The growing medium consists of 12 inches of USGA specification sand, either alone or amended with ten percent sphagnum peat and two percent fine sandy loam soil. Nitrogen applications consist of three nitrogen rates (38.7, 58.1 and 77.4 g N m⁻² annually) and two application methods (granular slow release/soluble N fertilizer in four-week applications and biweekly granular slow release N with liquid ammonium sulfate).

Leachate data collection was begun the last week of October with the beginning of fall rains on the weekend of October 20, 1991. Soil-water percolate from each lysimeter is monitored and quantified on 24-h intervals during leachate production periods. Leachate samples are analyzed by nitrate and ammonium ion sensitive electrodes and ion analyzer.

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The Effect of Salinity on Nitrate Leaching from Turfgrass

This project was initiated in March of 1991, and consists of both a field component (Las Vegas) and a greenhouse component (Reno) to examine the effects of saline irrigation water on nitrate leaching from a soil root zone and on nitrogen uptake by turfgrasses.

Las Vegas: The irrigation system and sampling hardware (lysimeters, tensiometers, neutron probe access tubes, ceramic extraction cups, associated plumbing, etc.) were installed at Horseman’s Park in southeast Las Vegas during the spring and summer. Plots were then seeded with either ‘NuMex Sahara’ bermudagrass or ‘Monarch’ tall fescue at rates of 45 and 357 lbs./acre, respectively. Each turf was established under typical fairway management conditions. Bermudagrass plots were overseeded with Palmer/Prelude perennial ryegrass in October. The saline irrigation treatments will be initiated in January of 1992, after which time data collection will begin. It is anticipated that the first full season’s data will be available by November 1992.

Reno: Seventy-two soil columns (6 inches diameter by 24 inches deep) were equipped with