Objectives

- Overview of Risk Management in Schools
- Overview of top 5 most problematic Safety and Environmental Health areas:
  - Trips, Falls (JG)
  - Lighting Regulations and Assessments (JG)
  - Fall Protection (SL)
  - Hearing Conservation (SL)
  - Chemical Hazard Communication (EJ)

What is Risk Management in Schools?

- The process of planning and taking actions that will minimize the adverse effects of risk in the educational environment.
  - Student and staff injury.
  - Legal non-compliance.
- It means to anticipate, recognize, evaluate, and mitigate the potential hazards that could impair the health and well-being of the school community.
- Documentation of data and processes to assure continuity.
- Proactive, preventive process.
**Benefits of Risk Management**

- Protects staff and students from harm.
- Reduces potential losses in revenue.
- Safeguards the district's public reputation.
- Makes your students, teachers, and parents feel safe.
- Supports the continuity of quality education.
- Limits the possibility of lawsuits.

**Risk Management Process**

Starts with identification of hazard, also called Hazard Assessment.

**Step 1 & 2: ID and Assess Risk**

- Safety and Health Core Rules: Chapter 296-800 WAC
  Employer and employee responsibilities
- Employer responsibility: “Employer must establish, supervise, and enforce rules that lead to a safe and healthy work environment that are effective in practice.”
- Employee responsibilities: collaborate, coordinate, study, follow safety guidance, etc.
- Accident Prevention Program
- Job Hazard Analysis (JHA): “A qualified person must perform a job hazard analysis … to determine the safeguards and personal protective equipment that must be used for each job.” WCT/UP recorded training.
3. CONTROL RISK: HIERARCHY OF CONTROLS

Apply these controls to your level of exposure.

**Admin controls:**
- Reduce the frequency of a task.
- Increase efficiency of a task.
- Distance the worker from the hazard.
- Job rotation.
- Increase rest period after exhausting tasks.

**Safety & Health Areas / Subjects**
- Slips, trips and falls.
- Lifting heavy objects.
- Awkward positions, rotation, lifting above head, reaching.
- Repetitive motion.
- Extended standing.
- Dangerous machinery – cuts, scrapes.
- Electric safety, running cords, fans, water and electricity.
- Chemical safety.
- Etc.

- Crowded workspaces, blocking exits.
- Heat and burns.
- Fatigue and stress.
- Ladders.
- Fire safety.
- Walk-in freezers.
- Cleaning and disinfection.
- IAQ and exhaust system.
- Housekeeping.
- Etc.

**Slips, Trips, Falls**

In the last ten years, the PSWCT has experienced 4,897 slip, trip, and fall claims resulting in incurred costs of approximately $43 million. The average cost per claim is $8,905.

Nationwide, in 2020, 42,114 people died in falls at home and at work, according to the Centers for Disease Control (2022).
SLIPS, TRIPS, FALLS

Slips occur when there is not enough friction or traction between a person’s feet and the surface they are walking on.

Trips happen when a foot strikes an object, causing a person to lose their balance.

Falls occur when the body loses balance or is no longer supported and comes into contact with the ground.

An elevated fall is when someone falls from one level to another.

A same-level fall is when someone falls to the floor they are standing on or against a nearby object or wall.

REAL WORLD EXAMPLE

Slip:
Too little friction or traction between feet (footwear) and walking/working surface, resulting in loss of balance.

Possible Root Cause:
Improper chemical storage.

REAL WORLD EXAMPLE

Trip:
- Foot or lower leg hits object and upper body continues moving, resulting in loss of balance.
- Stepping down to lower surface and losing balance.

Possible Root Cause:
Improper housekeeping practices.
REAL WORLD EXAMPLE

Two types of Falls

• Fall at same level:
  Fall to same walking or working surface, or fall into or
  against objects above same surface

• Fall to lower level:
  Fall to level below walking or working surface

Possible Root Cause:
Improper use of tools and equipment.

SLIPS, TRIPS, FALLS:
PREVENTION METHODS

Footwear:
Non-slip options are encouraged for kitchen, maintenance
and grounds staff.

Housekeeping:
Reduce clutter and do not store items on the floor.

Training:
Equipment specific training, spatial awareness, use the
right tool for the job.

Equipment Inspection and Maintenance:
What is the maintenance request process?
Are employees trained to identify abnormalities of
equipment?

SLIPS, TRIPS, FALLS:
PREVENTION METHODS

Coefficient of Friction (CoF) for Footwear:
➤ Friction is the force that resists movement (slipping) of
  an object on a surface.
➤ The coefficient of friction gives insight to the
  relationship between materials in contact with one
  another.
➤ The CoF is expressed by a value between 0 and 1. The
  higher the CoF, the greater the resistance to slipping.

Regulatory standards are detailed in CSA Z195:
➤ Details requirements for static-dissipative footwear,
  with or without toe impact resistance.
➤ Defines requirements for slip-resistant footwear, with
  or without other protective features.
**ACTION ITEMS**

- Engage your staff to share their safety concerns and seek their input when developing solutions.
- Provide anti-fog wipes to employees who use eye or safety glasses to perform work.
- Update the Footwear Use Policy to require non-slip shoes for certain job tasks or work groups.
- Implement a Handrail Use Policy to require when a handrail is available on a step, incline or similar, it must be used to maintain three points of contact (two feet and one hand).
- If your hands are too full to use the handrail, use an alternate route such as an elevator or use a cart/dolly/backpack to carry your materials.

**LIGHTING REGULATIONS AND ASSESSMENTS**

- Foot-candle and lux are units of measurement for light intensity.
  - Foot-candle is used in the imperial measurement system, where lux is used in the metric system.
  - Foot-candle is the amount of light given by a standard candle (one lumen) over one square foot = 1 foot-candle.
- Most light meters can measure in both foot-candle and lux.
MINIMUM LIGHTING REQUIREMENTS
WAC 246-366-120

General, task and/or natural lighting may be used to maintain the minimum lighting intensities.

<table>
<thead>
<tr>
<th>Area</th>
<th>Minimum Foot-Candle Intensity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-instructional areas including: Auditoriums, lunchrooms, assembly rooms, corridors, stairs, storerooms, and toilet rooms.</td>
<td>10</td>
</tr>
<tr>
<td>Gymnasiums: Main and auxiliary spaces, shower rooms and locker rooms.</td>
<td>20</td>
</tr>
<tr>
<td>Kitchen areas including: Food storage and preparation rooms.</td>
<td>30</td>
</tr>
<tr>
<td>General instructional areas including: Study halls, lecture rooms and libraries.</td>
<td>30</td>
</tr>
<tr>
<td>Special instructional areas where safety is of prime consideration or fine detail work is done including: Sewing rooms, laboratories (includes chemical storage areas), shops, drafting rooms and art and craft rooms.</td>
<td>50</td>
</tr>
</tbody>
</table>

LIGHTING ASSESSMENTS

- Take measurements as close to the task or walking surface as possible.
- Note any natural light sources or lack thereof. Weather conditions may affect ambient lighting.
- Lighting may present a fire hazard due to heat transfer or electrical spark. LED lights produce minimal heat.
- Excessive brightness and glare shall be avoided to reduce eye strain.

EXIT LIGHTING

- Exit routes and emergency planning are covered in WAC 296-800-310 and CFR 1910.37.
- Each exit sign must be illuminated to a surface value of at least five foot-candles (54 lux).
- Provide at least two unobstructed access to exit routes of adequate size and location.
- Illuminate each exit route adequately and reliably.
  - Most exit lights have an internal battery for use when building power is interrupted.
PCB Lighting Sources & Health Effects

- Polychlorinated biphenyls (PCBs) used as a coolant or lubricant in electrical equipment, paint, and plastics, among other products.
- PCBs don’t break down easily in the environment and may remain there for very long periods of time. PCBs can contaminate air, soil, and water.
- Health risks of exposure include liver damage and skin irritation.
- Health effects can be passed from mother to child.
- Blood tests are used to confirm exposure.

Fluorescent Light Ballast Replacement Funding

- The Washington State Departments of Health and the State Department of Ecology are engaged in a program to find and replace old fluorescent lighting that could contain PCBs.
- They are offering reimbursement vouchers worth up to $10K to offset the costs of light fixture replacement and waste disposal in schools.

Apply for financial assistance here: [Fluorescent Light Ballast Replacement Application (wa.gov)]

Identification and Disposal of PCBs

- Use the PCB Information and Reference Fact Sheet to identify PCBs at home and work.
- Any FLBs manufactured before July 2, 1979, may contain PCBs.
- Any FLBs marked with the statement “This equipment contains PCB Capacitor(s).”
- Outsourcing the risk of PCB exposure is usually the most effective risk management strategy.
- Hire a contractor who is familiar with the removal and disposal of this hazardous chemical.
- Contents are typically destroyed by incineration or hazardous waste landfill burial.
THE "NEW" - UNIFIED STANDARDS FOR FALL PROTECTION

EFFECTIVE NOVEMBER 1, 2022

Why?
- Combined standards for new construction and defined post construction fall hazards.
- Provided clarity on when a fall protection plan is required and when it is not.

What changed?
- Included a provision when fall protection is required.
- Provided a handy Quick Reference Guide that explains common fall hazards and the threshold heights.
- Clarified language regarding when you can use the "safety watch system".
- Added clarifying language and scenarios on when you can apply the "fall protection exemption."

WHEN IS FALL PROTECTION NOT REQUIRED?
The "EXCEPTION"

- When work is performed 15 or more feet from the leading edge of the roof edge. (WAC 296-801-20005 (7)(f))
- Work must be infrequent and temporary.
- Fall protection work plan is not required.
- Work can be performed alone.
- This is different than the "Fall Protection Exemption."
SAFETY WATCH SYSTEM

What is the “Safety Watch System”?
- Can only be used on low-pitched or flat roofs.
- Must be a competent person?
- Can be utilized when work is performed infrequently or temporarily.
- Requires a fall protection work plan.
- Work must be performed six feet from the roof edge.
- This is not to be confused with the “Safety Monitoring System.”

Fall Protection Requirements for Low Pitch or Flat Roofs
(Non-Construction, Infrequent, and Temporary Work)

- **Green Zone**
  - 215 ft. from edge:
  - No Fall Protection Required
  - 15 ft.

- **Orange Zone**
  - 26 ft. < 15 ft. from edge:
  - Safety Watch System
  - 6 ft.

DO I NEED TO HAVE A “FALL PROTECTION WORK PLAN”?

- **YES.** The employer must develop and implement a written fall protection work plan including each work plan where fall hazards of 10 feet or more exist.
WHAT IS THE “FALL PROTECTION EXEMPTION”? 

- No fall protection required when installing or disassembling a fall protection system.
- When employees are inspecting, investigating, or accessing roof level conditions or work to be performed on low-pitched roofs.
- Only applies to low-pitched roofs.

![](exempt.png)

STILL THE SAME? 

- Fall protection required regardless of height and at four feet.
- Personal fall protection required when performing work within six feet of the leading edge.
- Personal fall protection required on steep-pitched (>4/12 pitch) roofs or dangerous slopes.

HEARING CONSERVATION

Onsite Audiogram Program
**HEARING CONSERVATION - ONSITE AUDIOGRAM PROGRAM UPDATE**

- All Trust districts are participating?
- Participation for Music/Shop Teachers is increasing!
- Additional testing appointments available for medium and large districts with approval.
- What about new hire employees and baseline testing?
- What do I need to do when an employee’s test results show a standard threshold shift?
- What are hearing protection audits?
- Are audiograms required or voluntary for employees?

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**CHEMICAL HAZARD COMMUNICATION**

Mandated by law for the past 40 years

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**WHERE ARE THE HAZCHEMS IN SCHOOLS?**

- Science laboratories.
- CTE technical education (woodwork, welding, 3D printing, aerospace, nursing, agricultural & veterinary programs).
- Art activities (photography, printing, painting, glass, pottery, glass etching, jewelry making, etc.).
- District maintenance & transportation.
- Custodial supplies.
- Health rooms.
- Food services.
- Offices (printers, copiers, laminators).
- Pools.
- Classrooms, early learning.
- Restrooms, lockers.
- Construction, renovation.
**What are the Hazards?**

- Unstable/Explosive
- Flammable or combustible
- Highly reactive (with water, air, organics, etc.)
- Toxic (acute and/or chronic toxicity; target organ toxins, carcinogens)
- Corrosives
- Irritants, sensitizers

Reference: WAC Chapter 296-828

**What can happen if HazChems are mismanaged?**

- Accidents: Burns, fire, inhalation of toxins.
- Long term chemical exposure & chronic illnesses.
- Aggravation of pre-existing health conditions.
- Damage to buildings, sewers and equipment.
- L&I non-compliance and associated COST.

**Look under the Sink**

- Flammables
- Toxins
- Irritants
- Elementary classroom
- Close to food
- Easily accessible
ACCIDENT: METHANOL BURN IN HIGH SCHOOL LAB

ART: POTTERY CLAY DUST AND HEAVY METALS EXPOSURE

WOOD SHOP DUST INHALATION, WOOD TREATMENTS & POTENTIAL DRY DUST EXPLOSION
DISTRICT MAINTENANCE SHOPS

Corrosive, irritant. Poison, extremely flammable, fine mist.

3D PRINTERS, COPIERS, LAMINATORS:
HAZARDOUS AIR EMISSIONS

CUSTODIAL SUPPLIES:
DANGER, CORROSIVES CAUSES IRREVERSIBLE DAMAGE
GOOD REPLACEMENT: CLEANING WITH LOW-HAZARD, NEUTRAL DETERGENT

Liquid / Dish Soap = Detergent
- Low Hazard
- Inexpensive
- Easy to Prepare

BASIC LEGAL REQUIREMENTS:

For Science Labs
- Chemical Hygiene Officer
- Chemical Hygiene Plan
- Inventories
- Labels
- Safety Data Sheets
- Training

HAZARD SPECIFIC
WAC 296-828

For Other HazChems
- Hazard Communication Program
- Inventories
- Labels
- Safety Data Sheets
- Training

HAZARD SPECIFIC
WAC 296-901

HAZARD COMMUNICATION PLAN MANDATORY
WAC 296-901

Inventory: Up to date
Labels: GHS compliant labels
SDS: GHS compliant Safety Data Sheets
Written: Program updated as needed.
Training: Specific
SAFETY EQUIPMENT AND PPE

- Emergency washing stations
- Ventilation
- Fire protection
- Spill kits
- Goggles, gloves, aprons
- Appropriate clothing
- First aid kit

GENERAL RULES FOR SAFE CHEMICAL USE

- Read up on hazards BEFORE purchase.
- Always choose the lowest hazard and smallest amount.
- Always minimize exposure by all routes (inhalation, skin, ingestion, injection).
- Have written safety procedures and train exposed employees.
- Always read the labels and the SDS first and follow the precautions.
- Have appropriate safety equipment and PPE.
- Properly dispose of the accumulated hazardous wastes.

TAKE-AWAY ACTION ITEMS

- List district departments and programs that use HazChems.
- Check the Chemical Hazard Communication Plan and update.
- Cleanout and proper disposal of hazardous wastes.
- Pre-plan purchases, reduce chemical stock.
- Mandate training for all employees who may be exposed to HazChems.
- PROACTIVE PLANNING: Are the room, the activity, the equipment, the training of staff, and the age of students a good match?
DOCUMENTING EH&S ON DISTRICT SHARED DRIVE

QUESTIONS?

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YN 0  [@Tif Litt] - Hi Ms. Tif! Can we please add the Tim Reeve flyer after this slide? Thank you!
    Yzabel Nelson, 2023-06-20T23:26:20.462

TL 0  Done :)
    Tif Litt, 2023-06-21T16:47:03.584
We appreciate your time and participation!

We invite you to complete the post-event survey.

Your feedback will inform our efforts to continually enhance the value of these events!