Public Health Advisory: Cleanup of Outdoor Areas Following Flooding

Floodwater can contain sewage and other contaminants which are contained in the mud residue. Cleanup of outdoor areas that have been covered with mud from flood waters is necessary. From a public health standpoint, it is important that the mud residue be removed prior to resuming use. Harmful microorganisms found in floodwaters, including bacteria, viruses and parasites, pose a significant risk to human health. The amount of time microorganisms can survive in the environment depends on factors such as temperature, humidity, soil acidity, and amount of sunlight. Sunlight, soil activity and rain help destroy microorganisms so it is usually safe to use areas where sediment was deposited a couple of weeks after flood water has receded if proper cleanup steps are taken. This guidance applies to private and public yards, grounds, and properties including campgrounds, school grounds, playing fields and playgrounds. Intended use of outdoor areas should be determined and considered with special consideration for areas where young children are likely to play or areas where frequent ground contact will occur (e.g., football fields).

General recommendations regarding cleanup:

- Avoid direct contact with mud residue by wearing protective eyewear, gloves and boots.
- Wear an N-95 respirator (also called a mask) during cleanup activities when inhalable particles may be generated (available at most local hardware stores).
- Spray water (soapy water if possible) on dry dirt or dust to help prevent particles from becoming airborne.
- Remove gross contamination including litter, debris and mud.
- Remove sand in sandboxes and soil, mulch, and wood chips around playgrounds where young children are likely to play.
- Clean all outdoor items with cleanable surfaces (e.g. playground equipment) exposed to flood waters with a disinfectant or bleach solution (see Centers for Disease Control and Prevention (CDC) bleach solution recommendations available from URL: http://emergency.cdc.gov/disasters/bleach.asp). Allow to air-dry.
- Contaminated areas should be drenched with potable water to flush microorganisms out of the upper layers of soil.
- Follow the manufacturer’s recommended cleanup protocol for playing fields that utilize artificial turf.
- Allow areas to air-dry in the sun. Several sun and rain cycles destroy and remove microorganisms.

Hydrated lime (also known as calcium hydroxide) can be applied in heavily contaminated areas after the mud is removed; however, this material is a strong alkali and can cause severe burns to the skin and eyes, as well as inhalation injuries. If hydrated lime is used, applicators should follow manufacturer’s recommendations and wear appropriate personal protective equipment. The lime should be fully removed after a contact time of two hours by thoroughly hosing the field with water until all of the powder is removed and the pH is returned to near neutral. The field should then be allowed to dry. If there is any concern that the applied lime cannot be removed properly, it should not be used in the cleaning process.

What can parents, coaches and athletes do to minimize any potential exposures?

- Wash hands thoroughly after playing on field or play area and before eating.
- Protect open cuts or scrapes by covering them before playing. Thoroughly wash any cuts or abrasions incurred while playing on field or play area with clean water to prevent infection. Athletes should be up-to-date on tetanus vaccinations.
- Remove shoes/cleats, sports equipment and soiled uniforms after playing to avoid contaminating clean areas.
- Shower after play or field contact.