NCWM Safety Program Toolbox

Keeping employees safe is a challenge faced by private companies and government agencies alike. Each organization is ultimately responsible for creating and maintaining its own safety program. This toolkit is an attempt to provide links to resources which will be useful to Weights & Measures organizations whether they are just beginning to establish their safety programs, or they have already spent years refining them.

The safety resources included in this toolkit represent just a small fraction of the vast amount of safety information available on the World Wide Web. Most of the information in the kit is provided by government resources such as OSHA, NIOSH, CDC, etc. In a few cases, toolkit links lead to safety blogs or information provided by individuals or companies who also sell safety products. These links are included for the information they contain, and in no way are an endorsement for or against the safety products themselves. Toolbox users are encouraged to exercise the same caution they would use whenever evaluating products available for sale on the internet.

To us the toolbox: *Scroll through the document or Click on any heading in the Table of Contents to find helpful links on desired topics*

Please contact the Safety Awareness Subcommittee if you find any links which do not work, or if you have suggestions for additional resources which can be added to the toolkit.

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(If you are brand-new to safety, we suggest you start with the first section on General Information.)

Suggestions for improvement? Please contact Safety Liaison Julie Quinn (julie.quinn@state.mn.us) to suggest new links or to report problems with existing links.

General Information on Creating and Managing a Safety Program

o   OSHA Safety and Health Program Management Guidelines
o   OSHA Small Business Handbook
o   OSHA Help For Employers
o   NCWM Newsletter Safety Articles

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Making the Economic Case for Safety

o [Work-related fatalities for cases inspected by Federal or State OSHA](#)
o [OSHA's $afety Pays Cost Estimator](#)
o [CDC's WISQARS™ (Web-based Injury Statistics Query and Reporting System)](#)
o [2016 NCWM Safety Survey](#)
o [2017 NCWM Safety Survey](#)
o [2018 NCWM Safety Survey](#)

Identifying Hazards
General Information

o [NIST EPO Safety Annex (document)](#)
o [The Safety Triangle Explained](#)
o [OSHA Safety and Health Topics Index](#)

Leading Indicators – Hazard Assessments and Pre-task Evaluations

o [OSHA On-Site Consultation](#)
o [OSHA Hazard Awareness Advisor](#)
o [OSHA Hazard Identification Training Tool Game](#)
o [NIST - Examination Procedure Outlines (EPOs)](#)
o [Safety Article: Don't Be a Statistic, Watch for Workplace Hazards](#)
o [Safety Article: Safety in Standard Operating Procedures](#)

Examples of pre-task evaluation forms

o [Pre-trip Hazard/Risk Analysis for Off-Site Visits by NIST OWM Staff](#)
o [Template for a Job Safety Analysis (JAS) for Meter Proving Using a Truck Mounted Prover](#)
o [Blank Job Safety Analysis (JSA) Template #1](#)
o [Blank Job Safety Analysis (JSA) Template #2](#)

Lagging Indicators – Incident (Injury, Property Damage, Near-Miss) Reports

o [What is an OSHA recordable incident?](#)
o [Investigating Accidents in the Work Place](#)
o [Example of a Near Miss-Reporting Form](#)

Examples of Common Hazards
The hazards listed below have been identified as major sources of lost time, days away, and fatal injuries in general industry and in the Weights & Measures field. The list cannot include all possible hazards which may be encountered in a given workplace; nor is it meant to substitute for actual workplace hazard identification and assessment. All toolkit users are ultimately responsible for conducting their own workplace hazard identification and assessment.

Top Days Away/Restricted Time (DART) Hazards from NCWM Safety Survey Results
Lifting/bending/twisting (Ergonomics)

o [UCTV Video on Spine Sparing Bending Lifting and Twisting](#)
o [OSHA Computer Work Stations Evaluation Checklist](#)
o [OSHA Computer Work Stations Purchasing Guide](#)

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Vehicle accidents

- [Insurance Institute for Highway Safety General Statistics by State](#)
- [National Safety Council Road Safety Page](#)
- [Operation Life Saver Rail Safety Education (safe driving around tracks)](#)
- [OSHA Guidelines for Employers to Reduce Motor Vehicle Crashes](#)
- [MNDOT On-Line Defensive Driver Training](#)
- [Safety Article: Defensive Driving](#)
- [Safety Article: Defensive Driving While Towing a Trailer](#)

Slips/trips/falls [(see OSHA Fatal Four below)](#)

OSHA Fatal Four

OSHA has identified the four hazard categories below as responsible for the majority of deaths in construction and general industries.

Slips/Trips/Falls

- [OSHA PowerPoint : Slips Trips Falls Identification and Prevention](#)
- [Government of Canada "If You Fall or Witness a Fall, Do You Know What to Do?"](#)
- [National Safety Council Slip Trip and Fall Prevention Training](#)
- [Slips Trips & Falls - The Fatal Half Inch - Training Video](#)
- [Safety Article: Climbing Tanker Trucks for Sampling or Inspection Purposes](#)

Struck By Hazards and Caught-In/Crushing/Pinching/Cutting Hazards

- [OSHA Construction Struck-by eTool](#)
- [Toolbox Talk: Struck-by and Caught-In Hazards](#)
- [Quizlet Self-Training Tools on Struck-By and Caught-In Hazards](#)
- [OSHA Machine Guarding eTool](#)

Electrical hazards

- [OSHA Big 4: Electrical Hazards](#)
- [OSHA Safety and Health Topics: Electrical](#)

ERTK Hazards/Hazard Communication Requirements

Most states require that employers offer initial Employee-Right-to-Know (ERTK) training and annual refresher training on the chemical, physical, radiation, and infectious disease hazards faced by their employees. The list below includes resources on some of the common hazards in each category which may be encountered in weights and measures work. The list cannot include all possible hazards which may be encountered in a given workplace; nor is it meant to substitute for actual workplace hazard identification and assessment. All toolkit users are ultimately responsible for conducting their own workplace hazard identification and assessment.

Chemical

Weights & Measures employees encounter a variety of chemicals in the lab, field, and even the office. Employers are required to identify the chemicals present in the work place; maintain a current library of safety data sheets on the

chemicals present; and train their employees about proper handling and storage, as well as methods of exposure and how to respond to an exposure.

General Chemicals

o   OSHA Hazard Communication Standard: Safety Data Sheets
o   OSHA Occupational Chemical Database
o   CDC-NIOSH Pocket Guide to Chemical Hazards
o   OSHA Chemical Hazards and Toxic Substances

THC (Cannabis) – Employees testing at cannabis locations may be exposed to THC, as well as pesticides, fertilizer, carbon monoxide, oxides of nitrogen, and other hazardous chemicals.

o   Growing Worker Safety Concerns in the Medical Marijuana Industry
o   5 Safety Issues with Cannabis Extraction
o   3M Technical Bulletin: Health Affects Associated with Indoor Marijuana Cultivation
o   Top 4 Food Safety Hazards for the Cannabis Industry
o   Colorado Marijuana Occupational Health Guidelines
o   Washington State: Cannabis Industry Safety & Health (Marijuana)

Lead – Lead is used for calibration seals, and for calibrating mass standards.

o   OSHA Safety and Health Topics - Lead
o   EPA - Lead
o   NIOSH Workplace Safety and Health Topics - Lead

Physical
Lone Worker

o   Canadian Centre for Occupational Health and Safety: OSH Answers→ Health and Safety Programs→ Working Alone – General

Noise

o   Safety Article: Save the Ears!

Weather

o   Free NIOSH/OSHA Heat Index App for Apple and Android Phones
o   Example of a Heat Stress Prevention Plan
o   Interactive National Weather Service Alerting for Government Workers

Operating Motorized Industrial Trucks (pallet jacks, forklifts and weight carts)

o   OSHA Powered Industrial Trucks (Forklift) eTool
o   OSHA Safety Topic: Powered Industrial Trucks
o   Safety Article: OSHA's Powered Industrial Truck Standard

Lock out/tag out (release of stored energy)

o   OSHA LOTO Plus Expert Advisor
o   OSHA Lockout-Tagout Interactive Training Program

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Operating Cranes and Hoists

o   [OSHA Safety Topic: Crane, Derrick and Hoist Safety](#)

Confined spaces (engulfed and exposure to hazardous vapors or low oxygen)

o   [OSHA Safety Topic: Confined Space Safety](#)
o   [OSHA Confined Spaces Advisor](#)

Respiratory hazards – Respiratory hazards such as dust, pesticides, fertilizer, etc. can be present in both field and laboratory settings.

o   [OSHA Respiratory Protection eTool](#)
o   [3M Guide for Creating a Respiratory Protection Program](#)

Armed intruder

o   [Preparing Employees for an Active Shooter Event](#)
o   [Dept. of Homeland Security Active Shooter Preparedness](#)

Fire

o   [National Fire Protection Association Codes and Standards](#)

Radiation

Non-ionizing Radiation – Field workers will usually be exposed to large amounts of Sunlight

o   [Shining a Light on Sun Safety in the Workplace](#)
o   [CDC: Sun Safety Tips for Employers](#)
o   [Australia: Skin Cancer & Outdoor Work - A Guide for Employers](#)

Ionizing Radiation– lab employees may work with x-ray instruments such as sulfur analyzer

o   [OSHA Safety and Health Topics: Ionizing Radiation](#)
o   [OSHA Safety and Health Topics: Radiation](#)

Infectious Diseases

Food-borne pathogens – Package Checking may expose employees to food-borne pathogens such as listeria and e-coli, etc.

o   [OSHA Safety and Health Topics: Foodborne Disease](#)
o   [FDA Retail Food Protection: Employee Health and Personal Hygiene Handbook](#)

Common Contagious Diseases – Employees may be exposed to common contagious diseases through their co-workers or contact with the public.

o   [Managing the Risk of Infectious Diseases in the Workplace](#)
o   [Infectious Disease Control in the Workplace](#)

Addressing Hazards

o   [NIOSH HIERARCHY OF CONTROLS](#)
o   [OSHA Hazard Prevention and Control](#)

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- OSHA e-Tool to Create Your Own Emergency Action Plan (EAP)
- OSHA e-HASP Software for Creating Site Specific Health and Safety Plans

Training

Funding Training

- Susan Harwood Training Grant Program
- NCWM Associate Membership Committee Training Funds Application

Maintaining Training Records (checklists and templates for keeping training records)

- Example of a Training Plan Grid
- OSHA Record Keeping Advisor

General Training

For topic-specific training resources, please see the ERTK hazards listed above.

- National Safety Council Free Materials
- Compilation of the 5 Canadian Prevent_It_Videos

Coordination and Communication on Multi-Employer Work Sites

- OSHA's Multi-employer Citation Policy: Who is Citable?
- Example of Safety Policy Covering off-site workers and contractors coming onto your site

Program Evaluation & Improvement

Tracking Program Performance

- US Dept. of Labor: Incidence Rate Calculator and Comparison Tool
- EMR Ratings
- How Your Experience Modification Rate (EMR) is Calculated and How it Affects Your Bottom Line (YouTube Video)
- OSHA Challenge (A Cooperative Improvement Program)
- Minnesota Safety Council Safety Program Evaluation Scorecard
- OSHA Clarification on Effect of Business Size on Incident Rates

Employee Safety Performance & Improvement

- Example of Annual Employee Review Form Which Includes Safety Performance
- Example of safety duties for job description of lab, office or field staff
- Example of safety duties for job description of supervisor or manager
- Example of safety duties for job description of agency director or CEO

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