

STATE OF CALIFORNIA  
REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

STAFF SUMMARY REPORT  
MEETING DATE: **January 11, 2006**

ITEM: **10**

SUBJECT: **Sanitary Sewer Overflows – System for Reporting and Tracking**

DISCUSSION: This item is to provide some background on sanitary sewer overflows (SSOs), and present a demonstration of an innovative computer system for reporting SSO events.

The Bay Area has over 14,000 miles of sanitary sewers, intended to carry sanitary waste from homes and businesses to local sewage treatment plants. These are built and maintained by over 100 sanitary sewage collection agencies, which is more than double the number of sewage treatment plants we regulate with permits. Sanitary sewage overflows (SSOs) occur relatively often, resulting in raw sewage flowing out of manholes and onto the street, and then to storm sewers that empty out to local streams, and ultimately to the Bay, without any treatment.

The most common causes of SSOs are:

- Hydraulic overload of the sanitary sewer, normally during wet weather periods, when rainfall seeps into sanitary sewers and causes flow to exceed capacity.
- Blockages in the sanitary sewer, from materials such as tree branches, congealed grease, and cave-ins of old sewers. These are also most common during wet weather.
- Failures of sewage pump stations. These are needed when the land is too flat to carry sewage to the treatment plant by gravity alone. Pump station failures tend to cause larger SSOs than the other categories, and tend to occur at any time of the year.

One key step in addressing the SSO problem is getting an accurate understanding of its true extent. For example, this Board's enforcement priorities should logically focus on agencies with the worst SSO problem. (We do not have remotely enough staff to bring to the Board enforcement actions for all violations). Also, managers and directors of sewage collection agencies are more likely to act if they understand how their record compares to their peers.

Sewage collection agencies have long been required to report SSOs, but the requirements were obscure in various codes and regulations, and there is reason to

believe that reporting has been spotty. For example, we have cases where adjacent agencies having very similar service areas report very dissimilar SSO numbers.

To encourage more accurate reporting, Water Board staff have developed a web-based, easy to use reporting system for sewage collection agencies to report SSOs as they occur. The Bay Area Clean Water Agencies (BACWA) helped with funding the project and liaison with the collection agencies.

The results have been striking. Since the new SSO reporting system went on line in December of 2004, we have received over 900 reports of SSOs, a total much higher than previously reported. We believe this increase is due to better reporting and not more SSO incidents. Ours is the only region with such a reporting system in place, but the State Board has indicated it intends to implement a system modeled after ours statewide. Johnson Lam of the Board's staff deserves major credit for the new system, and we should recognize BACWA's assistance.

The ultimate payoff of this system will be a better understanding of how many SSOs occur, and where, when, and why. This will provide the basis for a program to address the problem, starting with the worst problems. Better reporting will also provide a basis for estimating compliance costs, a subject the legislature may be interested in.

Recommendation:

This is an information item, and no action is required at this time.