multi-line
Vermont School Boards Insurance Trust

Lithium-Ion Battery Risk Assessment & Preparedness Checklist

Lithium-ion batteries pose serious fire and safety risks if not properly handled, stored, or charged. Schools should store batteries in cool, ventilated areas away from flammables, never charge damaged batteries, and use only approved chargers - never overnight or unattended. Training staff and creating awareness around safe charging, storage, and handling is the best way to prevent incidents.

1. Inventory & Risk Identification

- Create an inventory of all lithium-ion battery types, sizes, and applications on-site
- Identify battery-powered tools, devices, vehicles (e.g., e-bikes, forklifts, laptops, UPS)
- Determine battery chemistries used (e.g., LCO, NMC, LFP)
- Classify usage risks (charging, discharging, storage, disposal, transport)
- Document historical incidents, near misses, or thermal events

2. Storage Safety

- Store batteries in a well-ventilated, dry, cool area away from flammable materials.
- Separate damaged or suspect batteries in a designated fire-resistant container
- Use UL-listed battery storage cabinets or rated fire containment systems
- Limit quantities stored based on fire code and insurer recommendations
- Prevent metal tools or conductive materials from contacting terminals

3. Charging Practices

- Use chargers approved by the battery/device manufacturer
- Prohibit overnight or unattended charging unless fire-rated charging stations are used
- Ensure charging stations are free of combustible materials and on non-combustible surfaces
- Regularly inspect charging cables and connections for wear or damage
- Do not charge batteries that are swollen, leaking, or damaged

4. Handling & Maintenance

- Train employees on safe handling, including PPE when appropriate
- Never crush, puncture, incinerate, or disassemble batteries
- Enforce regular inspection of lithium batteries and quarantine batteries that are swollen, leaking, or damaged in a lithium battery-safe storage pail, crate or containment system.
- Use carts or insulated containers when transporting large battery packs

5. Incident Preparedness

- Develop and practice a lithium battery-specific fire/emergency response plan
- Install appropriate fire suppression systems (e.g., CO_2, Class D, F-500EA FireBlanket, FireIce, CellBlockEX)
- Keep thermal run-away containment materials on hand near storage/charging areas
- Clearly post emergency contact and response instructions near battery areas
- Train ERT/Facilities in lithium battery fire response and safe extinguishing techniques

6. Disposal & Recycling

- Partner with certified e-waste or battery recycling services
- Ensure damaged/dead batteries are labeled and stored safely before disposal
- Never dispose of lithium batteries in general waste or recycling bins
- Maintain documentation of proper disposal for regulatory compliance

7. Compliance & Documentation

- Review applicable regulations (OSHA, NFPA 855, DOT, EPA, local fire code)
- Maintain SDSs for battery types used onsite
- Conduct regular safety audits and update risk assessments annually or after incidents
- Document training, inspections, maintenance, and incident reports

8. Training & Communication

- Provide annual training for employees handling batteries or equipment
- Post visual signage for charging, storage, and disposal best practices
- Educate staff on signs of battery failure (smoke, heat, odor, swelling)
- Include battery safety in onboarding for relevant job roles