

School District Injuries, Injury Rates and Loss Source Controls

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Introduction

School districts have a wide variety of exposures and types of injuries. School districts have a wide range of injury rates per 1,000 enrollments. To provide districts insured by Liberty Mutual with feedback on how their results compare to other districts we conducted a study to look at causes of injuries, injury rates per 1,000 enrollments and specific actions that school districts can take to help reduce the injury potential by implementing programs and exposure specific control measures.

We identified the school districts by using loss data for policyholders identified in the SIC (Standard Industrial Classification) 8211 elementary and secondary schools and NAICS (North American Industry Classification System) 611 Educational Services. Around 200 schools or school districts were identified. The district sizes ranged from just under 200 students to well over 10,000 students. The median size was close to 2,000 students. Public sources of information were used to obtain the enrollment data allowing us to calculate injury rates and verify the policyholders were school districts.

Enrolled students, was selected as the injury rate measure. This allowed us a common measure that would be more constant than payroll. There are some potential distortions due to the programs and maintenance outsourcing. Schools with larger special education programs may have more exposure to specials needs staff injuries. Schools that contract for food service or maintenance would have lower injury exposures. The benchmarks were not adjusted to take these distortions into account.

Over 3,000 injuries were reviewed. All of the injuries occurred in 2008. The loss data was valued as of May 1, 2009. Injury costs were reviewed and are shown in the average cost per injury. Injury cost benchmarks are not included due to varying state worker's compensation laws that may have higher incurred costs in one state than another.

The injury loss sources were classified by reviewing the text description of each injury. The activity the worker was engaged in when the injury occurred was used as the type. Some types/activities had sub types to provide additional details. These are shown in detail in the loss source section.

Management support and direction plays a critical role in injury prevention. Many of the injuries identified could have been avoided with the implementation of commonly used safety programs and practices. This report allows a school district to see how their injury rates compare to the study group of Liberty Mutual insured school districts, provides details on injury loss sources and suggested programs to help reduce the potential for school district employee injuries.

Injury Rates

Comparing injury rates from studies or selected data from Bureau of Labor Statistics (BLS) (see Tables 1 and 2) data provides an opportunity to compare your results to others. Measuring your injury rates also allows you to measure your progress over time. For injury rates to be valid they should provide a measure of exposure that does not vary between districts. Payroll, hours or student counts can be used. All of these will have some variations based on a school district's operations. The study and historical injury information showed some occupations had injury counts per worker.

The injury rate per 1,000 students is likely to vary based on some variables. For example if a district uses transportation (school busses) operated by employees they may have a slightly higher injury rate than districts that contract the bussing to a school bus service. The same would hold true for food service, building and grounds, heavier maintenance work and other service areas. Some caution should be used when comparing injury rates due to differences in the exposures at each school district.

Differences between school districts based on size were found in the study. The difference may be a function of exposure as discussed above but could be related to other factors.

Table 1. School District Study Injury Rates

	Injury Frequency per 1,000 Enrollment*	Injury Rate Range
All School Districts in Study	4.34	.73 to 27
1500 or less enrollment	4.16	.73 to 15
1501 or more enrollment	4.62	1.02 to 15

* Enrollment data obtained from public sources

Table 2. Bureau of Labor Statistics Injury Data 2007 Data for NAICS Code 611

	Total recordable cases	Cases with days away from work, job transfer, or restriction			Other recordable cases
		Total	Cases with days away from work	Cases with job transfer or restriction	
NAICS code 611	2.4	1.0	0.7	0.3	1.5

*Rates per 100 workers

Loss Sources

Using the text description of the injuries allowed a type/activity such as food service or custodial work to be used rather than an injury code that defines the nature of the injury such as strain, cut or burn. Most of the injuries involve a specific group of workers that are obvious. Some types such as Parking Lot Falls involve a mixture of occupations. Custodial work was determined by the nature of the work such as; activity set up, cleaning and light maintenance. Building Maintenance was heavier work and involved specialty trades such as plumbers, carpenters, etc. There is likely to be exposure to both activities with some workers. The main types are shown in Table 3 below. The main groups that had additional classifications to obtain more specific injury sources are identified in the sub type review column.

Table 3. Injury Loss Sources

Type/Activity	% of Injuries	% of Incurred Costs	Average Cost per Injury	Sub Type Review
Behavior Control	6%	5%	\$3,365	No
Building Maintenance	7%	8%	\$4,601	Yes
Class Room Injury	15%	17%	\$4,620	Yes
Crash	1%	2%	\$6,677	No
Custodial Work	9%	10%	\$4,682	Yes
Food Service	7%	5%	\$2,594	Yes
Handling Furniture or Equipment	3%	4%	\$5,006	No
Moving Supplies	3%	5%	\$6,054	No
Parking Area Fall	4%	4%	\$4,667	No
Ramps and Stairs Falls	3%	4%	\$4,329	No
Snow and Ice Falls	5%	9%	\$6,531	No
Special Needs Behavior	13%	9%	\$2,564	No
Major Types Totals	77%	82%	\$4,641	
Grand Total	100%	100%	\$3,949	

Building Maintenance

Building Maintenance included exterior work involving grounds maintenance and landscaping. This group also included vehicle maintenance. Some districts own and operate their own busses. Districts with vehicle maintenance may have a slightly higher injury rate but the overall impact of vehicle maintenance on the total injury rate is not likely to be significant (see Table 4).

Table 4. Building Maintenance Injury Details

Building Maintenance Sub Type	% of Injuries	% of Costs
Contact with Irritant	1%	7%
Falls from Building, Scaffolding or Ladders	13%	24%
Handling work materials	32%	28%
Power Equipment Injury	7%	5%
Snow removal	8%	11%
Vehicle maintenance	7%	5%
Work Area Falls	4%	14%
Major Types Totals	72%	95%
Grand Total	100%	100%

Classroom Injury

Classroom injuries were identified as injuries to teachers and other professional staff that were directly related to classroom activities (see Table 5). This group did not include injuries related to field trips or extracurricular activities that may have been part of a classroom program. Gym, shop, music and lab work were grouped with classroom injuries. Injuries involving “Jumped off Table” and “Standing on Chair” were typically where a worker had used a table or chair in place of a step stool or ladder.

Table 5. Classroom Injury

Classroom Injury Type	% of Injuries	% of Costs
Chair Tip Over, Collapse or Movement	8%	14%
Collision with Person	4%	2%
Falling Equipment or Supplies	5%	2%
Jumped off Table	1%	2%
Ladder use	1%	2%
Miscellaneous	10%	5%
Moving Equipment or Supplies in Room	5%	3%
Sports injury	23%	31%
Stage Fall or Incident	1%	6%
Standing on Chair	3%	1%
Trip and or Fall	23%	28%
Major Types Totals	86%	96%
Grand Total	100%	100%

Custodial Work

Custodial work involved a variety of activities. The activity the worker was engaged in at the time of the injury can identify specific tasks that should be examined for standard work practices and if workers were following them. There were a significant number of injuries that did not have a specific task or activity associated with the injury. These are classified as Miscellaneous in Table 6.

Table 6. Custodial Work

Custodial Type	% of Injuries	% of Costs
Moving Bleachers or Risers	3%	4%
Fall on Floors	1%	8%
Floor Scrubbers	10%	22%
Handling Trash	21%	21%
Miscellaneous	21%	19%
Mopping	5%	2%
Moving Tables or Desks	13%	9%
Repetitive Motion	2%	3%
Trip and Fall	5%	6%
Vacuuming	5%	2%
Major Types Totals	87%	95%
Grand Total	100%	100%

Food Service

The majority of the food service injuries provided details on what the worker was doing (see Table 7). The injuries provided a better understanding of the higher risk parts of the food service tasks.

Table 7. Food Service

Food Service Sub Type	% of Injuries	% of Costs
Dishwashing	2%	2%
Fall in Water or Spilled Food	12%	25%
Freezer Falls	2%	5%
Handling Products or Supplies	22%	35%
Knife Cuts	11%	2%
Miscellaneous	10%	5%
Moving Trays of Food	10%	7%
Trip and Fall	6%	10%
Major Types Totals	74%	91%
Grand Total	100%	100%

Loss Source Controls

The topics below are based on the major loss sources. Each district has unique operations and the exposures will vary. Not every section is applicable to your operations. Reviewing the items below and reviewing your safety programs and activities can provide you with opportunities to make strategic program improvements to help reduce the potential for employee injuries.

Management Support and Direction

When management provides support for the safety program by establishing expectations, measuring performance and allocating resources to address injury exposures they show support for the injury prevention process.

- Assign responsibility for the safety program and include safety in the job responsibilities for a management team member
- Measure injury rates and track changes year to year. Comparing the number of injuries per 1,000 students would allow you to measure schools within your district.
- Establish safety related goals at the district and school level. Goals should be based on past injury rates and exposures. Goals should be for injury rates and program improvements.
- Investigate injuries to determine root causes and take action to improve work practices or enforce policies. Injury investigation should be the responsibility of the top administrator at each building.
- Establish task expectations for jobs that involve use of equipment, handling of materials and exposure to falls. The process of establishing expectations should start with the most significant areas first, such as building and grounds or food service.
- Communicate job task expectations as part of initial training and as part of regular communications
- Assign responsibility for enforcing work practices to supervisors and administrators responsible for every location. Each district should have a district safety coordinator.

District Safety Coordinator Job Responsibilities

The district safety coordinator should coordinate and verify program elements are in place and policies are followed. Major areas that should be included in their responsibilities are:

- Perform scheduled walk through safety surveys of facilities and grounds.
- Coordinate and record chemical information for all materials stored and used in the facility and on the grounds.

- Supervise members of building and grounds department for adherence to site safety standards.
- Coordinate emergency response programs between the school and the general community.
 1. Schedule and maintain fire evacuation, tornado evacuation, and other evacuation records
 2. Verify monthly fire evacuation procedure and signaling action. (autodial system)
 3. Collaborate on policy and procedure development for the school district.
 4. Serve as a member of the school safety committee and make recommendations as needed.
 5. Prepare and maintain school safety and emergency response plans and coordinate review/revision at least bi annually.
 6. Distribute copies of school safety and emergency response to all school service emergency providers annually.
 7. Develop and revise as necessary blueprints and diagrams for emergency response providers. Including chemical storage sites, electric and water line locations and shutoffs, gas line locations and shutoffs, door evacuation locations and numbering, first aid and fire suppression equipment locations, and locations of any other safety related equipment used in the facility. Distribute to emergency service providers annually blueprints or diagrams with related information.
 8. Distribute quarterly to the police department student directory information including name, parent's name, and contact information.
 9. Coordinate emergency evacuation record keeping system and reporting of information to emergency service providers in the event of an emergency response episode.
 10. Coordinate door locking systems and responsibilities for locking doors.
 11. Coordinate employee training for all government mandated safety training.
 12. Insure compliance with government mandated safety standards.
 13. Perform routine walkthrough inspections of facilities including maintenance shops, industrial arts shops, art rooms, kitchens, locker rooms to insure adherence to safety standards.
 14. Perform or coordinate yearly training in emergency response for all district employees.
 15. Coordinate and develop budgets for school safety and emergency response.

16. Coordinate pesticide application and verify licenses of applicators doing service on school grounds.
17. Perform yearly safety audit in consultation with emergency service providers.
18. Perform yearly site safety student, parent, and employee review of procedures and concerns.
19. Maintain MSDS and chemical safety information as required by OSHA
Coordinate chemical disposal of unneeded or out of date chemicals. Maintain records of disposed materials and insure adherence to disposal requirements.
20. Recommend changes in safety systems and operations based on current industry knowledge and results of school safety reviews.
21. Coordinate with department chairs and school administration a review of educational delivery systems and information being delivered to student regarding safety topics. Recommend as necessary changes in safety related information being delivered to students.
22. Investigate job related safety issues and comply with insurance company recommendations regarding reduction in workforce injury rates.

Inside Falls

Preventing inside falls should be a combination of maintaining facilities in good condition, maintaining physical conditions that reduce the potential for falls and having policies that provide direction on behaviors that make falls less likely.

- Instruct school employees to use appropriate building entrances. Many slip and fall injuries occur when a teacher uses a side door since it is near their classroom. Snow/ice may not have been removed from this entrance as it has been at the main entrances and inside areas may not have walk off mats.
- Discourage teachers from wearing flip flops to school – especially when teachers come in to school during the summer months.
- Develop a policy where shop class teachers, art teachers, theater teachers, etc. require students to clean up at the end of class.
- Encourage teachers to report unsafe acts or conditions. Frayed carpets, broken equipment, broken shelving units, overloaded shelving units, etc.
- Keep corridors, foyers, and stairwells clear of stored items
- Have "Wet Floors" signs and clean up carts strategically stationed near entrances
- Verify stair treads and risers in good condition
- Develop and implement policies on spill notification and clean up

- Keep all floor coverings (e.g., rugs, mats, etc.) in place and verify they have non-slip surfaces
- Inspect and maintain floor surfaces in good repair and free of obstructions or hazards to traffic flow, such as loose or raised carpet edges, flaking or chipping concrete, missing floor tiles, broken stair edges, objects left on the surface, etc.
- Cover concrete floors with a resilient floor covering where Appropriate
- Use entrance way floor mats, with a non-slip surface and regularly change them during periods of inclement weather
- Inspect and maintain threshold plates and doorway features for defects

Classroom Injuries

Classroom injuries are shown in *Table 3. Classroom Injuries*. Some are directly related to instructional activities, however others are not. Classroom physical conditions should be evaluated to reduce hazards. Basic safety expectations should be established and communicated to help reduce injury exposures. Many of these injuries can be avoided by adopting practices that reduce the potential for injuries.

- Inspect chairs for defects and damage that can cause them to break or collapse
- Use 5 pointed base chairs to limit the potential for wheeled chairs tipping
- Limit storage to areas that can be reached without needing to stand on chairs or tables
- Prohibit hanging decorations, art work or other items that require climbing to hang (ask custodial staff to hang items if they are essential and can not be hung from floor level)
- Keep aisles clear of stored items including backpacks, boxes and other items that can contribute to trips and falls
- Keep storage areas neat and orderly to reduce the potential for items falling
- Ask the custodial staff to move furniture or larger items to reduce the potential for injuries
- Avoid high level storage areas that require reaching (instruct teachers where they can and cannot store materials)
- Install and use guarding on power equipment used in classrooms (Contact the manufacturer for proper guards and verify they are installed as intended by a qualified person)

- Provide and enforce the use of personal protective equipment (gloves, eye protection, etc.) as appropriate based on class rooms hazards (labs, industrial arts classes, some art room situations etc.)
- Establish policies on teacher participation in sports (as opposed to coaching, instructing, etc.) Athletic director should review with teachers/coaches what acceptable and unacceptable participation is.

Building and Grounds Maintenance

Schools may use one staff for building and grounds and custodial work. The injuries were divided into two groups based on the nature of the task. In larger districts separate groups may do more skilled work such as HVAC, electrical, plumbing etc. The injury controls are split out for custodial and buildings and grounds based on the injury analysis.

- Review work that is done above floor or ground level for fall exposures
- Develop plans to address fall exposures based on the work to be completed and system used to access the above floor or ground level work
- Establish and communicate expectations on complying with plans to address falls from above floor or ground levels
- Provide ladders or scaffolds that are appropriate for the type of work being done taking into account a method to get tools and or equipment to the work area
- Provide training as needed based on work assignments so workers understand what fall exposures exist and methods they are expected to use when working
- Inspect and maintain equipment including the following to ensure that equipment is in good condition and guards are in place
 - Ladders, step and platform
 - Ladders, extension
 - Scaffolding, tubular or steel
 - Personnel Lifts, hydraulic, pneumatic, electrical etc.
 - Lawn mowers, hand or ride-on
 - Snow blowers
 - Weed eaters
 - Floor buffing/washing machine
 - Vacuum cleaners
 - Shop vacuums, wet and dry
 - Brush cleaners

- Electrical appliances, fridge, stove, washing machine, kettle
- Power tools, drill, jigsaw, skill saw, etc.
- Extension cords
- Guards on all rotating shafts in boiler or fan rooms
- Guards for V belts on compressors and similar equipment
- Formal inspections for crane and hoisting equipment based on manufacturer's recommendations
- Electrical cords in good condition, e.g. no taping, ground pin missing, bare wires at plugs or other defects
- Personal protective equipment (eye protection, hard hats, hearing protection, etc.) needs identified and policies established to require use of PPE based on operations or exposures
- Railings and other fall protection measures are inspected to verify they are in place and in good condition

Custodial Work

There were a small number of activities in the custodial area that were responsible for the majority of the injuries. Some of the injuries involved occupations that were not shown as custodial. Some teachers and other staff were engaged in the same activities such as moving tables, handling trash. The controls such as work practices and training on the work practices would apply to any occupation that performs the tasks.

- Limit sizes of trash containers to reduce the potential for injuries from lifting and handling full containers
- Use mechanical aids such as carts to move bags or containers of trash longer distances
- Provide railings on platforms where trash is dumped from a dock into a dumpster
- Keep pathways to outside dumpsters clear, well lit and free of obstacles and surface defects
- Provide gloves that will protect worker's hands from cuts when containers may contain broken glass or other sharp objects
- Develop work practices to minimize the potential for strains that address proper lifting and not "throwing" bags or containers
- Provide training on proper use of floor cleaning equipment that includes manufacturer's instructions, chemical handlings and personal injury prevention

- Prohibit non-trained employees from using powered floor cleaning or scrubbing equipment
- Require use of appropriate footwear when workers will encounter wet or slippery surfaces
- Address mounting and dismounting of riding floor cleaning equipment
- Develop procedures for moving tables, desks and stacks of chairs
- Provide desk movers and other mechanical aids for moving stacks of chairs

Food Service

The main sources of food service area injuries were falls and injuries related to handling of products or supplies. Basic controls are:

Handling of supplies or product

- Handle supplies as few times as possible by having delivery workers stock shelves when possible
- Use wheeled containers for trash to reduce carrying them or tripping while dragging them
- Limit size of waste containers to weights that can be lifted when full and do not overload them
- Adopt a policy that carts and wheeled equipment should be pushed rather than pulled
- Use the largest wheel practical to minimize the effort needed to move wheeled equipment and carts and comply with load limits based on the cart manufacturers recommendations and weights that can be handled without overexposure to strains
- Adopt handling protocols that prohibit employees from blocking their view when moving carts, wheeled equipment or carrying supplies
- Secure shelves to the floor and or wall to reduce the potential for shelves falling when items are placed or retrieved
- Adopt policies on never climbing on shelves or racking
- Keep heavier items on shelves closer to waist height and store lighter items on the lower or upper levels of the shelves or racking system

Reducing fall exposures in food service and cafeteria areas

The following are ways to reduce falls in food service and cafeteria areas:

- Have and maintain a spill clean up cart in the food service area
- Adopt policies and designate responsibility for spill clean up to assure prompt clean up of spills

- Adopt policies on use of non-slip footwear in the food service areas
- Arrange storage and work areas to keep aisles clear of storage
- Adopt policies prohibiting use of improvised step stools such as buckets, boxes or other items to reach upper storage areas
- Provide wide step stools for access to upper shelves and racking areas. They should be limited in height and wide enough to provide support when handling supplies or products
- Keep drains and floor openings covered with secured covers to reduce the potential for trips
- Highlight any elevation changes such as steps
- Use non slip mats in areas where water or spilled material is routinely encountered or use non slip strips on the floor
- Keep freezers and walk in coolers free of ice and standing water

Other food service area injury exposures

Other injury exposures can be controlled by:

- Adopt policies on knife storage that keep knives stored in racks
- Prohibit leaving knives in sinks with soapy water with other kitchen utensils
- If knives drop, employees should step back and let them fall rather than trying to catch them
- Keep mixers and food processing equipment guarded with guards supplied by the manufacturer
- Prohibit removing, changing or tampering with guards
- Provide training for workers that use powered equipment based on the manufacturers' instructions
- Provide covers over control switches to reduce the potential for accidental starting
- Include powered equipment in the lock out program for repairs
- Adopt policies on loose clothing, jewelry, long sleeves etc to reduce the potential for employees being pulled into moving parts
- Unplug or lock out equipment prior to cleaning
- Provide internal opening devices for walk in units and verify they are in good working order on a regular basis

- Have protected lighting in walk in units and verify their operating condition during regular inspections

Moving Furniture and Equipment

Injuries associated with moving equipment and furniture most frequently involved the custodial or maintenance staff. Some were from other staff members moving things within their classroom or work area. When items are moved, material handling aids should be used and adequate personnel used to limit the handling and injury exposures.

- Have furniture and equipment moved by designated staff
- Use mechanical aids to limit the carrying of heavy items
- Workers moving items should not block their view and should clear travel paths prior to moving furniture or equipment

Equipment that can be useful in moving and handling furniture or equipment includes:

Desk Movers: Beneficial when moving desks between classrooms or when moving a large number of desks during the summer cleaning months.

Chair Movers: Operates on the same principle as the desk mover. It is possible to stack a number of chairs on the mover to facilitate easier handling.

Bleacher Pullers: A variety of pullers are available ranging from full-power systems to manual bleacher pullers.

- *Powered Truck Tailgates:* Can make it easier to load/unload items transported by truck between facilities.
- *Powered/Manual Pallet Jacks:* Can be used to move pallets of materials/supplies.
- *Hydraulic and Electric Hoists:* Can be used in areas where heavy equipment/materials are handled on a frequent basis.
- *Lightweight Wrestling Mats:* Lightweight wrestling mats are available weighing 30-40% less than conventional mats.
- *Bottom Drain Mop Buckets:* A mop bucket full of water can exceed 50 lbs. in weight. Bottom drain mop buckets can prevent an employee from having to lift the bucket to the sink to empty it. The buckets are drained at floor level by opening the bottom bucket drain when over a floor drain.
- *Storage Shelves/Racks:* Shelves/racks get supplies off of the floor to a height that facilitates easier loading/unloading.

- *Larger Wheels for Carts:* Larger diameter wheels will make carts easier to push/maneuver.
- *Roller Conveyors:* Used to move material from one area to another with minimal material handling.
- *Slip Resistant Overshoes:* There are overshoes equipped with non-skid grit type soles and are intended to be worn when working on slippery/wet/icy surfaces.
- *Salt Spreaders:* Push type lawn spreaders can be used for spreading salt evenly on sidewalks.
- *Power Brush/Sweeper:* Mounted to a riding lawn mower, a power brush can clean a sidewalk better than a conventional snow plow. Cleaning down to the bare pavement, the power brush can remove the thin layer of snow left behind when using a plow.
- *Lightweight Building Entrance Mats:* These mats are available to reduce the weight handled by custodians. Efficient entrance mats will reduce the amount of snow/water brought into the school, thereby reducing the slip and fall hazard.

Handling Supplies

These are some suggestions for handling supplies:

- Identify areas, departments, or services where materials are handled or back injuries have occurred
- Identify material handling requirements in each area and develop protocols for handling products in those areas
- Limit weights of products ordered taking into account such as bagged product that could be obtained in two 25 pound bags rather than one 50 pound bag
- Order products with hand holds in boxes or hand holds in bags when possible
- Provide and use mechanical devices to move stacks of boxes
- Arrange storage areas to keep heavier items closer to waist height and limit handling below knee and above shoulder height

Parking Area Falls

Parking area falls had a variety of causes. The most frequent were employees tripping on uneven surfaces, stepping into holes or tripping over obstructions. The basic controls for these injuries are:

- Encourage employees to use sidewalks and designated walks ways

- Conduct regular inspections of sidewalks and parking areas and provide repairs and maintenance as needed to keep surfaces free of defects and even
- Use curb cutouts in high traffic areas
- Provide exterior lighting at night and verify it provides adequate lighting to see surface areas
- Encourage the use of carts or other material handling aids when items being carried will obstruct an employee's view of where they are walking
- Check drain and other utility openings to verify they are even and secure as part of regular facility inspections
- Use highlighting paint that does not become slippery when wet to highlight speed bumps and curbs when highlighting paint is used
- Control access to areas under construction or renovation to limit access and control hazards such as mud and rocks that can move out of the construction areas

Ramps and Stairs

Falls on ramps and stairs were most frequently caused by physical conditions or footwear issues. Controls for inside falls would apply to stairs and ramps. In addition, regular inspections of treads and hand rails should take place:

- Inspect stair treads to verify they are in place and not worn
- Non-slip edges should be replaced when worn
- Hand rails should be secure and inspected on a regular basis

Snow and Ice

The potential for falls related to snow and ice exposures will vary by year. Controls should include a plan that is developed and implemented prior to the winter season. In addition to addressing snow and ice removal, policies on footwear, entranceway maintenance and traffic patterns should be included in the program.

- Develop an action plan that addresses snow/ice at building entrances, on sidewalks, parking lots, etc. The plan should include:
 - Guidelines when snow/ice must be removed (entrances and drop off areas first)
 - Designating a snow storage plan or area
 - Leveling snow piles to make them less attractive as a play area
 - Playground policy and no playing on snow piles
 - Use written contracts with snow removal contractors and have them reviewed by legal counsel
 - Obtain proof of insurance from snow removal contractors
 - Communicate snow removal plan so buildings and grounds staff understands their responsibilities
 - Include extra-circular activities in the snow removal time lines to address after hour and weekend activities

- Do preventative maintenance prior to the winter season
- Conduct equipment training prior to the winter season and have back up operators for snow removal equipment that are trained
- Provide regular communication to staff prior to and during the winter season regarding winter fall issues such as snow and ice safety, footwear, parking regulations etc.
- Verify each school and facility has snow removal equipment (shovels, sleet spreaders, salt etc.) and it is in good condition, with adequate quantities prior to the winter season.
- Mark hydrants, road edges etc with marking so plow drivers can identify them
- Clean drains and storm sewer covers in the fall so drainage is not obstructed
- Provide a designated contact for snow removal issues so buildings have a contact person
- Maintain daily logs showing exterior conditions and snow and or ice removal or treatments
- Require slip resistant footwear for staff that will be responsible for snow removal
- Establish and verify the public communication (web site posting, radio and TV) notification system prior to the winter season
- Use spot salting by building staff to address for trouble areas such as stop signs, curves, entrances, etc

Special Needs Behavior Control

Injuries reported for special needs behavior and behavior control issues did not have details that would allow patterns of incidents to be developed. The recommended controls are limited to the most commonly identified program areas of school districts we have worked with. Each area has separate program areas identified below:

Special Needs Behavior:

The following needs to be taken into account for those with special needs:

- Include behavioral issues in the individualized education plans
- Conduct incident investigations as soon after an incident occurs to identify patterns and causes
- Conduct debriefings with staff to review incidents and what was learned that can be used to prevent future incidents
- Adjust individualized education plans as needed to reflect issues identified in the incident investigations
- Develop and follow behavior management models

- Include input from others (family, social workers, teacher aides, etc) that know the student in the development of the behavior sections of the individualized education plans
- Use resources from school associations, universities and other sources when developing behavior management models
- Provide regular in-service training beyond the minimum required by law to address employee safety
- Provide management follow up to monitor compliance with programs and policies outlined in the training programs

Behavior Control

A behavior control model should include the following:

- Develop and follow a behavior management model
- Develop a core team of staff members with in-depth training that can serve as trainers for other staff members
- Develop, practice and follow emergency action plans
- Provide regular in-service training for dealing with behavior control issues
- Use verbal intervention when possible rather than physical intervention