Water on Tracks

Most running tracks are designed to shed water in three ways. First, latex and some polyurethane track systems are porous. Water drains through the voids in the surface until it meets the asphalt, where, by virtue of the cross slope on the track (maximum 1% at the amateur and college levels, 2% for high school tracks), the track drains either to the inside or the outside, the second method of shedding water. Finally, water, trapped in the surfacing material or on the surface of the track may evaporate. Non-porous tracks drain in only two ways - via slope and evaporation.

In some cases, however, water on porous tracks does not drain properly and the surface becomes saturated. Where this occurs, the surface may feel “squishy” or some standing water may be observed. One common cause of inadequate drainage is that the asphalt under a porous surface is lower than the curb or other barrier on the side where the water drains and the water cannot escape. Another problem occurs where owners request minimal slope, as they often do on high jump approaches, for example, and the slope is not adequate to move the water.

Excess water on tracks generally does not delay use of the track, but it may cause staining and, ultimately, lead to delamination or degradation of the surface, particularly in geographic areas with freeze/thaw cycles.

Water often collects in and on tracks due to loss of planarity and slope, which may be caused by any of the following circumstances: unsuitable material in the subsoil, inadequate drainage design, improper slope or grade, or inadequate compaction of the subgrade. However, among the most common causes are improper placement of sprinklers and paving error.

Grass fields, particularly newly sodded or repaired fields, need regular, deep watering. In areas where rainfall is limited, sprinkler systems may be installed. No track is designed to handle constant watering. Even when weather conditions are ideal – hot and dry – a track simply cannot move that much water and a porous surface will become saturated. Therefore, irrigation systems should minimize overspray onto the track.

Water on tracks due to paving error also is common. Paving and surfacing involves both skill and judgment. It is not reasonable to expect perfection; therefore, steps should be taken to identify and correct paving errors prior to surfacing. Paving errors occur most commonly in the chutes and transition areas, at the spot where the paving machine moves on and off the track during paving, at the paving seam, if any, and in the D area, if paved. The owner or architect should require that the track be flooded, with a hose or water truck or from a good rainfall, and areas that hold water should be marked and planed or filled prior to surfacing. It is far more difficult and costly to wait until the surface has been installed to identify drainage or water management concerns. Additionally, unless the surfacing contractor is also responsible for the paving, it is inappropriate to hold that contractor responsible for drainage issues if the pavement has not been checked and corrected prior to surfacing.

Weather also plays a role in causing excess water on tracks. Tracks can absorb and move more water when the weather is sunny, hot and dry, less when the weather is cloudy or cool. At times, the amount of rainfall may be temporarily more than the surface can handle. Maintenance practices also can cause problems. For example, improper maintenance may allow grass or dirt to build up on the edge of the track, thereby creating a dam, which prevents water from draining.

In summary, some excess water in or on the track, at times, is normal. However, care should be taken in design, construction and maintenance to minimize the causes in order to protect the track surface and to extend the useful life of the track.

Differences in site, weather and soil conditions require variations in construction and repair methods and materials. Readers are advised to consult an ASBA Certified Track Builder, a design professional with experience in designing sports facilities or a qualified contractor before undertaking construction or repair of a running track facility.

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