sew´·ẽr sō·ci·ōl´o·gy, *the science of society, social institutions, and social relationships viewed through the eyes of a sewer; specifically the systematic study of the development, structure, interaction, and collective sewer use of organized groups of human beings.*

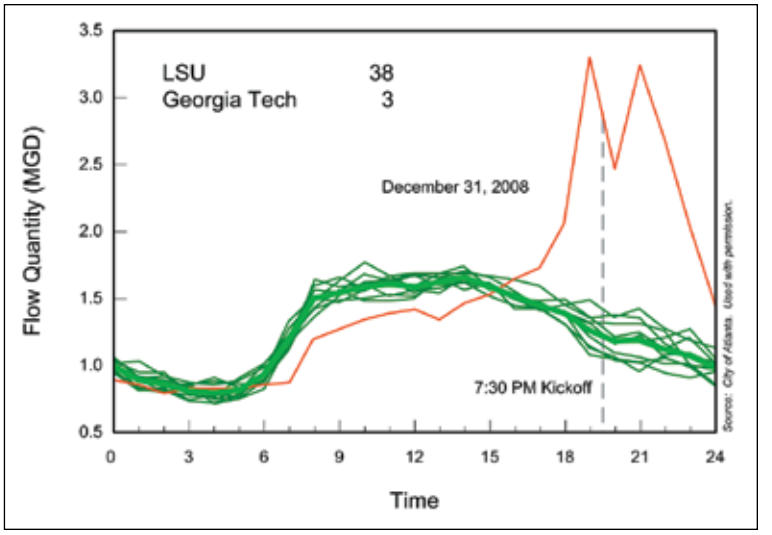
Is Your Team's Season Down the Toilet?

Kevin L. Enfinger and Patrick L. Stevens

Most sewer flows are characterized by repeatable diurnal patterns that vary across weekdays, weekends, and holidays. Differences in land use are also apparent, and distractions and disruptions of daily life often can be observed. This month, in honor of the holiday season, we take a look at sewer flows from a college bowl football game.

For college football fanatics, there is no better time each year than bowl season — a chance to end the season on a high note and just perhaps win a national championship. During the 2008 season, the authors enlisted the help of a sewer flow monitor to watch a college bowl game from a unique perspective — through the eyes of a sewer. This flow monitor was located downstream from the Georgia Dome during the 2008 Chick-fil-A

2008 Chick-fil-A-Bowl — Atlanta



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Bowl featuring Louisiana State University (LSU; Baton Rouge) against Georgia Tech (Atlanta).

A composite hydrograph of the flow monitor data from this location is shown in the figure on p. 87. Weekdays are shown in green, and game day is shown in red. The game started at 7:30 p.m., and a significant increase in sewer flow was observed just prior to the game as fans arrived at the stadium. A second increase was observed around halftime.

A total of 71,423 fans cheered as LSU racked up 324 yd (296 m) of total offense and defeated Georgia Tech with a score of 38 to 3. Meanwhile, down in the sewer, the flow monitor cheered as the bowl game racked up 1 million L (276,000 gal) of wastewater — a per-capita sewer use of about 14.8 L/d (3.9 gal/d) per fan.

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Looking Ahead

Coming up in the January issue …

Model Plants

Theoretical models are powerful tools to help engineers optimize treatment plant design while keeping multiple water-quality objectives in sight. They also can help plant managers and operators simulate how an existing plant will react to extreme conditions so they can prepare for those rare occasions.

However, in both cases, computer programs alone are not enough. Experienced engineers and operators are essential ingredients in assuring a truly good solution. Read about the advantages and disadvantages of commonly used models, and how they can help solve real-world problems such as evaluating clarifier capacity and meeting nutrient limits.

Starting Strong

Good headworks sets the tone for the rest of the plant. Read about how upgrades and improvements to preliminary treatment systems eliminate unpleasant and, sometimes, unsafe working conditions as well as shrink maintenance needs and time.

These upgrades range from optimizing how screenings are collected and washed, to innovative design choices that keep potentially explosive sewer gases safely contained. In each case, the benefits expand beyond such measurable elements as hours worked and pounds of screenings hauled away and extend into more elusive gains like better operator morale and more appealing work environments.

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