

SEWAGE OVERLOAD SOLUTIONS (S.O.S.) A PUBLIC SERVICE INFORMATION ALERT

from The Churchill Area Environmental Council

2300 Wm. Penn Highway, Pittsburgh, PA 15235 1997-1998

THE LAW

Clean, safe water for consumption and recreation is a public and environmental health necessity. Thus, the federal **Clean Water Act** and the state **Clean Streams Act** prohibit the discharge of untreated human waste (sewage) into rivers and streams. Such discharges are responsible for disease outbreaks and contamination of drinking water sources. Violators are subject to fines and other penalties specified in these laws.

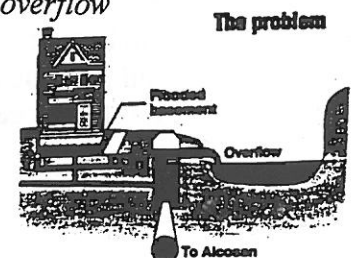
The United States Environmental Protection Agency (E.P.A.) charged with implementing the federal law, sent letters in March, 1997 to 52 communities in the ALCOSAN wastewater service area requesting data on flow levels from all sanitary sewer systems. An initial deadline of May 1, 1997 for the installation of flow monitors (costing \$3,000+ each) to gather the data was extended to August 1 for communities agreeing to a cooperative, regional approach to addressing a growing sanitary sewer overflow (SSO) problem. Some municipal officials felt that not enough time was being allowed for bringing everyone together and for formulating and implementing regional plans. However, all municipalities had been notified in 1994 that monitoring was mandatory and that sewer overflows had to be eliminated. Without specific target dates many officials put the sewage overflow issue on the back burner where it is now boiling over. The August 1, 1997 deadline for the start of monitoring was set to bring in data for August, because heavy rains are at their peak in that month, ground water is low at the end of the summer, and it is an especially good time to measure sewer inputs from runoff.

In order to comply with the current mandate, monitoring must be continued until sewer flows stay below the established threshold of a peak daily flow of 250 Gallons Per Day per Capita (250 GPDC) for 8 consecutive months. The E.P.A. may limit the monitoring to overflow points as compliance increases and useful data are gathered. The 250 GPDC is actually a generous allotment provided no significant amount of extraneous water enters the system. That is why, even if individual communities can show that they fall below this per person threshold within their borders, infrastructure repairs, retrofits, or replacements may still need to be shared on a population or contributory basis.

SOME BACKGROUND

How did we get to a crisis stage on this issue? Our region is part of two water drainage collection basins known as The Turtle Creek and Nine Mile Run Watersheds, with individual municipalities draining into one or more sub-sections of the former, such as Thompson Run (along lower Rodi Road,) and Falls Run (along Ardmore Blvd.)

The **primary problem** is that the infrastructure is old. The original clay pipes are cracked, broken or crumbling in many places. This includes large sewer trunk lines, lateral tap-in lines from homes and businesses and even interceptor pipes flowing into the ALCOSAN system. The magnitude of the damage and the specific pipelines affected vary by community and subdivision area, but the net result is that when heavy rains saturate the soil, groundwater infiltrates the compromised sanitary sewer system, vastly exceeding ALCOSAN's 225 million gal/day treatment capacity. This leads to frequent overflows of water containing raw (untreated) sewage into streams and rivers and to less frequent, but dangerous and expensive backups into basements and homes. *50+/- % of the overflow problem is attributable to this infrastructure deterioration.*



A **second problem** is that older areas in the region may have combined sewers – a single pipe that carries BOTH sewage and storm water into the sanitary sewer line leaving the property. These combined sewers, while still legal, add large volumes of unnecessary water to the ALCOSAN system.

Third, there is illegal flow into sanitary sewers from such sources as:

- driveway, patio, porch and swimming pool drains
- French drains and roof drain conductors
- basement waterproofing systems.

It is not clear whether this improper draining was done in ignorance or defiance of the law, or represents a lack of proper building inspection. But the *extraneous water from combined sewers and illegally connected property drains are estimated to represent 50+/- % of the sanitary sewer overflow problem.* Only household use water (from sinks, tubs, showers, toilets and washers) should be connected to the sanitary sewer for treatment at ALCOSAN. All other water running off developed property should flow into the storm water system at the street and directly into streams and rivers.

And **fourth**, the Thompson Run branch of the ALCOSAN system is overloaded with tap-in lines from unanticipated, excessive development that was, nevertheless, permitted.

SOLUTIONS AND COSTS

Dwarfing the costs for monitoring will be the expenditures required for capital improvements to the sewer systems. These may include replacing damaged pipes or threading newly developed, inflatable liners into old lines, severing connections between storm water and sanitary sewer lines, and connecting sewer lines to areas now using on-lot septic systems. Since there are no federal funds available, financing may have to come from some combination of low-interest state loans (through Pennvest and other programs,) long-term municipal bonds, hikes in local taxes and increases in sewage bills. In some cases, individual property owners may have to pay \$500 to \$5,000 to redirect runoff to the storm water system at the street or road.

Most affected communities have begun **monitoring** water flows through the sanitary system, **dye testing** individual properties and doing household head counts. If the 250 GPDC threshold is exceeded, homeowners will be notified. An **accurate map** is being prepared of all monitoring sites and sewer line locations in the east suburbs. This information will be entered into a computer program (ArcInfo) and requires cooperation from all municipalities. Several **committees** have been formed and are meeting regularly to coordinate these efforts (e.g. The Thompson Run Comm., The Falls Run Comm., etc.) ALCOSAN may enter into a **consent order** with the state Department of Environmental Protection (D.E.P.) for a \$392 million expansion and odor control project.

CONCLUSIONS

Clean, potable water is everyone's responsibility and is in everyone's health interest. It is mandated by law at county, state and federal levels. Ignoring a deteriorating or inadequate system now is like living below a leaky dam and waiting for the deluge of the next ten- or hundred-year storm. Since communities differ with respect to sewage infrastructure and problem resolution, be sure to call your municipal office for specifics.

Although it may not seem so at this time, when we may face significant expenditures to correct existing problems, it is always cheaper to avoid contamination and abuse of the environment than it is to clean up the mess after the fact. Each of us needs to be aware of our individual roles and vulnerabilities in this issue and to make sure that government at all levels proceeds reasonably, honestly and cooperatively to a satisfactory solution.