contact NBU Control Center within the expected time, Control Center will attempt contact three (3) times within a fifteen (15) minute period
3. If the employee does not respond NBU Control Center will contact the employee's Supervisor to determine if emergency response is required

Options for the Supervisor:

1. Report to the scene and contact NBU Control Center within five (5) minutes or less after making location
2. NBU Control Center may request a "welfare check" from NBU Crew Members on duty or local Law Enforcement
3. NBU Control Center may contact 911 (If this option is used, the following information is required):
 - Exact location
 - Type of injury/illness
 - Age of employee and approximate weight (for possible Airline Activation)

EMERGENCY PROCEDURES

Preplanning for a potential emergency situation at NBU is most valuable. All employees shall be aware of the medical services available and how to obtain them. This information will be covered in orientation and reviewed annually in division safety meetings. Emergency phone numbers and evacuation routes shall be posted in or near all work areas. Employees shall familiarize themselves with the emergency exits, alarm signals, and escape procedures when working inside a building or structure.

GENERAL EVACUATION

If you are asked to evacuate, hear the alarm, or are notified to do so, you should:

1. Stop all work.
2. Shut off electrical equipment and machines, if possible.
3. Walk to the designated exit, including emergency exits with crash bar assemblies. Push the bar and exit the building.
4. Exit quickly. Do not stop for personal belongings.
5. After exiting the building, move immediately to designated relocation areas and wait there for further instructions.
6. Do not re-enter the facility until you are instructed to do so.
7. Do not go to your car and leave unless instructed to do so.
10. If you are not working at your normal workstation or area, exit the building and relocate with your group at the designated location as soon as possible.



HAZARDOUS MATERIALS PROGRAM

RIGHT TO KNOW

Just as New Braunfels Utilities is interested in your safety from physical hazards, it is also concerned about other aspects of your health and safety. Our use of chemicals at home and at work can present health problems if recommended precautions are not followed. Most chemicals have made our lives more comfortable and productive. However, most have some other effects that could be of concern.

NBU has established a Hazardous Materials Communication Program. This program is designed to insure that while on the job you will be given training and information for the safe handling, use, storage, and disposal of any chemical you may encounter on the job. Training will include where hazardous materials exist, how to read and interpret safety data sheets (SDS) and labels and where data safety sheets (SDS) are located and how to obtain them. All SDS documents can be found at the NBU Infonet at <https://nbuconnect.nbutexas.com>

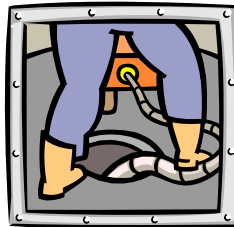
Employees using chemicals have a responsibility to keep informed and seek information from their supervisor. The goal of the program is to make each of us more aware of potential hazards.



CONFINED SPACE SAFETY

1. All potential hazards shall be evaluated prior to entry into a confined space.
2. Only NBU employees who have been properly trained on the hazards associated with confined space work shall be allowed to enter a confined space.
3. If work is to be performed in a confined space, a written permit system shall be followed. The entry supervisor shall complete the written permit prior to entry to ensure that all safety equipment is in place and acceptable entry conditions are present.
4. Before any entrance cover to a confined or enclosed space is removed, it shall be determined that there are no temperature or pressure differences, or other hazardous conditions that may cause injury to the employees removing the cover.
5. No smoking shall be permitted in a confined space or near the entrance/exit area.
6. When covers are removed from confined or enclosed spaces, the opening shall be guarded by a railing, temporary cover, or other temporary barrier.
7. Before an employee enters a confined space, the internal atmosphere shall be tested for oxygen content, flammable gases and vapors, and potential toxic air contaminants. Approved and calibrated testing equipment shall be used to measure the concentration of the various gases.
8. Before entering, if an oxygen deficiency is found, or if flammable or toxic gases or vapors are detected, the space shall be continuously tested and forced ventilation shall be used to maintain oxygen at a safe level and to prevent a hazardous concentration of flammable or toxic gases and vapors.
11. Electric welding, gas welding, cutting, or any other hot work shall not be performed on the interior, exterior, or near the openings of any confined or enclosed space that may contain flammable or explosive gases or vapors until the space has been properly cleared. Monitoring shall be continuous during any hot work activities.
12. If a hazard-increasing work activity is to take place in a confined or enclosed space (i.e., welding, painting, working with solvents and coating), the air in the space shall be continuously tested for the presence of flammable or toxic gases and vapors or insufficient oxygen. Forced ventilation shall be used as required.
13. Before employees are allowed to enter a confined space, all electrical and mechanical energy sources that could affect the employees working in the space shall be physically rendered inoperative, locked out, and tagged. If required, the space shall be drained, vented, and cleaned.
14. A properly trained attendant shall be stationed outside the confined space. The attendant shall maintain continuous communication with the employees authorized to be in the confined space. The attendant shall be able to recognize confined-space hazards and changing conditions in the confined space that could affect employees in the space. In the event of an emergency, the attendant shall not enter the confined space but shall be able to summon emergency and rescue services.
15. All employees required to enter a confined or enclosed space shall be equipped with a body harness and lifeline monitored by a properly trained attendant. Other personal protective equipment and rescue devices may also be required depending on the situation.
16. Compressed gas cylinders, other than breathing air, shall not be taken into a confined space.

17. While work is being performed in an enclosed space, a person with CPR and basic first aid training shall be immediately available to render emergency assistance if there is reason to believe that a hazard may exist in the space or if a hazard exists because of traffic patterns in the area of the opening used for entry.
18. Necessary rescue personnel and equipment shall be available in the event of an emergency.
19. Safe access to the confined space shall be maintained at all times. If possible, all cords, hoses, leads, etc., shall be routed through an entrance other than the employee access into the confined space.
20. Employees whose job duties and responsibilities include entering confined spaces should familiarize themselves with the Confined Space Policy.



TRENCHING AND EXCAVATION SAFETY

1. Before opening an excavation, all interferences such as trees, sidewalks, and foundations shall be removed or supported as necessary to protect employees and the public.
2. The estimated location of utility and other underground installations that may be encountered during excavation work shall be determined before opening the excavation.
3. When excavation operations approach the estimated location of underground installations, the exact location of the installation shall be determined by safe and acceptable means.
4. While the excavation is open, underground installations shall be protected, supported, or removed to safeguard employees.
5. Employees exposed to vehicular traffic shall wear "high visibility" vests or clothing.
6. A stairway, ladder, ramp, or other safe means of egress shall be located in trench excavations that are 4 feet or more in depth so as to require no more than 25 feet of lateral travel for employees. Ladders must extend 3 feet above the surface and be tied off if necessary.
7. No employee shall be permitted underneath loads handled by lifting or digging equipment. Employees shall be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials.
8. All mobile equipment (front-end loaders, bulldozers, and dump trucks) shall be equipped with a warning device such as a back-up alarm. When mobile equipment is operated adjacent to an excavation, a warning system shall be utilized such as barricades, hand or mechanical signals, or stop logs. If possible, the grade should be sloped away from the excavation.
9. In excavations deeper than four feet with the potential for a hazardous atmosphere or oxygen deficiency, air testing shall be conducted before employees can enter an excavation and as often as necessary to ensure the atmosphere remains safe. Ventilation or respiratory protection may be needed to protect employees from harmful atmospheres.
10. Daily inspections of the excavations and adjacent areas and protective systems shall be made by a competent person for evidence of situations that could result in a possible cave-in, failure of protective systems, hazardous atmospheres or other hazardous conditions. An inspection shall be conducted prior to the start of work, when there are changes in weather conditions, if the excavation has been left unattended for a period of time (such as lunch), and as needed.
11. Employees shall not work in excavations in which there is accumulated water or in an excavation in which water is accumulating unless adequate precautions have been taken to protect employees. The precautions necessary to protect employees adequately can include special support or shield systems, water removal, or the use of a body harness and lifeline.
12. Surface water shall be prevented from entering an excavation by utilizing diversion ditches, dikes, or other suitable means.
13. Excavations subject to run-off from heavy rains shall require an inspection by a competent person.
14. Excavated earth (spoil), materials, tools, and equipment shall be placed no closer than two feet from the edge of the excavation.
15. Where employees or equipment are required or permitted to cross over excavations, walkways or

bridges with standard guardrails shall be provided.

16. When excavations are left open, warning devices, barricades, or guardrails shall be placed to adequately protect employees and the public.
17. At the end of the workday, as much of the excavation as practical shall be closed.
18. Mechanical excavating equipment that is parked or operating on streets or highways shall be protected by proper warning devices.
19. Each employee in an excavation shall be protected from cave-ins by an adequate protective system (sloping, benching, shoring, or shielding), unless excavations are made entirely in stable rock, or are less than five feet deep and examination of the ground by a competent person provides no indication of a potential cave-in.
20. When choosing a protective system, a competent person shall take into consideration soil type, vibration sources, previously disturbed soil, layered soil, presence of water, heavy equipment work adjacent to the excavation, limited work area, and other hazard-increasing conditions.
21. Sloping, benching, shoring or shielding for excavations greater than 20 feet deep shall be designed by a registered professional engineer.
22. A “competent person” as used in this section shall mean one who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has the authorization to take prompt corrective measures to eliminate them.

Dig Safely.[®]



The dig safely program stresses that safe excavation is a four step process:

1. Call before you dig. Call Texas 811 Dig, 24 hours a day, 7 days a week.
2. Texas law requires a least 2 working days notice before beginning excavation. If you are going to work on Saturday, call no later than Wednesday.
3. Emergency excavation may begin immediately, with reasonable care. Emergency locates should be called in and or the excavator must call when reasonably possible.
4. Respect the marks. Excavators are encouraged to outline the excavation area in white paint to aid in the location process. During the project, it is the excavator’s responsibility to make sure the marks remain visible. If the marks are obliterated, the excavator must call the Texas 811 Center for re-mark.
5. DIG Safely. Once the work begins, it is up to the excavator to use safe accepted digging practices staying 18 inches on either side of utility markings. Hand digging is recommended when working within 18 inches of the mark. Regardless of how careful the preparation has been, the excavator must work in a prudent and careful manner.

WORK ZONE TRAFFIC CONTROL

Work zone safety is the adequate safeguarding or protecting of pedestrians, motorists, utility workers and equipment by the use of adequate barriers, warning signs, lights, flags, traffic cones, high level standards, barricades, rope, flaggers, etc. on approaches to work areas, excavations, open manholes, parked equipment, etc.

NOTE: Work zone traffic control training will be conducted and qualified NBU employees may train non-qualified employees as needed. Employees must receive proper training prior to accomplishing working as a flagger.

Successful work zone traffic control is accomplished by the use of informative and protective devices, keeping in mind that a safe installation requires the use of these devices in relation to the location of the workers and equipment involved. The use of these devices must be coupled with proper planning, design, installation, inspection, maintenance and the use of good common sense. It is of utmost importance that the work area be properly identified and that warning devices clearly convey the message to the traveling public well in advance of arrival at the work area.

The public must be warned in advance, then regulated and guided through or around the work area. Proper work area protection shall be planned to ensure the safety and protection of the public, the worker, and the equipment.

1. If street construction or repair work is to be done, preparations will be made to ensure vehicle and pedestrian safety before work is allowed to begin.
2. If traffic is affected by the operation, proper signs must be used in advance of the work area, and the traffic control signs in and around the affected area are to be correctly placed and maintained for the duration of the period when work is being performed and traffic obstructions exist.
3. When barricades and signs are used overnight, supervisors will examine the work area for proper placement at the end of the workday.
4. All employees working in or near the roadway will wear NBU approved reflective vests while at the work site. TXDOT states reflective vests are to be worn 15ft from the edge of a traveled way in urban areas and 30ft in rural areas. Garments worn at night must be made of reflectorized material.
5. Lighted barricades will be used whenever possible for overnight protection.
6. Where traffic must be periodically stopped or obstructed by workers or equipment in a traveled portion of a roadway, a flagger wearing a reflective vest may be stationed. If lack of manpower exists, the roadway must be closed and the traffic detoured.
7. Flaggers will be used to slow or direct traffic where the approach to the work area does not provide adequate visibility to drivers. The use of reflective sign paddles (Stop/Slow) is preferred and should be used if available.
8. All plates used to cover holes in the street on a temporary basis are to be spiked in place.
9. In any case where streets are significantly obstructed or closed for any period of time, the police, fire and other relevant departments will be notified of the situation and told approximately how long the closure will be in effect.
10. When pedestrian traffic is impeded, barricades, restrictive tape, rope or other restraint will be



used to keep the public from the work site.

11. Holes in the sidewalk or parkway which must be left open will have perimeter protection. Protection of these areas will be in the form of physical barriers and warnings signs.

MATERIAL HANDLING AND LIFTING SAFETY

1. Before starting to lift or carry, check to ensure that the walkway is clear of all obstacles. Cautiously test the object to check its weight and center of gravity.
2. Before lifting, face the object and get as close as you can with feet slightly apart. Remember, bend at your knees not at your waist.
3. Maintain the natural curve of the back by looking forward and using abdominal muscles for support.
3. Use your legs to bring you to a standing position. Make the lift smooth and under control.
4. When carrying an object, grip it firmly and hold it as close to your body as possible.
5. Keep the load directly in the front of the body, both hips and shoulders facing forward. Do not twist your body when lifting or setting an object down.
6. If necessary, obtain assistance in lifting heavy objects by utilizing additional personnel, power equipment or other types of assisted lifting devices.
7. When two or more persons carry a heavy object that is to be lowered or dropped, there shall be a pre-arranged signal for releasing the load.
8. When two or more persons are carrying an object, each employee, if possible, should face the direction in which the object is being carried. Crouch or squat with the feet close to the object to be lifted; secure good footing; take a firm grip; bend the knees; keep the back vertical; and lift by bending at the knees and using the leg and thigh muscles. Employees shall not attempt to lift beyond their capacity. Caution shall be taken when lifting or pulling in an awkward position.
9. Material shall not be thrown from place to place or person to person.
10. A safety line or tag line should be attached to help control loads as they are lifted to elevated work areas.



FIRE EXTINGUISHER AWARENESS

1. Employees shall be familiar with both the location and the operation of all fire protection equipment in the vicinity of their work area. (See Safety Manager and or Safety Infonet page)
2. Fire extinguishers should be “wall-mounted” in an easily accessible location not more than five feet above floor level. If an extinguisher cannot be easily seen, a sign indicating the extinguisher’s location should also be posted. Except for actual use or inspection purposes, employees shall not move or remove such equipment without proper authority.
3. Fire extinguishers shall not be blocked or hidden behind material or machines.
4. Fire extinguishers shall be visually inspected at least once a month and service inspected annually.
5. Employees should know the classes of fires and the proper extinguishing agent to be used. Employees shall be trained on the primary fire exposures in their immediate work area.
6. Class A-for fires in paper, wood, or cloth
Class B-for flammable liquid fires
Class C-for electrical fires
Class D-for combustible metal fires

A multi-purpose “ABC” fire extinguisher will extinguish most types of fires.

7. Remember how to operate most extinguishers:

PULL	-	the pin.
AIM	-	at the base of the fire.
SQUEEZE	-	the handle.
SWEEP	-	from side to side.



TOOL SAFETY

1. All tools shall be of an approved type and maintained in good condition.
2. All tools shall be examined prior to use to ensure adequate working condition.
3. Defective tools shall be tagged to prevent their use and removed from the job site.
4. Employees shall always use the proper tools for the job.
5. Employees shall be trained on the correct use, hazards and limitations of tools used in the workplace.
6. Gloves should be worn when they provide protection to the employee without increasing the chances of the employee becoming entangled at the point of operation.
7. Tools shall not be left unsecured in elevated places. Tethering is recommended in areas where tools may fall to a lower level.
8. Impact tools, such as chisels, hammers and punches that become mushroomed or cracked shall be dressed or replaced.
9. Chisels and punches, etc. shall be held with a safe holding device, such as vice grips or pliers to avoid injury to employee's hand.
10. Wrenches with sprung or damaged jaws shall not be used.
11. Wooden handles that are loose, cracked or splintered shall be replaced, not taped or lashed.
12. Power tools shall be disconnected from any power source while repairs or adjustments are being made.
13. Carrying and storing tools:
 - a. Never carry sharp tools in your pockets unless the edges are protected.
 - b. Do not carry tools in your hands while climbing a ladder. Hoist them with a rope or use an approved utility belt.
 - c. Protect your tools from falling when working from a scaffold, ladder or other elevated work areas.
14. Do not leave tools lying around where they may cause a trip/fall hazard. Tools no longer needed for the job shall be returned to their proper location.

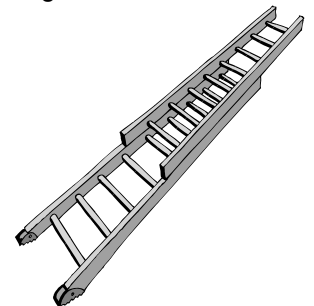
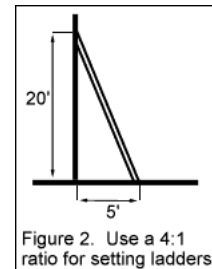


LADDER SAFETY

1. Wooden ladders shall not be painted so as to obscure a defect in the wood; only a clear, nonconductive finish shall be used.
2. All ladders shall be inspected regularly. Ladders with weakened, broken, or missing steps, broken side rails, or other defects shall be tagged and removed from service.
3. Ladders and scaffolds shall be sufficiently strong for their intended use.
4. Ladders shall not be placed in front of doors opening toward the ladder unless the door is open, locked, or guarded.
5. When ascending or descending ladders, employees shall have both hands free and shall face the ladder.
6. Only one employee shall work from a ladder at one time (except for hook-type ladders). If two employees are required, a second ladder shall be used.
7. Only NBU supplied ladders shall be used by employees. The minimum standard for ladders used by NBU shall be Type 1A.
8. Ladders shall not be used as scaffold platforms unless specifically designed for that purpose.
9. Boxes, chairs, etc., shall not be used as ladders.
10. Portable metal ladders and other portable conductive ladders may not be used near exposed energized lines or equipment except in very specialized situations.
11. The use of stepladders above 20 feet is prohibited and the use of extension ladders above 24 feet is strongly discouraged.

STRAIGHT & EXTENSION LADDERS

1. Portable straight ladders shall be equipped with nonskid bases or shoes.
2. Ladders should be set at a 4:1 angle.
3. Straight ladders shall not be climbed beyond the third step from the top.
4. When working from a portable ladder, the ladder must be securely placed, held, tied, or otherwise made secure to prevent slipping or falling.
5. When dismantling from a ladder at an elevated position (such as a roof) the employee shall ensure that the ladder side rails extend at least 3 feet above the dismount position, or that grab bars are present.
6. Employees shall belt off to a ladder whenever both hands must be used for the job or a possibility of the employee falling from an elevated position exists.
7. Ladders shall not be spliced together to form a longer ladder, unless specifically designed to be used as a section ladder.
8. A ladder shall not be placed against an unsafe support.



9. When an employee is working on a straight or extension ladder more than 10 feet high (except a platform ladder), another person shall hold the ladder or it should be tied to a support to prevent it from falling.

STEP LADDERS

1. The top step shall not be used, except for platform ladders.
2. Stepladder legs shall be fully spread and the spreading bars locked in place.
3. Stepladders shall not be used as straight ladders.
4. When an employee is working on a stepladder more than 10 feet high (except a platform ladder), another person shall hold the ladder or it should be tied to a support to prevent it from falling.

MATERIAL STORAGE SAFETY

Bins and Shelves

1. Material shall be stored in such a manner that it will be safe from damage. Special care must be taken to assure that stored material poses no hazard to anyone working around it. Only lightweight material should be stored on top shelves.
2. Bins or shelves shall never be used as ladders.
3. Materials shall not be stored on the floor, in front of shelving.

Stacking Material

1. When material is stacked all possible precautions must be taken to assure that it will remain stable. The lower level must be blocked or tied to prevent slipping. The height of a stack of material should remain within reasonable limits.
2. When unloading and/or stacking poles or pipe, great care should be exercised to maintain a safe work environment. Do not stand on poles or pipe. Watch for pinch points, and stay out of the path of equipment during unloading. Avoid any contact with creosote, while unloading poles.

Flammable Material

1. Under no circumstances shall flammable materials be stored in an area where heat or potential ignition sources may affect the stability of the material.
2. All flammable materials shall be stored in a location that will not endanger life or property. Containers will be clearly and appropriately marked, in accordance with fire safety standards. In addition, storage facilities shall have a sign identifying the materials as "flammable".
3. Storage of open containers of flammable materials is prohibited. Container covers must be promptly replaced. Smoking will not be permitted inside any warehouse facility, or outside near flammable or combustible materials in the equipment yard.
4. Flammable liquids shall be used only for their designed purposes. Gasoline shall not be used for cleaning purposes or for starting or kindling fires.
5. All solvents should be kept in approved, properly labeled containers. Gasoline and other solvents of this class shall be handled and dispensed only in Underwriters Laboratories (UL) approved, properly labeled (yellow letters) red safety cans.
6. When pouring or pumping gasoline or other flammable liquids from one container to another, metallic contact shall be maintained between the pouring and receiving containers. Transferring of flammable liquids from one container to another shall be accomplished only in properly ventilated spaces free from ignition sources.
7. Strict adherence shall be paid to "No Smoking" and "Stop your Motor" signs at fuel dispensing locations.

Housekeeping

1. Work locations including vehicles, buildings, shops, yards, offices, cabs, etc. shall be kept clean and orderly at all times.
2. Combustible materials, such as oil-soaked rags, waste and shavings shall be kept in approved metal containers with metal lids. Containers shall be emptied as soon as practical.
3. Both clean rags and used rags shall be kept in metal or metal lined bins having metal covers.
4. Permanent floors and platforms shall be kept free of dangerous projections or obstructions and shall be maintained reasonably free from oil, grease, or water. Where the type of operation produces slippery conditions, mats, grates, cleats or other methods shall be used to reduce the hazard from slipping.
5. Stairways, aisles, permanent roadways, walkways and material storage areas in yards shall be kept reasonably clear and free from obstructions, depressions and debris.
6. Materials and supplies shall be stored in an orderly manner so as to prevent their falling or spreading and to eliminate tripping and stumbling hazards.
7. Rubbish and unused clothing shall not be allowed to accumulate in lockers.
8. Paper and other combustible materials shall not be allowed to accumulate, and weeds or other range vegetation shall not be permitted to grow in or around storage areas, shops, substations, pole yards, buildings, fuel tanks or other structures.
9. Batteries shall be stored in a well-ventilated area protected from sparks or open flames.
10. All personnel will practice good housekeeping. Scrap material will be disposed of properly and the work area should be free of any loose material.

Smoking

Open flames shall not be permitted in areas where flammables or combustibles are present. Smoking will only be allowed in designated smoking areas and never in the vicinity of flammable materials. The absence of "No Smoking" signs shall not be considered authorization for smoking in hazardous locations.



SHOP SAFETY

1. All rotating pulleys, gears, shafts and belts on compressors, motors, etc. shall be properly guarded. No equipment or machinery shall be operated while required guards are not in place.
2. Drain valves on air compressors should be opened frequently to prevent the accumulation of liquid.
3. Safety-relief valves will be installed on all compression tanks. These valves will be tested periodically to ensure their proper operation.
4. Never use compressed air to clean your hands or to blow dirt from clothing or your body.
5. When using compressed air for cleaning purposes, it must be kept at a level below 30 pounds per square inch (PSI).
6. If compressed gas cylinders are stored inside a building, the area will be kept dry and well ventilated. Oxygen and fuel gas cylinders must be stored separately.
7. Cylinder carts, other than those designed to hold cylinders in an upright position, are prohibited. Upright cylinder carts must be equipped with a chain, bar or some other device that will act to stabilize the cylinders. If gauges are not attached to the cylinders, valve caps must be in place.
8. Signage similar to the following must be posted in any cylinder storage areas. "DANGER - NO SMOKING, MATCHES, OR OPEN FLAMES".
9. Radial bench saws shall be equipped with a hood guard, forward travel stop and the head shall automatically return to starting position when released.
10. A face shield and safety glasses shall be worn while grinding. Any grinding equipment without proper safety features is not allowed in the work place. Abrasive wheels shall only be used on machines that have guards that cover the spindle end, nut and flange projections.
11. Grinder work rests must be designed to be adjustable to compensate for wheel wear. Work rests should be adjusted with a maximum clearance of 1/8" to help prevent work from jamming. Tongue guards must also be adjusted to within 1/8".
12. When replacing abrasive wheels, follow the manufacturer's directions for proper installation and inspection. All grinding wheels must be inspected prior to installation to insure that the RPM rating of the wheel is correct for the grinder's RPM.
13. Identify and label all electrical control devices, such as circuit breakers, fuses, disconnects, etc.
14. All electrical outlets, including wall receptacles, extension cords, etc. must have an independent, third-wire ground system.
15. All electrical tools and equipment shall be effectively grounded unless the tool is an approved double-insulated type.
16. All electrical junction boxes shall have protective covers. All such boxes must have sufficient access space.
17. Stored materials should be stacked in such a manner as not to create a hazard. Stack containers, boxes, parts, etc. in an orderly fashion to ensure stable stacking heights.
18. Heavy bulky materials should be stored on lower shelves to minimize chances of injury due to

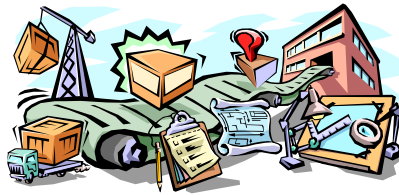
falling objects.

19. Elevated storage platforms over four (4) feet in height from floor level shall have standard handrails (includes a mid-rail and a top handrail) and toe boards. The handrails will be constructed of metal or wood sufficient to withstand 200 pounds of top rail pressure.
20. Proper signage, such as "NO SMOKING" signs, will be installed in all areas where flammable or easily combustible materials are stored.
21. Hooks used on hoisting equipment shall be equipped with a safety latch to help prevent dropping of any lifted load.
22. The hoisting capacity of any hoisting equipment shall be printed clearly on the frame in lettering that is large enough to be read from ground level. All cranes shall be inspected on at least a monthly basis to assure their proper operation and condition.
23. All shops shall have at least two accessible exits for emergency evacuations.
24. Any doors not designated as exits, but may be mistaken for exits should be clearly marked "NOT AN EXIT".
25. All exits shall be identified by a clearly visible, illuminated, "EXIT" sign.
26. Only approved containers are to be used for the storage of flammable and combustible materials. Approved containers can be identified by the presence of a label from a certifying organization such as Underwriters Laboratories.
27. Safety cans shall be painted red and clearly marked to identify the contents. Only approved pumps or self-closing faucets are to be used for dispensing flammable or combustible liquids.
28. No guard shall be removed from any machine or piece of equipment except to perform required maintenance. Guards removed to perform maintenance operations shall be replaced immediately after the completion of the work.



YARD STORAGE SAFETY

1. All vehicles shall have the emergency brake set when parked on a slope or down grade. Consideration should also be given to the use of chocks in these situations.
2. All vehicles and equipment shall be parked in a position that does not require backing whenever possible. When backing a truck or machinery in the yard, use a Guide to assist you into position.
3. Proper personal protective equipment should be evaluated before performing any work in the yard. It is not possible to identify all personal protective equipment that may be required due to the various types of assignments in that area.
4. Miscellaneous tools, equipment and material should be stored on pallets instead of being placed on the ground when able. Pallets should be stacked in a way that ensures their stability. Stability may be influenced by many items such as the stability of the ground, the height of the stacked material, the configuration of the stacking, etc.
5. Always roll pipe or pole's from the ends or from behind to avoid placing your body in the pipe or pole's path.
6. All pipe racks will be fitted with pipe stops to prevent pipe roll-off. Stripping should also be used at the ends of the pipe to act as spacers.
7. All aboveground fuel storage tanks should be protected on all four sides with heavy-duty guard posts and crash rails. Emergency cut-off switches shall also be installed near the pumping equipment and a fire extinguisher should be readily accessible.
8. A diking system capable of holding the volume of the above ground storage tank should be constructed to help control potential spills.



COMPRESSED GAS CYLINDER SAFETY

1. Never attempt to lift compressed gas cylinders with an electromagnet. Where cylinders must be handled by a crane or derrick, as on work sites, the cylinders shall be lifted in a cradle or suitable platform, not by the valve protector cap. Do not lift with slings or chokers. Extreme care must be exercised to prevent dropping or bumping of the cylinders.
2. Cylinders, whether full or empty, shall be stored in a rack, chained or otherwise secured to prevent them from falling.
3. Do not use cylinders as rollers, supports or for any other use other than its designed purpose.
4. Cylinders shall have their contents properly identified. Empty cylinders shall be plainly marked "EMPTY" or "MT", and the valves shall be closed.
5. Oxygen cylinders in storage shall not be stored near flammable or highly combustible materials, such as oil, grease, fuel, other fuel gas cylinders, etc. In addition, no cylinders shall be stored in areas where there is an exposure to direct sunlight.
6. Welding or cutting of any pipeline, tank, empty container or piece of equipment shall not be performed until it is assured that the object is free from flammable materials or an explosive mixture of gases. Before welding or cutting begins, the hazardous materials shall be removed or it shall be vented to the atmosphere to prevent a possible explosion from the expansion of trapped gases.
7. Cylinders shall not be placed where they might become part of an electric current or within five feet of an electrical outlet. Cylinders shall not be allowed to come in contact with energized conductors, ground wires from electrical equipment or welding machines.
8. Valves of compressed gas cylinders shall be opened slowly and with the proper wrench.
9. Before the regulator is removed from a cylinder, the valve shall be closed and all pressure released from the regulator. Use regulators and pressure gauges only with gases for which they are designed and intended. Do not attempt to repair or alter cylinders, valves or attachments. Any changes in the cylinders shall only be performed by the supplier or manufacturer.
10. Leaking cylinders shall not be used. Such cylinders shall be taken away from sources of ignition and the supervisor notified. Leaking compressed gas cylinders shall be taken out of service immediately and handled as follows:
 - a. Close the valves and take the cylinder outdoors well away from any source of ignition.
 - b. Properly tag or mark the cylinder.
 - c. If the leak occurs at a fuse plug or other safety device, take the cylinder outdoors well away from any potential ignition source and open the cylinder valve slightly to allow the contents to escape slowly. Tag the cylinder to warn others. (The environmental and health effects of the contents must be evaluated prior to allowing the cylinder to bleed-down.)
 - d. Post warnings against approaching with lit cigarettes or other potential ignition sources.
 - e. Promptly notify the supplier and follow their instructions for handling/returning the cylinder.
11. Do not remove or change the marks and/or numbers stamped on compressed gas cylinders. In addition, any labels shall be left in place for identification purposes.
12. Cylinders that are heavy or difficult to carry by hand may be rolled on their bottom edge, but they

should never be dragged.

13. Do not tamper with safety devices in valves or on cylinders.
14. Consult the supplier of the gas or the appropriate Safety Data Sheet (SDS) when there are doubts concerning the proper handling of a compressed gas cylinder or its contents. Safety Data Sheets (SDS) shall be maintained at respective locations and online at the NBU Infonet <https://nbuconnect.nbutexas.com/>
15. When cylinders are transported:
 - a. Load to allow as little movement as possible.
 - b. Secure them to prevent violent contact or falling.
 - c. Remove regulators and put valve protection caps in place.

CHLORINE SAFETY

Chlorine is used in water and wastewater facilities. It is hazardous; may cause irritation of the throat, nose and eyes and in large concentrations, it can cause dizziness, uncontrollable coughing, vomiting, unconsciousness and even death. It is important for the personnel to be aware of these dangers and the proper use of emergency equipment and handling of chlorine containers.

Chlorine handling requires proper planning and use of proper procedures in changing cylinders and containers and operating the equipment. The following list provides preventive actions which will help minimize the effects of an emergency.

1. **Only** trained workers should be allowed to handle chlorine.
2. Avoid dropping or bumping containers.
3. Store and chain 150 lb. Cylinders in an upright position.
4. Do not remove protective valve caps while in storage or standby.
5. Chlorine valves should be opened slowly and carefully using a wrench of proper size and length.
6. Chlorine valves need only to be turned one full turn counter clockwise to permit maximum discharge from the cylinder. Chlorine valves can normally be opened by striking the end of the wrench with the heel of the hand. If a valve doesn't open in this manner, return the container to the supplier for replacement.
7. Disconnect the chlorine container when empty and test the new container for leaks after connections with a strong solution of aqueous ammonia (white fumes of ammonium chloride are emitted if a leak is present).
8. Self-contained breathing apparatus should be worn by personnel (at least two individuals present) when entering chlorine room where a leak is suspected.
9. New lead washer should be installed with each new chlorine cylinder.
10. Emergency drills shall be conducted annually.



WELDING AND CUTTING SAFETY

1. Welding and cutting shall only be performed by experienced and properly trained personnel.
2. The work area shall be inspected for potential fire hazards before any cutting or welding is performed.
3. When welding or cutting in elevated positions, precautions shall be taken to prevent sparks and hot metal from falling onto people or material below.
4. Suitable fire extinguishing equipment shall be immediately available at all locations where welding and cutting equipment is used.
5. Proper strikers shall be used in lighting torches. Matches and cigarette lighters shall not be used.
6. A fire watch shall be maintained whenever welding or cutting is performed in locations where combustible materials present a potential fire hazard. A fire check should be made of the entire area after completion of welding or cutting activities.
7. Machinery, tanks, equipment, shafts or pipes that could contain explosive or flammable materials shall be thoroughly cleared and decontaminated prior to the application of heat.
8. In dusty or gaseous spaces where there is a possibility of an explosion, welding or cutting equipment shall not be used until the space is adequately ventilated.
9. Adequate ventilation or approved respiratory equipment shall be used while welding in confined spaces or while cutting, brazing or welding zinc, brass, bronze, stainless steel, galvanized or lead coated materials.
10. Welders shall wear clothing made of fire resistant fabrics, gloves, appropriate footwear, sleeves and a buttoned collar. All protective clothes and equipment should be worn in a manner that provides the most efficient protection from slag or other hot material.
11. When using an arc welder, use No. 10 or No. 12 shade lenses. When using acetylene torches for welding or cutting, use No. 5 or No. 6 shade lenses.
12. Regular shaded safety glasses do not provide adequate protection for welding or cutting operations.
13. Proper eye protection in the form of safety glasses and a face shield should be worn during any portable grinding activities. Safety glasses should also be worn during any slag chipping activities.

GAS WELDING

1. Suitable eye protection, protective gloves and clothing shall be worn during welding or cutting operations or while cleaning scale from welds. Helpers or attendants shall wear proper eye protection. Other employees shall not observe welding operations unless they use approved eye protection.
2. Matches shall not be used to light a torch. A torch shall not be lit on hot work.
3. When gas-welding equipment is not in use, the cylinder valves shall be closed and the pressure in the hose released.

4. Gas hoses shall not be positioned so they create tripping/slipping hazards.
5. Always inspect oxygen or fuel gas hoses for leaks, burn spots, worn places, or other defects before pressurizing.

ELECTRIC WELDING

1. No electric welding machine, either AC or DC shall be operated until the frame or case of the machine is electrically grounded for protection from potential shock hazards.
2. All ground and electrode lead cables will be inspected before use for bad or damaged connectors. Only connectors designed for joining or connecting will be used for that purpose.
3. Welders shall wear an approved welding helmet, proper protective gloves and fire-resistant clothing during welding activities. Proper eye protection in the form of safety glasses and/or a face shield should be worn by the welder and any helpers in the area when chipping slag, grinding, etc. Other employees shall not observe electric welding operations unless they use approved eye protection.
4. Welders shall wear proper eye protection to guard against flying particles when the helmet is raised.
5. Welding screens shall be used whenever practical to help control potential ultraviolet light exposures to other personnel in the area.
6. Welding machines will be placed at least 4 feet apart.
7. Fire fighting equipment should be placed in the immediate area and a fire watch used as necessary to control any fire potential.



COLD AND HEAT RELATED ILLNESSES AWARENESS

Cold Related Illnesses

Hypothermia is when the body's temperature drops below normal causing uncontrollable shivering, weakness, drowsiness, disorientation, unconsciousness, and even death. Persons working outdoors during the winter months should follow the guidelines listed below:

1. Dress in layers.
2. Keep dry.
3. Work with co-workers when possible.



Heat Related Illnesses

Heat stroke, heat exhaustion, heat cramps and heat rash are health related problems associated with working in hot environments. Heat related illnesses could be caused by prolonged exposure to hot temperatures, limited fluid intake, or failure of temperature regulation mechanisms in the brain.

The most serious health disorder associated with working in a hot environment is heat stroke. Symptoms of heat stroke include hot dry skin, no sweating, high body temperature, rapid heartbeat, mental confusion or a loss of consciousness. While medical help is being called, the victim should be moved to a cool area and his/her clothing soaked with cool water. Vigorous fanning of the body will increase cooling. Death can occur if prompt first aid and medical help is not given.

Heat exhaustion occurs as a result of excess fluid loss and failure to replace the minerals and fluid lost during sweating. Signs of heat exhaustion include extreme weakness or fatigue, giddiness, nausea or headaches. The skin is clammy and moist and the body temperature is relatively normal. The best treatment for heat exhaustion involves resting in a cool place and drinking plenty of fluids.

Heat cramps are painful muscle spasms, which are caused by excessive fluid and salt loss. Such cramps can be treated by consuming fluid replacement beverages.

Heat rash is likely to occur in hot and humid environments where sweat cannot be easily evaporated from the skin surface. It can be prevented by resting in a cool place and allowing the skin to dry.

By following a few basic precautions, health problems associated with working in hot environments can be prevented:

1. Those unaccustomed to working in the heat should be given time to adjust to work in a hot environment.
2. Wear light, loose fitting clothing and protect yourself by wearing a hat. Sunscreen should also be used when prolonged exposures to sunlight may be possible.
3. Drink plenty of fluids to help prevent dehydration. Eight to ten (8-10) ounces of fluid are recommended every ten to fifteen (10-15) minutes when working in extremely hot or humid conditions. Beverages containing caffeine should be avoided.
4. Alternate work and rest periods. Heavy work should be scheduled for the cooler parts of the day if possible.
5. Employees will be educated on the symptoms, treatments and preventive measures for heat related problems.



PESTICIDE/HERBICIDE SAFETY



1. When applicable, all employees who apply pesticides or herbicides shall be licensed.
2. Before using any pesticide or herbicide, employees shall read the label carefully and follow the directions and precautions.
3. Pesticides shall be stored in a properly labeled, tightly sealed container and under lock and key at all times. The building, room, or structure shall be clearly marked with pesticide warnings.
4. Before handling any pesticide/herbicide, the user should review the material safety data sheet and label to identify any personal protective equipment that will be needed to prevent a possible exposure.
5. Mix the pesticides/herbicides in a well-ventilated, well-lit area. Mix only at recommended rates and apply only at specified dosages.
6. Check application equipment for leaking hoses or connections, plugged or worn nozzles, and examine the filter to ascertain that it is free of debris.
7. Employees shall avoid contact with skin or inhalation of mists or spray.
8. Safety Data Sheets (SDS) shall be maintained at respective locations and online at the NBU Infonet <https://nbuconnect.nbutexas.com/>
9. Spray equipment shall be cleansed daily when using oil-based solutions.
10. Pesticides/herbicides shall not be stored or disposed of where they could contaminate people, property or waterways.
11. Empty containers shall be disposed of in a safe manner.
12. Pesticides/herbicides should only be applied under favorable time and weather conditions.
13. Do not eat, drink or use tobacco products while handling pesticides/herbicides.

CHAIN SAW SAFETY

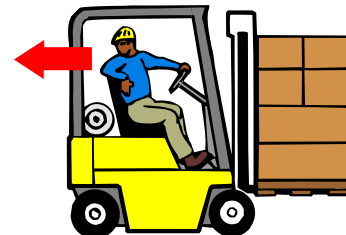
1. Employees operating powered trimming equipment shall, as minimum, wear safety glasses and/or face shields and hearing protection. Other personal protective equipment such as chaps, gloves, fall protection, etc. should also be evaluated to gauge its need.
2. When starting a chain saw, it shall be placed on or against a solid support.
3. The operator shall grip the chain saw with both hands during the entire cutting operation.
4. The saw bumper shall be against the tree or limb before starting a cut.
5. Chain saw operators shall regularly clear the immediate area around their work to make certain that brush/limbs will not interfere with the chain saw or operator.
6. Chain saws shall not be modified in such a way to allow locking of controls in the “on” position.
7. The chain saw engine or motor shall be stopped when:
 - a. Working on any part of the chain or cutting bar.
 - b. Being moved from one location to another.
 - c. The unit is unattended.
9. Gasoline driven chain saw engines shall be stopped when being refueled. If gasoline is spilled on the chain saw during refueling, it shall be wiped off before the engine is started.
10. A gasoline driven chain saw shall not be used above shoulder level. Employees shall not approach the chain saw operator within the reach of the saw blade while it is in operation.
11. Ropes, pulleys, etc. should be used as necessary to lower larger limbs that may endanger persons and property if allowed to “free-fall”.
11. The proper use of fall protection and/or ladders should be reviewed with all employees prior to working from a position other than ground level.



FORKLIFT SAFETY

1. Forklifts shall only be operated by authorized persons who have been properly trained in their use. This training should be documented and consistently used with all authorized operators and trainees.
2. The operator is responsible for inspecting the equipment before it is used. The brakes and controls shall also be tested by the operator prior to use. (Needed repairs shall be reported immediately and taken out of service.)
3. Equipment shall be operated at a safe speed for existing conditions. Go slowly around corners. Avoid holes, loose material etc.
4. Hard hat, safety glasses and seat belt shall be worn when operating a forklift with rollover protection.
5. Clearances shall be checked in all directions, particularly overhead clearances.
6. Forklifts shall not be fueled while the engine is running.
7. Forks shall be placed under the load as far as possible. Loads should not be raised or lowered while traveling. Loaded or empty, forks should be carried as low as possible, but high enough to clear uneven surfaces. (Usually about 6-12 inches on level surfaces.)
8. Operators shall always face the direction of travel and also keep their arms and legs inside operator's compartment.
9. Load limits as specified by the manufacturer shall not be exceeded.
10. Do not travel with the load raised as this causes the center of gravity to rise, which may affect the tipping potential.
11. Only the operator shall be allowed on the equipment during operation, unless a seat is provided for another occupant.
12. A secured platform specifically designed for that purpose must be used when lifting personnel.
13. Unattended forklifts (operator 25 feet away or forklift not in his view) shall have the load fully lowered, controls neutralized, power shut off and brakes set.

Equipment with internal combustion engines shall not be operated in enclosed areas for long periods of time so as not to exceed the allowable levels of carbon monoxide.



BACKHOE/LOADER SAFETY

1. Operators shall be adequately trained and qualified to operate the equipment. The operators shall become thoroughly familiar with the equipment before using it and they must understand the contents of the operator's manual.
2. The operator is responsible for inspecting the equipment before it is used. The brakes and controls shall also be tested by the operator prior to use. (Needed repairs shall be reported immediately and removed from service.) Observe proper maintenance and repair of all pivot pins, hydraulic cylinders, hoses, snap rings and main attachment bolts daily.
3. Hardhat, safety glasses and seat belt shall be worn on all equipment with rollover protection.
4. Operators should maintain "three points of contact" with the equipment when entering or exiting. This will allow the operator to regain their balance if a slip occurs.
5. Back-up alarms are a useful warning device and should be used when possible, especially on larger vehicles and equipment that may severely restrict your view to the rear of the vehicle. If an alarm is not present, the operator should honk his horn to warn others of the moving vehicle. Back-up alarms should be operable at all times.
6. Only the operator shall be allowed on the equipment during operation, unless a seat is provided for another occupant.
7. Employees shall never be allowed to ride in the bucket or use the bucket for an elevated platform.
8. Walk around the equipment to observe for children and others before starting up. If available, a spotter shall be used when backing the equipment.
9. Keep bystanders in the clear while operating the equipment. No one is allowed in a ditch while a backhoe is excavating.
10. Locate underground utility lines and overhead power lines before starting to dig. (Always contact utility companies to physically locate any underground lines.) Extreme caution shall be used when operating a backhoe within 10 feet of an overhead electrical line. Operators shall use every precaution available, including hand digging, to avoid damaging underground utilities.
11. Never attempt to lift loads in excess of the equipment's capacity.
12. Never allow anyone to get under the equipment or reach through the lift arms while the bucket is raised.
13. Relieve the pressure in any hydraulic lines before disconnecting them to make repairs. Any hydraulic implements that are not relieved shall be physically blocked to protect against mashing injuries during maintenance or repair activities. Physical blocks may include safety stands, timbers, cinder blocks, etc. that can withstand the force.
14. Use care at all times to maintain proper stability. Drive at safe speeds over rough ground, on slopes, when crossing ditches and when turning corners.
15. To prevent upsets when operating on a slope avoid using the full reach and swinging a loaded bucket to the downhill side.
16. Always center and raise the boom before moving to a new location.

17. Do not attempt to exit the equipment while it is still in motion. Apply the parking brake and shut down the engine before leaving equipment.
18. Lubrication activities or mechanical adjustments shall not be attempted while the equipment is running if there is a possibility of contacting a pulley, belt, shaft, etc. that is in motion.
19. Park the equipment on level ground when possible. As a minimum, the bucket should be lowered, the brakes set, the transmission engaged and engine killed when parking.
20. Use care in attaching towing lines to the equipment. Pulling from the tractor rear axle or any point above the axle may cause an accident.
21. Slow moving placards and other warning devices should be used to help other motorists in spotting the slow-moving vehicle from a safe distance.



DUMP TRUCK SAFETY

1. Employees or other individuals shall not be carried in the bed for transportation purposes.
2. Employees shall not remain in the cab when the bed is being loaded unless the cab is protected against impact.
3. Check overhead clearances before raising the bed. Be aware of overhead electrical lines.
4. Be sure hoist is not engaged before moving the truck.
5. Loose material shall be covered to prevent blowing debris and spillage.
6. Close windows during loading/unloading to control dust accumulation inside the cab.
7. Operators of dump trucks must possess a valid Commercial Drivers License.
8. Operators are responsible for cleaning debris, mud, rocks, etc. from the bed, fenders and other body parts that may become dislodged during travel.
9. Back-up alarms are a useful warning device and should be used when possible, especially on larger vehicles and equipment that may severely restrict your view to the rear of the vehicle. If an alarm is not present, the operator should honk his horn to warn others of the moving vehicle. Back-up alarms should be operable at all times.
10. All mirrors should be maintained in clean, good working condition and adjusted to assist the operator in viewing obstructions or other vehicles.
11. Operators should maintain “three points of contact” with the equipment when entering or exiting the cab. This will allow the operator to regain their balance if a slip occurs.



TRACTOR/SHREDDER SAFETY

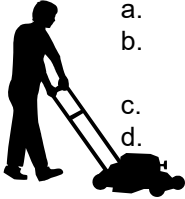
1. The operator shall wear a securely fastened seat belt if the tractor/shredder is equipped with rollover protection.
2. Guards around chains, shafts, pulleys, gears, etc. shall always remain in place while the equipment is in operation.
3. Use caution when operating near slopes, cuts, depressions, drop-offs, soft shoulders, ditches, etc. Operators shall constantly watch for hidden objects and uneven ground. Hazardous areas shall be pre-cleaned and special hazards removed prior to mowing.
4. Use care when entering traffic areas, crossing railroad tracks, etc.
5. Operators should maintain “three points of contact” with the equipment when entering or exiting. This will allow the operator to regain their balance if a slip occurs.
6. Back-up alarms are a useful warning device and should be used when possible, especially on larger vehicles and equipment that may severely restrict your view to the rear of the vehicle. If an alarm is not present, the operator should honk his horn to warn others of the moving vehicle. Back-up alarms should be operable at all times.
7. Only the operator shall be allowed on the equipment during operation, unless a seat is provided for another occupant.
8. Lubrication activities or mechanical adjustments shall not be attempted while the equipment is running if there is a possibility of contacting a pulley, belt, shaft, etc. that is in motion.
9. Take sharp turns at low speed.
10. Proper personal protective equipment shall be worn at all times. On a tractor with an uncovered cab, the operator should as a minimum wear safety glasses and hearing protection. Other personal protective equipment such as gloves, face shields, hard hats, sleeves, boots, etc. should be evaluated for individual jobs. Sunscreen should also be used in areas where the operator may be exposed to sunlight for long periods of time.
11. Slow-moving placards and other warning devices should be used to help other motorists in spotting the slow-moving vehicle from a safe distance.



GROUNDS MAINTENANCE SAFETY

Power Lawn Mowers and Edgers

1. All power lawn mowers shall be equipped with adequate guards, which shall remain in place while the mower is in use.
2. Prior to making adjustments, inspections, or repairs, the employees shall permit the mower to come to a complete stop. A spark plug wire shall be removed if necessary for energy control.
3. When operating a mower or edger, the employee shall:



- a. Remove any rocks, pieces of wire or other foreign objects from the area.
- b. Avoid directing the discharge opening toward themselves or other individuals in the vicinity.
- c. When mowing on a slope or incline, mow across the face of the slope.
- d. Wear proper personal protective equipment for the task being performed. Necessary personal protective equipment may include safety glasses, goggles, face shields, hearing protection and work boots.

Chippers

1. Chippers shall never be parked directly under the tree being trimmed.
2. If the chipper is parked on or near the roadway, advance warning signs, flaggers, cones, etc. shall be used to identify and protect the work area.
3. Spectators shall never be allowed to stand near the machine while feeding brush into the chipper.
4. Employees shall never place hands or other parts of the body into the brush chipper while the chipper is in operation.
5. The battery cables shall be disconnected prior to performing any task that may potentially put you in contact with the cutting blades.
6. Tools or other metallic objects shall not be used to push brush into the chipper.
7. The ignition key shall be removed when the chipper is left unattended.
8. Hard hat, safety glasses and hearing protection will be worn by all employees near the chipper and other personal protective equipment may be necessary depending on the activity. In addition, workers must be aware of entanglement hazards involving loose fitting clothes, gloves, etc.
9. Employees shall be familiar with emergency “shut off” procedures and ensure that the emergency shut-off is operational prior to use.

POISON IVY, OAK OR SUMAC AWARENESS

1. Sensitivity to these plants can vary and some people who do not appear sensitive may develop sensitivity on later exposures.
2. Exposures to poison ivy, poison oak or sumac are greatest in the spring and summer months when the oil (urushiol) is most abundant.

3. Onset of the rash is from a few hours to several days after exposure. The skin becomes red, blisters appear, usually accompanied by itching. As symptoms progress, swelling and fever may develop.
4. Common poison ivy can be recognized by its three green, glossy leaflets that turn yellow in the fall.
5. Western poison oak can be recognized by its vine form and three leaflets that are green or brown in color with yellow veins and brownish/yellow stems. In addition, the leaves are covered with hair on the underside and there are groups of hairy, yellowish berries.
6. Poison sumac is recognizable as a woody shrub or small tree, five to twenty five feet tall and containing seven to thirteen leaflets per stem. The leaves turn red in the fall. Poison sumac has cream-colored berries that hang in loose groups from the branches.
7. If you are going to be in areas where you know poison oak or ivy is likely to grow, wear long pants and long sleeves, and if practical, gloves and boots. Your best protection is to identify the plant and avoid contact. For highly sensitive persons, a barrier cream can provide even greater protection.
8. Be aware that the plant's oily resin sticks to almost all surfaces and can even be carried in the wind (on particles of dust) when there is a fire burning.

If you think you have contacted poison ivy, follow these simple procedures:

1. Wash all exposed areas with cold running water as soon as you can. If this is done within five minutes, the water should neutralize or deactivate the urushiol in the plant's oil before it can bond with your skin and create a rash. Soap is not necessary and may even spread the oil.
2. If possible, change clothes. Wash all clothing outside with a water hose before taking it into the work area or home to prevent the oil from being transferred to furniture or rugs. Resinous oils can last on tools and clothing for months unless properly cleaned or laundered.
3. Mild rashes can be treated with lotions and by soaking in an oatmeal bath or covering the rash with wet compresses. Contact a physician for treatment of severe cases or if the irritation is not cleared up in three or four days.

PAINING SAFETY RULES

1. Read and follow the manufacturer's directions carefully when applying any finishing materials, such as lacquer, enamel, paint, etc. If questions arise as to the hazards of the substance, refer to the applicable Safety Data Sheet (SDS).
2. Safety Data Sheets (SDS) shall be maintained at respective locations and online at the NBU Infonet <https://nbuconnect.nbutexas.com/>
3. Personal protective equipment, as recommended by the manufacturer, shall be used when applying the products.
4. Any spray painting must be done with an adequate amount of clearance from any potential sources of ignition. When possible, painting should be performed in isolated areas where ignition sources do not exist or are very minimal.
5. Proper ventilation and/or adequate respiratory protection must be addressed before any application begins.
6. Any flammable substances, such as paints, thinners, etc., must be stored in proper storage areas or in a UL listed metal storage cabinet.
7. Any flammable substances removed from their original containers shall be stored in UL listed storage containers, if the original container will not meet the requirements.
8. Bond metal containers when transferring flammable liquids, especially those that are known Class I flammable liquids. Refer to Safety Data Sheets (SDS) for flammability information.
9. Use the proper type of respirator at all times when applying toxic paints. If questions arise as to the toxicity of the paint, refer to the applicable Safety Data Sheet (SDS).
10. Never have more than one day's supply of flammable substances outside of approved storage.
11. Clean up all spills promptly and in accordance with the requirements on the Safety Data Sheet (SDS).
12. Dispose of oily, paint or solvent-soaked rags in metal containers with tight fitting lids to prevent possible chemical reactions that may result in "spontaneous combustion".
13. Use properly designed and erected ladders, scaffolds, elevated mobile work platforms, etc., when painting above ground level. Do not work or place elevated equipment within 10 feet of power lines.
14. When using spray guns and compressed air:
 - a. Follow all rules concerning the safe handling of combustible and flammable materials.
 - b. Exercise caution in the handling of compressed air equipment.
 - c. Adjust and regulate the air pressure on the spray gun before starting work.
 - d. Clean the spray gun and other equipment thoroughly after each use.
15. Read and follow the manufacturer's directions carefully when applying any finishing materials, such as lacquer, enamel, paint, etc. If questions arise as to the hazards of the substance, refer to the applicable Safety Data Sheet (SDS).
16. PPE, as recommended by the manufacturer, shall be worn when applying the products.

OFFICE SAFETY

1. Employees shall walk cautiously up and down stairs and use handrails whenever possible. Avoid using both hands to carry objects up and down the stairs.
2. Caution shall be exercised when walking around blind corners, walk to the right side of hallways and corridors when turning corners. Open doors cautiously to prevent hitting someone who may be on the other side.
3. Desk drawers and file cabinets shall be kept closed when not in use.
4. Only one drawer of a file cabinet shall be pulled out at a time.
5. Boxes, chairs, buckets, etc. shall not be used in place of ladders.
6. The floor shall be kept clear of tripping hazards such as telephone cords, electrical extension cords, paper cartons, etc.
7. Employees mopping or waxing floors shall place warning signs to alert co-workers of the potential for slippery floors. In addition, all liquid spills shall be cleaned up immediately and signs put in place until the hazard is alleviated.
8. Material shall be stored on shelves in a manner to prevent falling; heavy objects shall be placed on lower shelves.
9. Hallways and aisles shall be kept clear of obstructions.
10. All emergency exits, electrical panels, fire extinguishers, and emergency equipment shall be kept clear of all obstructions.
11. Solvents or other toxic substances shall be used only with adequate personal protection or in well-ventilated areas. Safety Data Sheets (SDS) should be accessible to all employees who are using these substances and can be found at the NBU Info net <https://nbuconnect.nbutexas.com/>
12. Employees shall not attempt to clean, oil or adjust any machine that is running. If the machine is not equipped with a starting switch that can be locked in the "off" position, it shall be disconnected from the power source.
13. Unsafe electrical cords, faulty equipment, or any other hazardous condition shall be reported and taken out of service until the repairs are completed.
14. Broken glass and other sharp objects shall not be placed in wastepaper containers.
15. Do not attempt to move heavy desks or equipment alone. Sufficient help should be available whenever desks or furniture needs to be relocated.





ERGONOMICS AWARENESS

Work Stations

Chairs should be easily adjustable and provide good lumbar support. If feet cannot rest firmly on the ground, a footrest may be provided. Chairs with a five-point base are recommended due to the stability that is provided.

Sufficient legroom must be allowed for seated operators.

Position the monitor directly in front of the operator. The operator's eyes should be level with the top of the screen. Viewing distance between the user's eyes and the screen should be approximately 16 to 22 inches.

The equipment or sources of light should be positioned so that glare or bright reflections on the display screen are minimized.

Adjust the height of the chair and/or keyboard so that the shoulder-elbow-arm angle is approximately 70-90 degrees.

Keyboard heights and placement should be adjustable. Use a cushioned palm rest if needed to keep user's hands and fingers in the same plane as the forearm and avoid resting wrists and forearms on sharp table edges.

Work surface heights should range from 23 to 28 inches for seated workstations. In addition, your work area should be well organized with routine operations within easy reach and easily accessible.

Document holders should be placed adjacent to and at the same height as the display screen.

Operators should adjust positions frequently and get up and move around to help avoid fatigue.

Lighting, Noise and Heat

Adequate but not excessive heat should be provided.

Windows should be equipped with adjustable blinds.

Use task lighting where extra illumination is required.

Noise above 85 to 90 decibels (dba) may be harmful to workers. When exposed to high noise levels, employees shall utilize hearing protection equipment to ensure proper working conditions.

Whenever possible, isolate noisy machines and equipment in a remote location.

Tailor work practices to prevent heat/cold-related disorders. Employees exposed to hot environments must know the appropriate medical steps to counteract potentially life threatening situations such as hypothermia, heat stroke, heat exhaustion, and heat cramps.

Materials Movement

Appropriate equipment should be readily available and used to eliminate or minimize the physical demands of the process on the people involved. Whenever possible, people should be engineered out of the flow of materials.

Where mechanical means cannot be used, seek assistance from another person in lifting heavy or

unwieldy objects.

Repetitive lifting tasks should be eliminated or minimized if possible. Tasks should be designed so that twisting while lifting or carrying is not required.

The area in which material movement tasks are performed should be designed for optimal materials handling. Footing should be comfortable and stable and should not be slippery or sticky. Space should be provided to insure adequate room to work. The work area should have adequate lighting and provide workers with clear sight lines.

Employees shall be taught the correct ways to lift, push or pull objects and to modify workloads to make moving objects safer.

Hand Work and Use of Tools

Activities should be performed keeping the elbows at right angles to the body and avoid bent wrists when using the arms to apply force. Also extreme inward or outward rotation of the arms and wrists should be avoided.

Minimize repetitive motion and the amount of force needed to perform work.

Analyze each job to ensure the correct tool is being used. Good tool design promotes efficiency and reduces cumulative trauma disorders.

Hand tool handles should be insulated against electricity, heat, and cold.

All surfaces with which arms, elbows, and other body parts are in contact should be rounded or padded to avoid mechanical contact stresses on the nerves.

Where workers use hand tools that vibrate, hazards may be reduced by decreasing exposure time or isolating equipment vibration.

TIPS FOR PREVENTING WORKPLACE VIOLENCE

1. Recognize signs that may precede violence in your co-workers or customers and report them to your supervisor. Be cautious when you deal with a person who:
 - a. Makes verbal threats on the job about getting “even” with co-workers or with your employer for disciplinary action or dismissal
 - b. Regularly threatens or intimidates others
 - c. Claims people are out to get him or her
 - d. Talks a lot about weapons-and may own them
 - e. Holds grudges
 - f. Blames others for problems or setbacks
 - g. Gets angry very easily and often
 - h. Is defensive when criticized
2. Report the following behavior to you supervisor:
 - a. A customer that becomes unusually angry with you because of perceived slow service, perceived poor product quality or lack of information
 - b. A customer who talks abusively when making a telephone complaint
 - c. A customer who threatens you or co-workers
3. Respond effectively to a threatening or violent situation:
 - a. Take all threats seriously.
 - b. Stay calm and be polite. Look the person in the eye and do not argue or threaten.
 - c. Address each customer with a friendly greeting when you are on the phone or meeting the customer in person.
 - d. Be courteous at all times.
 - e. Notify the police if you are frightened or use a warning signal to alert co-workers.
 - f. Remember Avoid-Deny-Defend in active shooter situations.
Avoid the attacker-**Deny** access to the attacker-**Defend** yourself against the attacker.
4. Protect yourself and co-workers on the job:
 - a. Keep security and police department numbers near your phone.
 - b. Know how to use an alarm or alert staff to possible danger.
 - c. Develop a “danger signal” you can use to alert others to possible danger.
 - d. Meet visitors in the lobby and escort them to your work area.
 - e. Report any unusual packages to appropriate personnel, do not open them.
 - f. Lock purses and personal belongings in a desk or locker.
 - g. Report signs of a break-in and missing items immediately.
5. Follow security policies and procedures:
 - a. Keep locked doors locked, do not prop them open.
 - b. Wear nametags or badges when in NBU facilities.
 - c. Do not share access cards or entry codes.
 - d. Do not allow non-employees (including ex-employees) to avoid sign-in and other visitor entry procedures
 - e. Do not engage in fistfights or other aggressive behavior at work.
 - f. Do not bring a weapon to work on your person, must be left in your car.
 - g. Do not drink or use drugs at work, or work under the influence.
 - h. Report all threats and security violations.



6. Take special precautions when working late or alone:
 - a. Inform someone that you are working late.
 - b. Lock the door to your work area if you are alone.
 - c. Work near a phone.
 - d. Work with lights on.
 - e. Avoid using dark stairways or halls.
 - f. If working with others, try to leave and walk to transportation together.
 - g. Have your car keys ready as you leave the building.
 - h. Check under and inside your car before unlocking it.
 - i. Lock your car as soon as you are seated in it.
 - j. Walk confidently and quickly to show that you know where you are going and what you are doing.
 - k. Try to run away from an attacker if possible.
 - l. Yell if you are being attacked to alert others.
 - m. Give an attacker money or jewelry on demand.

AGGRESSIVE ANIMAL AWARENESS

1. Any employees who may encounter an aggressive animal during the performance of their normal duties should exercise reasonable care to avoid contact, and follow the procedure below where practical.
2. Call animal control immediately if you contact an aggressive animal.
3. Clear the area of other people while waiting for animal control. Crowds may scare the animal and cause it to attack.
4. Call for the animal's owner or handler.
5. Do not run away unless you are certain of quickly reaching a place of safety.
6. Back away slowly while continuing to speak in a firm, calm voice.
7. Back against any available object to prevent an attack from the rear if more than one animal is present.
8. Do not back an animal into a corner, as this may cause it to attack.
9. Under no circumstances may animals be kept as pets on NBU property.
10. Care should be taken not to use excessive force in defending yourself against an aggressive animal.



**Remember safety is Everyone's Responsibility so
do it safe or don't do it at all.**