



Front Line News

Special points of interest:

Win \$50.00—See page 4 for details.

- We're still looking for a name. We received many great suggestions from our last issue, but our focus group just was not sure if any of them fit well enough. So please keep submitting your entries.
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Outdoor Rinks

The old outdoor Community Rink is experiencing a resurgence in popularity. The ability to use the rink as a community focal point has found several old dilapidated rinks being reconstructed as modern Outdoor Community Centers which hosts a variety of year round activities.

The rink's typical use as an outdoor hockey arena has been greatly expanded to include numerous non ice spring, summer and fall activities. The enclosed flat concrete or asphalt surface acts as an excellent venue for in line and ball hockey, lacrosse, enclosed skateboard parks, volley ball, tennis and basketball courts, outdoor dances, and even a theater under the stars. In fact, the potential

uses for this outdoor secured facility are unlimited.

Some communities, recognizing the new found value of their Community Outdoor Rink are including concession and change room buildings, resurfacers sheds, fire pits, and portable bleachers. Even small refrigeration packages that assist Mother Nature in maintaining

good ice on warm days have been found in some of the outdoor rinks we have visited.

The key to your Outdoor Rink and focal point of an Outdoor Community Center is the Dasher Board System. It must be attractive, require limited maintenance, and be flexible enough to host different events while providing many years of service.



Outdoor Dasher Systems are unique. They must be built to resemble and perform like their indoor cousins, but will have to endure conditions that are far more difficult and extreme.

Because of the challenges facing construction of Outdoor Dasher Systems, they

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Hantavirus what you can do to protect yourself

Arenas are very seldom-rodent proof and even if they are well sealed against the little critters, doors left open are invitations for them to take up residents. So there you are at work having one of those days, you move a couple of boxes sitting on the floor next to the Zamboni and you see the evidence. The shredded cardboard, the small black dots on the floor are unmistakable clues that a creature other than yourself is in the building. Before you grab traps,

bait and broom you should read the following.

In 1993 in the southern United States a young healthy Navajo man died suddenly of a mysterious pulmonary illness. Investigation revealed that the man's fiancée and five otherwise healthy individuals in the same area had died recently of acute respiratory failure. In the Public Health world the unexplained deaths of healthy people, in the same area, exhibiting the same symptoms is cause for concern.

So the US Centre for Disease Control sent staff—microbiologists, doctors and the like to the Four Corners Indian Reserve in southern Utah. Their mission was to identify the problem and fix it. What they expected to find was viral pneumonia or bubonic plague. What they did find was a new virus and a small villain common all over North and South America. The virus latter named the Hanta Virus was a distant relative of the Ebola virus and the small villain was a common deer mouse.

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Project Update

Grande Prairie Canada Games Arena

The Crystal Centre in Grande Prairie is one of the latest facilities to receive a new dasher system from Maple Leaf Gold.

The Crystal Centre hosts many of the City's major events, and with limited time between events for replacement of the hockey boards, careful co-ordination of the design, manufacture, and installation process was required.

Immediately after the Black Eyed Peas Concert on July 18th the old dashers were removed and the facility prepared for the arrival of a new dasher system, which was specially designed to be more conversion friendly. The Installation Team arrived on July 25 and 5 days later the new dashers were in place.

Numerous features such as Quick Release Supports, Removable Sections, Concert Gates, Ice Dam, Quick Release Spectator Side Covers, and the Easy Adjust Gate System will make it much easier for the facility to convert between events. The Crystal Centre has an extremely busy schedule, and is now ready to host these events with rapid conversion from an ice rink to the WWE Smackdown, Rock Concerts, and back to a rink for the Grande Prairie Storm Junior Hockey.

So when your rink needs custom designed dashers and installation over a very short period of time, contact the experts at Maple Leaf Gold. You can rely on our product and experience to ensure your project is completed as scheduled.

Hantavirus what you can do to protect yourself

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Investigations suspected a connection between the mouse and the virus because the virus was present in all people and in 10% of the deer mice population. They also theorized the virus was passed from the mouse to the humans via inhalation of dust contaminated with mice urine and feces. Their original theories about the virus, its vector, and mode of transmission were confirmed by analysis of the data and laboratory testing.

The researchers also discovered that if you are infected, you will probably think you have the flu. The disease begins abruptly with fever, chills, muscle ache, headache, nausea and vomiting. After a short period you may feel somewhat better, but within a day or two you will experience a shortness of breath as fluid seeps into your lungs. The initial shortness of breath may be subtle, you may not even notice it but its progress is rapid. If the disease proceeds unabated you will begin to bleed internally and ultimately succumb to respiratory failure.

In the initial Four Corners outbreak approximately 80% of the people infected with the virus died. Since that time as our understanding of the virus

increased and more appropriate treatment methods were employed the fatality rate has dropped to around 50%. So that's the story and that pile of mouse poop looks probably a little more ominous. Before you run screaming from the building and check yourself into the hospital you should know that this disease appears very difficult to contract, and that there are some precautions you can take to prevent its occurrence. In the province of Alberta, with a population of three million people, its rural based economy and tens of thousands of man-mouse close encounters yearly there have been only 28 people diagnosed with Hanta virus in the last two decades. You prevent the spread of hanta virus by ridding your building of mice whether or not they are deer mice or not and cleaning mice contaminated sites. DO NOT under any circumstances sweep-up or vacuum-up mice droppings. DO when cleaning up droppings wear a mask, gloves, and eye protection. Spray the urine and droppings with a disinfectant or a mixture of bleach (1 part bleach to 10 parts water) and let soak for 5 minutes. Use a paper towel/rag to cleanup urine and droppings and dispose of the waste in the garbage. After disinfecting the immediate area of contamination

look for other evidence of contamination and treat those areas/items in a similar manner. Mop floors and clean countertops with disinfectant or bleach, shampoo carpets and furniture, and wash clothing and bedding. Last but not least, spray your gloves with disinfectant or bleach before removing them and then wash your hands. Now relax and go have a pop. You've earned it.



Article courtesy of the Westveiv Regional Health Authority.

Rink Floor Construction By Bryan Trusty

It has been this rink floor constructors' experience that the merits of good attention to all components within a refrigerated concrete floor system provide optimum value to end use owners.

Measurement of good construction is generally realized by the efficiency of operation and durability of the concrete slab for all ice or non ice use activity. To achieve this, qualified contractors need to be sourced.

Common questions asked of us for either aged or new floors identify lack of engineering, improper installation procedures, and inexperience of

application. All of which tend to provide poorly performing floors and likely higher energy costs to compensate for substandard construction.

Many tenders of new or retrofit facilities are issued in a manner to meet public tender rules. Unfortunately this may not provide good value for end use objectives. Without a screening or prequalification measures, the assurance of guaranteeing experienced contractors is overlooked in consideration of an "economical" solution.

Some consultants have begun to recognize the need for a separate division of construction within the design documents

clearly stating a prequalification of subcontractors. Understanding this, one of the major cities and their consultant recently pre tendered the refrigerated floor, dasher board system, and refrigerated plant to pre qualified firms. The city then selected the contractors (not the lowest bid) that met their objective. These contractors were named to tender document and the pricing carried by the general contractors bidding on the complete new facility package.

During the past few years the market has proven that not all new or retrofit floors have been successful. Most tender documents have provided specifications for arena floors with no limitation on bidding parties.

Many of these facilities have, unfortunately, had limited success in their construction.

We suggest that owners implement a selection process through the tender document, identifying a separate division for the rink floor. Submissions for pre tender approval or a separate tender for this division then reduce the risk to owners of utilizing non proven contractors on the project.

Good Luck to all in your upcoming construction projects.

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## The Dasher Board—Floor Interface By Art Sutherland

The safety of the skating public is dependant on a uniform, high quality ice surface over the entire skating area of an ice rink. By its nature, there will always be a potential for accidents to occur on an ice rink, but it is essential to minimize this potential with proper system design.

It is the dasher board area where a very high percentage of injuries take place. This is very often due to people simply loosing their footing while entering or exiting the ice pad. However a number of accidents are due to poor quality ice around the perimeter of the rink.

This poor quality ice can fall into a number of categories which we will review in the following paragraphs.

**Insufficient Ice Maintenance:**  
 When the ice is first put in, the dasher boards must be properly sealed to the refrigerated floor to prevent water from running out resulting in a dangerous ice drop off next to the boards.

It is normal for ice to become thicker in the corners due to the ice resurfacing process and thinner at the gates due to traffic. A regular edging and patching routine will keep

the ice levels where they should be. Most facilities will carry at least 1 1/4" of ice on a concrete floor and 2" on a sand floor.

**External Heat Load:**  
 In years gone by, the dasher boards were mostly made of wood and the skating seasons were shorter which resulted in far less problems associated with heat gain at the dasher boards. Now with the common use of highly conductive steel and aluminum boards combined with longer seasons, new problems have arisen as a result of heat gain entering the ice surface from the dasher boards.

An "Ice Dam" can be installed to minimize heat conducting from the dasher boards into the ice surface. An ice dam is a non-conducting buffer plate which slows down the heat transmission from the dasher boards to the refrigerated floor. It is approximately 1" thick and is installed directly underneath the dasher boards.

Occasionally if the dasher boards are in close proximity to an outside wall, they can be subjected to large amounts of radiant heat. It is always best to try to eliminate this heat at its source by providing better insulation in the exterior walls or through the installation of a low-

material on the wall. In some cases insulating inside the dasher boards will help reduce this problem.

**Design Problems:**  
 The incorrect interface of the boards and the refrigerated floor has caused many poor quality ice issues over the years. There are a number of methods used to mount the dasher boards around the ice surface.

The two major variations are either mounting the boards directly on the floating refrigerated slab or mounting the boards on a perimeter curb or warm deck.

Generally, mounting the boards directly on the refrigerated slab provides the best ice conditions as you are assured of sufficient cooling by the refrigeration which is directly under the boards.

In the case of mounting the boards on the warm deck, it is essential that special precautions are taken. It is advisable to allow the boards to overhang the ice surface as much as the board mountings will permit. It is important to have a perimeter cooling loop installed as close to the boards as possible. Special attention must be paid to placing the piping in the radius areas or poor quality ice will be the price you pay.

On a sand floor it is possible to move or add piping to correct a problem. It is much harder to rectify a design problem on a concrete floor. With great care and a lot of work it is possible to reduce the size of the boards in an effort to get them over the refrigerated floor piping grid. In some cases this is the only alternative to correct a soft ice problem.

The integrity of the board system is also dependant on the proper mounting of the dasher boards on the refrigerated surface or the warm deck. With the move towards higher tempered glass and support-less systems, there is a higher level of stress imposed on the mounting systems. Broken mounts have ruptured piping on many occasions.

For the safety of your patrons and the long life of your equipment, it is very important to have the refrigeration contractor and dasher board contractor working off the same page well before the project begins.

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At Maple Leaf Gold, we recognize that every facility is different.

Many years of experience in hundreds of varied installations allows us to offer innovative solutions for unique facility requirements. We custom design and build every Maple Leaf Gold dasher system to meet your facility needs.

Factory production, and highly trained installation and service technicians enable us to ensure high quality standards in both product and workmanship. We are committed to customer satisfaction.

Maple Leaf Gold invites you to contact us for assistance with questions, or the design and selection of your dasher system and low emissivity ceiling. Explore your options!



Outdoor Rinks

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were typically built from wood, and required extensive maintenance to keep in operational condition. Maintenance requirements would often overwhelm the local communities operating a rink, and the Dashers would deteriorate into an embarrassing and unsafe condition.

Direct exposure to sunlight, extreme variations in temperature, multiple uses, and limited supervision and maintenance place a heavy demand on the Dashers that only specialized design and construction can overcome. At Maple Leaf Gold we have spent years developing and refining our Outdoor Dasher System to withstand the abuse of the elements and players.

Many of the construction features in an Outdoor Dasher System require a specialized and unique design. These features should include a specialized frame fabrication and customized sizing and fastening methods to allow the material to move on the frames. The controlled movement of materials limits the amount and direction of expansion and contraction to reduce gapping between the sheets, reduce potential breakage, and minimize maintenance requirements.

Specially formulated materials such as "Duraboard" are needed for the playing surface, top sill, and kick strip. The Duraboard material, which looks like conventional puck board, has been developed for UV resistance and durability under extreme weather condi-

tions. When factory applied to shop fabricated galvanized steel frames, the highly attractive product is ready for quick installation.

Options such as chain link, acrylic, or tempered glass puck containment, box shelters, lockable gates, portability, and various anchoring methods can make the highly durable system an attractive addition to your community.

Before finalizing your rink plans, we urge you to review the quality and features offered by your supplier. They should include the many the unique features that are vital to providing a safe and durable Outdoor Dasher System that the community can be proud of.

News To Share?

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