



# WAREHOUSE SAFETY

OSHA NATIONAL EMPHASIS PROGRAM



Warehouse Safety & OSHA National Emphasis Program

# AGENDA

## Topics we will cover in today's training:

1. OSHA NEP Programs
2. NEP – Warehousing and Distribution Center Operations
3. Frequent Injury Hazard Categories & Prevention
4. Hazard Identification and Risk Assessment



Warehouse Safety & OSHA National Emphasis Program

# Introductions



**PETER KOCH**

Manager, Digital Media  
Technology, WCP®



**RANDY MOREHOUSE**

Safety Management  
Consultant,  
CSP, WCP®



**DOUG DEAN**

Safety Management  
Consultant,  
PE, CSP, CIH, CHMM®





# OSHA NEP PROGRAMS



# What is a National Emphasis Program or NEP?

## OSHA Directives

OSHA Directives  
(various types)



CPL Directive:  
Enforcement and  
Compliance



CPL 03-00-026:  
Warehousing  
and Distribution

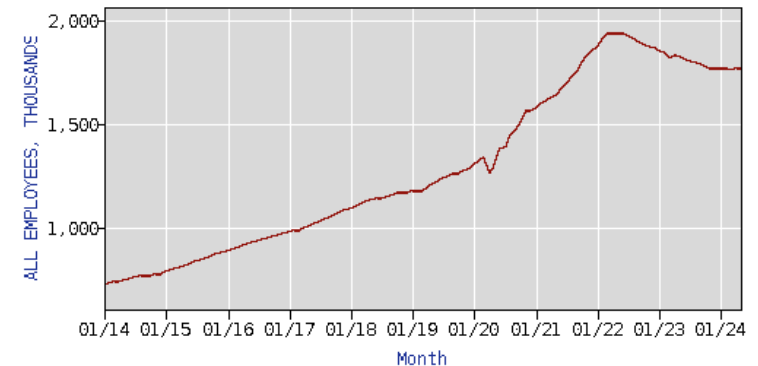


# Why is NEP for Warehousing-Distribution Needed?

- Warehousing-Distribution Centers have experienced a surge in employment:
  - January 2011: 668,900
  - December 2021: 1,713,900
- Five-year average incidence rates for non-fatal injuries-illnesses and average Days Away-Restricted-Transferred (DART) rates (2017-2021) significantly higher than industry baseline
  - Various NAICS Codes typically double

## Growth in Warehousing-Storage Sector: 10 Years

Data Type: ALL EMPLOYEES, THOUSANDS



Industry	NAISC Code	Recordable Case Rates	Total DART Rates
All Private Industry	--	2.76	1.6
General Warehousing and Storage	493110	5.18	4.06



# Purpose of NEP for Warehousing-Distribution

- Identify and reduce or eliminate hazards during warehousing and distribution center operations.
- Common hazards of concern:
  - Powered industrial trucks,
  - Material handling and storage,
  - Walking-working surfaces,
  - Means of egress, and
  - Fire protection and emergency planning.
- OSHA will also conduct a “screening” of occupational heat exposure and ergonomic hazards based on:
  - Injury and illness records
  - Employee interviews
  - Facility walkthrough, “plain view” observations



# Relevant OSHA Standards

## Standards Applicable to Warehousing-Distribution Operations

- **Specifically referenced in the NEP:**

- 29 CFR Part 1904, Recording and Reporting Occupational Injuries and Illnesses
- 29 CFR Part 1910, Subpart D, Walking-Working Surfaces
- 29 CFR Part 1910, Subpart E, Exit Routes and Emergency Planning
- 29 CFR Part 1910, Subpart I, Personal Protective Equipment
- 29 CFR Part 1910, Subpart L, Fire Protection
- 29 CFR Part 1910, Subpart N, Materials Handling and Storage

- **Not referenced but also very relevant:**

- 29 CFR Part 1910, Subpart G, Occupational Health and Environmental Control
- 29 CFR Part 1910, Subpart K, Medical and First Aid
- 29 CFR Part 1910, Subpart S, Electrical
- 29 CFR Part 1910, Subpart Z, Toxic and Hazardous Substances





# NEP-Targeted Industries

## Warehouses and Distribution Centers

NAICS	Establishment
491110	Postal Service (Processing-Distribution)
492110	Couriers and Express Delivery Services
492210	Local Messengers and Local Delivery
493110	General Warehousing and Storage
493120	Refrigerated Warehousing and Storage
493130	Farm Product Warehousing and Storage
493190	Other Warehousing and Storage

## High Injury Rate Retail Establishments

NAICS	Retail Establishments
444110	Home Centers
444130	Hardware Stores
444190	Other Building Material Dealers
445110	Supermarkets and Grocery Stores
452311	Warehouse Clubs and Supercenters

NAICS – North American Industry Classification System



# Site Selection and Inspection Scheduling

- **Site Selection— “Neutral and Objective Selection Criteria”**
  - List of industries in “Warehouse-Distribution” NAICS codes
    - Developed for each Area Office jurisdiction using “ListGen”
    - Establishment list is generated by type in random number order
  - List of industries in “Retail Establishments” NAICS codes
    - Separate list for each Area Office based on injury reporting data
- **Inspection Scheduling**
  - Each Area Office can establish a “cycle time”
  - Deletions—The Area Office must review lists and delete establishments known to be out of business, or not included on the high hazard retail establishment list, or otherwise not included in the NEP scope



# NEP Outreach and Review

## Outreach

Each Regional Office and Area Office must implement a 90-day Outreach Program

- ⇒ Directly and indirectly
- ⇒ OSHA encourages use of <https://www.osha.gov/warehousing>





# Frequent Injury Hazard Categories & Prevention



# Top Warehouse Hazard Categories

1

WALKING  
WORKING  
SURFACES

2

POWERED  
INDUSTRIAL  
TRUCKS

3

MATERIAL  
HANDLING





# Walking Working Surfaces

Falls to the same level



Falls from elevated surfaces



# S.A.F.E.

**Surface:** Condition of work surface and housekeeping

**Awareness:** Perception of risk, situational awareness, visibility

**Footwear:** Selection and condition

**Environment:** Weather, temperature, precipitation, pace of work



# Surface



Clean and free of obstructions



Clearly marked aisles and walkways





# Awareness!

- ✓ Look for obstacles
- ✓ Watch for moving equipment
- ✓ Keep your field of view unobstructed
- ✓ Don't walk backwards while talking



# Footwear

Monitor Footwear  
Condition

Replace When Worn







# Powered Industrial Trucks

(Forklifts, lifts, Powered Pallet Jacks)



# Operating Hazard

**Tip-overs** (ramps, moving with raised load, unstable load, loading docks)

**Collisions** (pedestrian, equipment, racking, other forklifts)

**Falling items**

**Obstructed vision**



# Training



Is the required 3-year training up-to-date?



Are you training to check a box?

## CHECKLIST



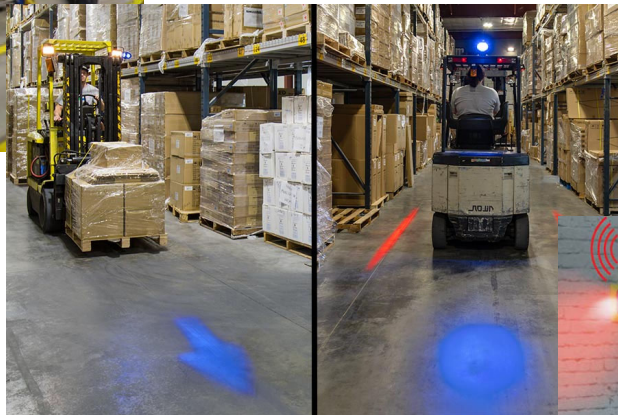
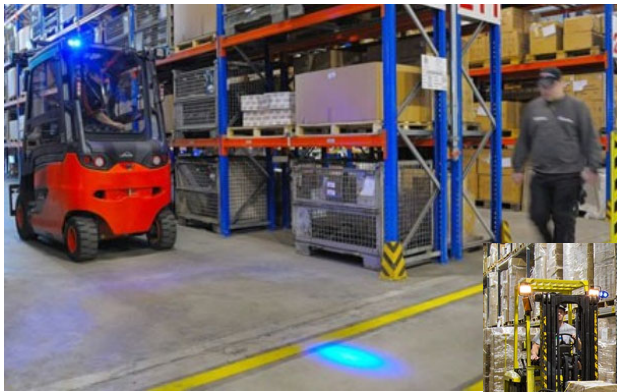
# 4 Basic Rules for Forklift Safety



- 1 Authorized Operations Only
- 2 Seat Belt Required
- 3 Nobody Under the Forks
- 4 No Riders or Horseplay



# Collison Avoidance Technology







# Manual Material Handling



# Warehouse Work

Warehousing work poses many physical risks including:

- Lifting and lowering
- Bending
- Reaching
- Pushing and pulling
- Awkward body postures
- Repetitive tasks



# Ergonomic Risk Factors

**Force**



**Frequency**



**Posture**

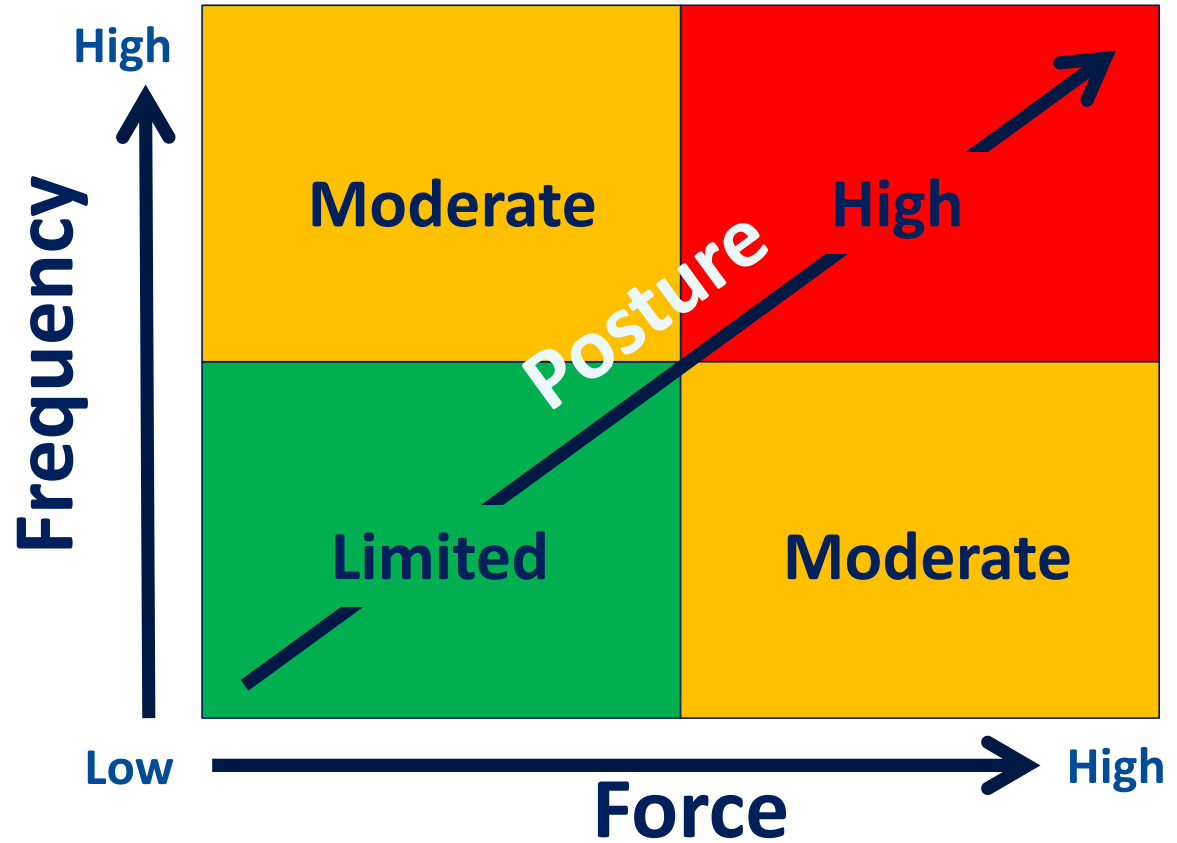


# Risk

How Much?

How Often?

How Long?





## Specific At-Risk Behaviors

---

### Back

Heavy load

Bending, twisting, etc.

Below waist / knee height

Extended reaching



# Specific At-Risk Behaviors

---

## Shoulder

Heavy load

Extended reaching

Elbows away from body

Hands at / above chest

Palm down with arm raised



# Use Equipment





# Hazard Identification & Risk Assessment





# Hazard Assessment and Response

## Safety and Health Hazards

Safety hazards can arise from operations, equipment, work areas and facilities:

- Frequent inspection of these areas is essential in finding hazards where they exist
- Condition of equipment, walking surfaces, *etc.* is important
- How work is performed in these areas can also be hazardous:
  - Poor housekeeping,
  - Failure to follow prescribed safe work methods,
  - Failure to wear appropriate PPE,
  - Horseplay, *etc.*



# Hazard Identification

OSHA's Recommended Hazard Identification Approach



**slido**

Please download and install the Slido app on all computers you use



**What safety and health hazards have you encountered in the warehouse environment?**

① Start presenting to display the poll results on this slide.

# Hazard Identification Methods:

## Points to Ponder

- Are the hazard identification processes pro-active and ongoing?
- Do the processes address both normal and abnormal situations, including emergencies?
- Do the processes address new hazards from changes to the organization?
- Have the legal requirements governing the hazards been addressed?



# Hazard Prioritization: Risk Assessment

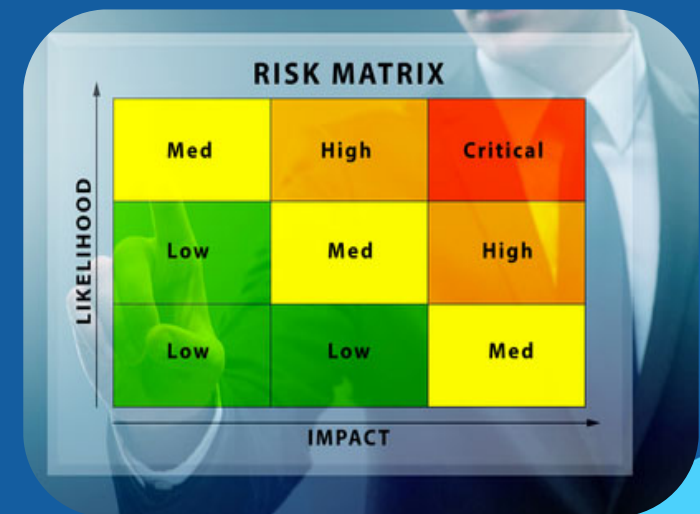
Risk = (Likelihood of Occurrence) x (Severity of Impact)

## Frequency:

- Daily? Weekly? Hardly ever?
- “Near-miss” observations helpful here

## Severity:

- **LOW:** Hazard will not result in serious injury or illness
- **MEDIUM:** Hazard could cause injury, illness but effects would not be serious
- **HIGH:** Can result in serious injury or illness
- **CRITICAL:** Can cause permanent injury or fatality

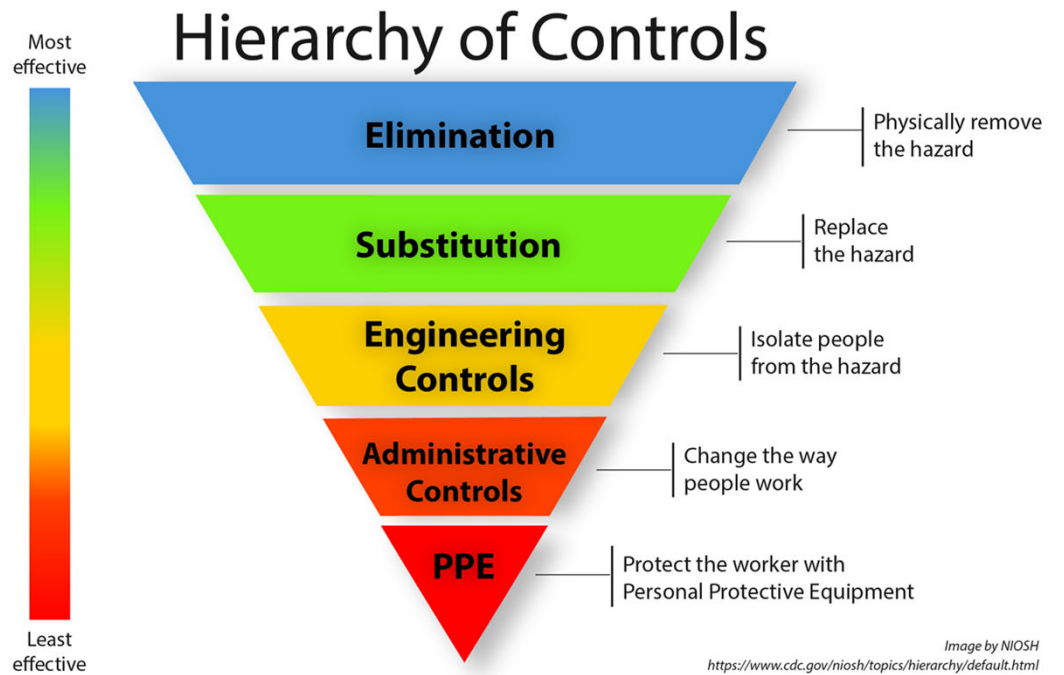


# Risk Assessment: Methods

- Goal: Identify *root causes* to address
- Basic risk assessment facilitation methods:
  - Flowcharts, check sheets, routine observation and judgment based on company-defined criteria
  - Good opportunity for safety committee engagement
- What If?
- Failure Mode and Effects Analysis (FMEA)
- Hazard Operability Analysis (HAZOP)



# Risk Control Methods



# Risk Assessment and Control: Action Plans

- Actions taken to address significant risks or safety improvements should be documented
- Action Plans should address:
  - What will be done
  - What resources will be required
  - Who will be responsible
  - When it will be completed
  - How results will be evaluated.





Warehouse Safety & OSHA National Emphasis Program

# SUMMARY

- Warehouse and Distribution Operations present a board range of hazards.
- Injury rates indicate that these hazards present risks that are not being adequately controlled; therefore, OSHA will focus on this issue through its NEP
- Industries facing increased scrutiny should ensure they are providing adequate controls to protect its workers by:
  - Establishing pro-active processes to identify hazards,
  - Prioritizing hazards based on risk,
  - Implementing risk controls using the hierarchy of controls, and
  - Evaluating the effectiveness of controls, making adjustments as needed.



# QUESTIONS?



**Thank you for  
attending!**

To download this and other webinars:  
<https://www.memmic.com/webinar-downloads>

You'll receive a follow-up email which will  
include:

- ? Responses to all unanswered questions
- 🔗 A link to this recording

**MEMIC**

