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MANAGING SPORTS FIELDS TO REDUCE ENVIRONMENTAL IMPACTS

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Abstract:

To remain useable in wet weather, sports fields are often designed and constructed to rapidly drain excess precipitation. Fields are often “crowned” to provide a sloped surface to drain excess surface water. Other fields require a flat surface and utilize a sand root zone to facilitate rapid internal drainage. Many sports fields are also irrigated to maintain a moist soil profile. From heavy athletic use, portions of sports fields have soils that are heavily compacted that encourage runoff. Factors of rapid drainage, moist soil, sandy soils or heavily compacted soils are important in enhancing the runoff or leaching of nutrients and pesticides. Understanding factors that influence nutrient and pesticide losses allow sports field managers to minimize the impact to surface and ground water quality. Factors important in managing nitrogen and phosphorus losses include: source, season and rate of application, irrigation, turf density and soil factors such as soil moisture level, slope and infiltration. Pesticide runoff and leaching losses are most often a result of limited turf density, pesticide properties and time from application to first large precipitation event. Using best management practices can result in minimal or no impact on the environment while having good sports playing conditions.

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