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TO: PRO Members

FROM: Dan Stanowick

SUBJECT: Competitive Advertising

DATE: February 15, 1993

COPIES: Nora Jacobs
Dave Meeker

I thought you would be interested to see DIPRA's newest ads appearing in the current issues of AWWA Journal and Water Environment & Technology.

[illegible] acceptable quality to protect the receiving stream, and the city was ordered to upgrade its facilities. Analysis of the treatment lagoon effluent showed that it met the requirements for agricultural use.

The redesign of the original system included rehabilitating part of the collection system, modifying the treatment lagoon pump station and force main, and constructing the HCR lagoon, outfall line, and controls. In the new system, the untreated wastewater enters the treatment lagoon where a dividing wall separates the lagoon into two cells. The lagoon effluent then flows by gravity to the chlorine contact chamber. It is then pumped through a force main to the holding lagoon. From the holding lagoon, water is either used for subsurface irrigation or is discharged to Snake Creek.

HCR Controls

In the redesigned system, the HCR controls regulate effluent discharge into Snake Creek. They include a flowmeter at the discharge weir structure, which measures the rate of discharge (if any) from the holding lagoon; an electric slide gate; a creek flowmeter; and a [illegible] microprocessor.

The discharge flowmeter transmits a signal to a microprocessor to record lagoon discharge. The creek flowmeter, located on the creek bank, sends a signal to the microprocessor to record the flow in Snake Creek. The creek flowmeter uses a 2 m wide (7 ft wide) rectangular weir.

The microprocessor determines the rate of flow that can be discharged from the holding lagoon. It then raises the slide gate until the weir flowmeter senses the flow from the holding lagoon. The microprocessor adjusts the slide gate position until the correct discharge rate is achieved.

If the water in the holding lagoon is held for irrigation purposes, the flowmeter is still active but the slide gate control is placed in the "off" position. If there is an equipment or electrical failure, the gate can be operated manually.

The total cost for construction, design, inspection, and administration of the new system was $773,776.

—***William Griggs***, *Griggs & Maloney, Murfreesboro, Tenn.*, ***and George Leckner***, *City of Adamsville, Adamsville, Tenn.*

Urban Runoff Models Simplify NPDES Process

Pollutant loadings for [illegible] pollutants in the National Pollutant Discharge Elimination System (NPDES) stormwater permit application process can be estimated from models provided in the *EPA Guidance Manual*: the *nationwide regression equation* model (NRE) and the *PS* model. The EPA model is a basic method that will satisfy the short-term requirements of the permit applications. The NRE and the PS models are more complex and difficult to apply but may be more useful for long-term management plans.

Estimating the quantity of pollutants discharged from stormwater systems to area creeks, rivers, lakes, and estuaries is part of the NPDES stormwater permit application process. EPA has established regulations that require 173 municipalities, 47 counties, and approximately 100,000 industries to obtain NPDES stormwater permits for their separate stormwater discharges. The permit ap[illegible] require municipalities to estimate [illegible] loadings from their stormwater [illegible] waters of the U.S.

The NPDES stormwater regulations require stormwater authorities to develop a program [illegible] a two-part permit application process. The largest jurisdictions (population 250,000 or more) submitted the Part 1 application to the EPA or to the appropriate state regulatory agency before November 18, 1991, and the Part 2 application before November 1992. Other stormwater authorities (population 100,000 to 250,000) are required to submit Part 1 permit applications by May 18, 1992, and Part 2 permit applications by May 17, 1993.

The Part 1 permit application describes the stormwater authority's existing system and its programs for managing stormwater. In the Part 2 permit application, among other information, the stormwater authority is required to provide:

- stormwater monitoring data from 5 to 10 outfalls in the service area that represent all major types of land use,
- annual cumulative pollutant loads and event mean concentrations for specified pollutants discharged from the entire stormwater system,
- a schedule to estimate seasonal loads and event mean concentrations of representative storm events, and
- a proposed stormwater monitoring program that would be implemented during the term of the permit.

In the Part 2 application, the stormwater authority must also describe management programs that will be used to reduce the pollutants in stormwater runoff from residential and commercial areas. Also to be included are estimates of the reductions that can be achieved by the proposed management programs.

Nationwide Urban Runoff Program Data

EPA sponsored the Nationwide Urban Runoff Program (NURP) to characterize discharges from separate stormwater systems that serve residential, commercial, and light industrial sites in 28 project cities across the U.S. Data collected for this study were compiled in a database that can be used to calculate pollutant loadings and event mean concentrations for NPDES permit applications.

The study concluded that annual suspended solids loadings from stormwater are 10 times higher than solids loadings from municipal wastewater treatment plants providing secondary treatment. Also, chemical oxygen demand (COD) loadings from stormwater were comparable to loadings from municipal wastewater treatment plants. However, considering the intermittent nature of stormwater flows, these loadings represent a greater shock to receiving water than the loadings from continuously discharging municipal wastewater treatment plants.

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