

Northwestern

Mobile Elevated Work
Platforms

Environmental Health and Safety

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I. Purpose

This program establishes a process for the safe operation of mobile elevated work platforms (MEWPs), such as scissor lifts, boom lifts, and other similar equipment. For the purposes of this program, “MEWP” also includes vehicle-mounted elevating and rotating aerial devices, such as extendable boom aerial devices and articulating boom aerial devices (e.g., bucket trucks).

II. Scope

This program applies to the operation of all MEWPs operated on Northwestern property by staff, faculty, students, or contractors.

III. Classifications

MEWPs are classified by group and type as follows:

A. Groups

- i. **Group A:** Lift moves vertically, but stays within the chassis or tipping lines (e.g., scissor lifts)
- ii. **Group B:** Lift moves beyond the machine’s chassis or tipping lines, such as wheels or outriggers (e.g., boom lifts)

B. Types

- i. **Type 1:** Can only travel with the platform in a stowed position
- ii. **Type 2:** Can travel while elevated, and is controlled from the chassis
- iii. **Type 3:** Can travel while elevated, and is controlled from the platform

IV. Responsibilities

A. Environmental Health and Safety (EHS)

- i. Review and revise this program to reflect changes in regulatory requirements as necessary.
- ii. Provide consultation and guidance when necessary.

B. Departments and Units

- i. Ensure operators and supervisors who directly supervise operators attend all required training.
- ii. Protect MEWPs from unauthorized use. Keep keys in a secure location and only issue to trained and authorized operators.
- iii. Maintain documentation and records as required in **Section XI**.
- iv. Remove equipment from service when the operator, supervisor, or other qualified person identify any condition that makes the unit unsafe to operate during inspection, maintenance, or operation.
- v. Ensure operators are properly inspecting and safely operating the equipment.
- vi. Provide appropriate fall protection equipment to operators and occupants as required by this program and the manufacturer.
- vii. Ensure MEWPs are inspected and maintained in accordance with **Section IX**.
- viii. Ensure MEWPs are registered with the manufacturer to ensure receipt of any safety-related bulletins.
- ix. Comply with all safety-related bulletins from the manufacturer, and communicate them to the operators.

- x. Use reasonable diligence and make every effort to avoid contractor or other outside entity use of University-owned MEWPs. If contractors or other outside entities will be operating a University-owned MEWP, contact EHS for approval.
- xi. Contact EHS to evaluate any safety concerns, or as specified in this program.

C. Operators

- i. Attend all training and evaluation prior to operating any MEWP.
- ii. Operate only those MEWPs for which they are authorized, trained, and familiar with.
- iii. Must be physically and mentally capable of operating MEWPs.
- iv. Trained and authorized theater students may only operate a MEWP under the supervision of a trained staff member.
- v. Complete a [pre-use inspection checklist](#) and [risk assessment and rescue plan](#) prior to operation, and submit to supervisor.
- vi. Immediately cease operations when any problems, hazardous conditions, or malfunctions arise. Operations may only continue after all issues have been corrected.
- vii. Report all maintenance issues, accidents, or unsafe practices to your manager or supervisor.
- viii. Ensure all safety and manufacturer guidelines and instructions are followed.
- ix. Inspect fall protection equipment prior to use, and wear personal fall protection equipment as required by this program and the MEWP manufacturer.
- x. If an untrained occupant accompanies the operator in the MEWP, the operator must provide instructions to the occupant to ensure he/she has a basic level of knowledge to work safely on the MEWP. The occupant must be taught how to operate the MEWP controls, in case of an emergency where the operator becomes incapacitated. This only gives the occupant the authority to operate the MEWP in an emergency. Refer to the [MEWP Guidelines for Occupants](#).

V. General Requirements

- A. Only trained and authorized personnel are allowed to operate and/or occupy a MEWP.
- B. MEWPs must always be operated, transported, loaded, and unloaded in accordance with this program and the manufacturer's guidelines and limitations.
- C. Modifications or additions to MEWPs must be approved in writing by the manufacturer. If the manufacturer no longer exists, modifications to a MEWP must be made under the direction of an engineer with expertise in MEWPs.
- D. Barricade MEWP work areas when necessary to keep unauthorized individuals from entering the work area.
- E. Operators must yield the right-of-way to workers and pedestrians, and all vehicular traffic.
- F. Supervisors, operators, and occupants must be aware of the tasks, hazards, hazard control measures, risk assessment, rescue plan, and manufacturer's operating guidelines prior to use.
- G. A qualified person must be on-site who is not working on the platform and is familiar with the emergency controls.
- H. Prior to use of a specific MEWP model, the operator must familiarize themselves with the equipment by reading, understanding, and following the manufacturer's operator's manual to:

- i. Identify and understand the purpose and function of the controls specific to the model of MEWP to be used.
 - ii. Identify and understand the features, limitations, and safety devices specific to the model of MEWP to be used.
 - iii. Identify and understand the operating characteristics specific to the model of the MEWP.
- I. Park MEWPs in secure and/or designated areas that do not block doorways, egress routes, or safety equipment.
- J. Always remove keys when not in use; equipment that is beyond the vision or more than 25 feet from the operator is considered unattended and should have the keys removed and be in the proper parked position.
- K. Do not leave MEWPs unattended in the elevated position, unless approved by the manufacturer.
- L. When operating near unprotected edges, such as loading docks and theater stages, always maintain as much distance from the edge as possible, and use a ground spotter when moving/positioning the MEWP.

VI. Pre-use Inspection, Risk Assessment, and Rescue Plan

- A. Complete the [pre-use inspection checklist](#) and [risk assessment and rescue plan](#) prior to operating any MEWP (i.e., at the beginning of every work shift and whenever a new authorized operator takes control of the MEWP).
- B. Adhere to the manufacturer's guidelines for additional pre-use inspection criteria, if applicable.
- C. Risk assessments and rescue plans must be communicated to all affected parties (e.g., MEWP occupants, other workers in the area).
- D. Completed pre-use checklist, risk assessment, and rescue plan must be submitted to the departmental supervisor.
- E. Other pre-use inspection checklists, risk assessments, and rescue plans may be used if they meet the requirements of this program.
- F. Any safety defects, impairments, damage, or malfunctions must be reported to supervisors, and the MEWP must be immediately removed from service and tagged with a label "Dangerous: Do Not Use" until repaired.

VII. Electrical Hazards

- A. All operators, occupants, tools, materials, equipment, and MEWPs must stay at least 10-feet away from all electrical power lines with voltages to ground 50kV or below at all times. For voltages to ground over 50kV, maintain a minimum 10-foot distance plus 4-inches for every 10kV over 50kV.
- B. Operators must maintain the appropriate Minimum Approach Distance (MAD) from energized conductors and apparatus, commensurate with the operators' qualifications.
- C. If work must occur within 10-feet of electrical power lines, consult a qualified person (e.g., Chief Electrician) and EHS to ensure appropriate safety measures are taken.
- D. Only specially trained, qualified, and authorized high-voltage personnel with approved PPE, tools, and equipment, and in approved, insulated MEWPs, are authorized to work within 10-feet of energized overhead power lines.

- E. Operator manuals and instruction plate(s) must indicate whether the MEWP is of the insulating type. Insulated MEWPs must be of the appropriate ANSI category for the work being performed (i.e., Category A, B, C, D, or E).

VIII. Fall Protection

A. Guardrails

- i. Guardrails are the primary means of fall protection for all MEWPs.
- ii. When additional fall protection is required by the manufacturer or this program, operators and occupants must adhere to all manufacturer guidelines.

B. Personal Fall Protection

- i. Personal fall arrest or fall restraint is required on all Group B MEWPs (i.e., 1b, 2b, 3b) at all times, as outlined in **Section III**.
- ii. Personal fall protection equipment must be:
 - a. Attached to the MEWP-designated anchor point,
 - b. Approved for use on a MEWP by the fall protection equipment manufacturer,
 - c. Approved for use by the MEWP manufacturer, and
 - d. Inspected for defects and damage prior to each.
- iii. Connecting personal fall protection equipment to adjacent poles, structures, guardrails, or equipment while working from a MEWP is prohibited.
- iv. Damaged or defective personal fall protection equipment must not be used and must be removed from service immediately.

C. Special Situations

- i. MEWPs are not specifically designed for mobile operation.
- ii. MEWPs are not specifically designed to transfer personnel from one level to another or for leaving the work platform. Exiting or entering a MEWP at heights may only be permitted when procedures from the manufacturer or a qualified person are developed that identify and address all the hazards (e.g., personal fall protection, movements of the MEWP, load changes, stability changes).
- iii. Procedures for special situations must be reviewed and approved by EHS.

IX. Maintenance

A. Inspections

i. Frequent Inspection

- a. Must be performed prior to placing a MEWP into service, if the MEWP has been out of service longer than three months, or if the environmental conditions require a shorter period.
- b. Must be made by a qualified person specific to the make and model of the MEWP. Inspection must include all items specified by the manufacturer for a frequent inspection.

ii. Annual Inspection

- a. Must be performed no later than 12 months from the date of the prior annual inspection.
- b. Must be made by a qualified person specific to the make and model of the MEWP. Inspection must include all items specified by the manufacturer for a frequent inspection and annual inspection.

- c. A label must be placed on the MEWP to identify the date and inspecting company of the most recent annual inspection.
 - iii. No MEWP may be placed back in service until all malfunctions and problems identified in the inspection have been corrected.
 - iv. All inspection records must include the inspection and tests performed, date of inspection, any deficiencies found, corrective actions accomplished, identification of the person(s) performing the inspections and repairs, and be maintained for at least 5 years.
- B. **Maintenance**
 - i. Adhere to the manufacturer's recommendations to establish a MEWP preventative maintenance program and take into account the environment of the work place and severity of use.
 - ii. Only authorized and qualified personnel can perform repairs on MEWPs.
 - iii. MEWP repairs must be conducted within a designated area for equipment or vehicle maintenance.
- C. **Electrical Tests**
 - i. Insulated MEWPs must be periodically electrically tested, at least every 12 months, to verify the dielectrics resistivity and to detect conductivity changes in its insulating sections.
 - ii. Qualification voltage and date of test must be provided on the identification plate(s).
 - iii. MEWPs must be removed from service until repaired or replaced in the event of a failed test.
- D. **Fueling and Charging Batteries**
 - i. Only trained and authorized personnel may fuel or charge batteries on MEWPs.
 - ii. Fueling and battery charging must take place in areas designated for those purposes.
 - iii. Wear protective clothing and PPE in accordance with the manufacturer's guidelines.

X. Training

- A. **Training**
 - i. Each employee must receive training and instruction specific to the MEWP type they will be operating (e.g., scissor, boom), and training must be successfully completed prior to the use of any MEWP.
 - ii. Theory instruction and hands-on demonstration and evaluation can be conducted by either a competent trainer in the department, equipment manufacturer, or a vendor who specializes in MEWP training.
 - iii. Training must meet the regulatory requirements in **Section XII**.
 - iv. Multiple training sessions are not required for an operator who operates two different manufacturers' models of a similar type of MEWP, so long as that employee successfully completed training on that specific type (e.g., scissor, boom). However, the trained and authorized operator is responsible for familiarizing themselves with the equipment prior to use, as outlined in **Section V**.
- B. **Re-training**
Re-training is required whenever:

- i. The operator's valid training period has expired (i.e., 3 years),
- ii. The operator is observed using the MEWP in an unsafe manner, or the performance of the operator has deteriorated,
- iii. Extended period of time with no MEWP operation,
- iv. Introduction of new or significantly different MEWP technology,
- v. The operator is involved in an accident or near-miss incident, or
- vi. A condition in the workplace changes that could affect the safe operation.

XI. Recordkeeping

- A. Departments and units are responsible for maintain the following records:
 - i. Supervisor and operator training documentation (i.e., person trained, person providing the training, date of training, type of MEWP trained on) for as long as the operator will be operating MEWPs.
 - ii. Completed MEWP pre-use inspection checklists, risk assessments, and rescue plans for all equipment subject to this program.
 - iii. All MEWP maintenance, inspection, and repair documentation.
 - iv. Service and parts manuals provided with each MEWP must be maintained for as long as the MEWP is in operation.
- B. Unless otherwise specified in this program, all records must be retained and made available for at least 5 years.

XII. Regulatory Authority

Northwestern and contractors will comply with the Occupational Safety and Health Administration's (OSHA) standards, American National Standards Institute (ANSI) standards, and any other applicable codes and standards, including:

[OSHA 29 CFR 1910.67 – Vehicle-Mounted Elevating and Rotating Work Platforms](#)

[OSHA 29 CFR 1910.333 – Selection and Use of Work Practices](#)

ANSI A92.2-2015 – Vehicle-Mounted Elevating and Rotating Aerial Devices

ANSI A92.22-2018 – Safe Use of Mobile Elevating Work Platforms (MEWPs)

ANSI A92.24-2018 – Training Requirements for the Use, Operation, Inspection, Testing, and Maintenance of Mobile Elevating Work Platforms (MEWPs)

XIII. Contact

For questions, contact Environmental Health and Safety at ehs@northwestern.edu.