THE CITY OF SAN DIEGO

MANAGER'S REPORT

DATE ISSUED: November 18, 2002 REPORT NO. 02-277

ATTENTION: Rules, Finance and Intergovernmental Relations Committee
Agenda of November 20, 2002

SUBJECT: Request from the International Boundary and Water Commission (IBWC) to treat Tijuana Sewage in the City Metropolitan Sewerage System

SUMMARY

Issue - What action should the City Council take regarding the IBWC's request to treat Tijuana Sewage in the City Metropolitan Sewerage System?

Managers's Recommendation - Deny the IBWC's request to use the Metropolitan Sewerage System and encourage the IBWC to vigorously pursue other alternatives.

Alternative Recommendation - Delay the decision on the IBWC's request and proceed with a technical feasibility study to determine the impact of taking Tijuana sewage on the overall capacity of the Metro system, the operations of the South Bay Water Reclamation Plant and the Point Loma Wastewater Treatment Plant, and Pt. Loma's sludge handling process, subject to full reimbursement of all study costs by the federal government and the State of California. Once the results of the feasibility study are completed, make a final determination.

Fiscal Impact - None with this action.

BACKGROUND

The problem of sewage flows from Tijuana, Mexico, impacting the San Diego area has been ongoing for more than 70 years. The solution to the problem is a federal responsibility. The IBWC is the federal agency assigned to handle this responsibility.

In 1990, the U.S. and Mexican governments determined that the permanent solution to the border sanitation problem was the construction of treatment and disposal facilities in the U.S. The plan included the construction of the International Wastewater Treatment Facilities. The planned facilities consisted of a 25 mgd secondary treatment plant, canyon collectors in Goat Canyon and Smuggler's Gulch to collect renegade sewage, and the South Bay Ocean Outfall (SBOO).

The construction of the advanced primary portion of the International Wastewater Treatment Plant (IWTP) and the canyon collectors was completed in April 1997. The SBOO began operations in January 1999. The IBWC is currently operating the IWTP as an advanced primary treatment plant at 25 mgd. The IWTP is currently operating in violation of the conditions of its National Pollutant Discharge Elimination System (NPDES) permit, which requires secondary treatment.

On February 15, 2001, the California Attorney General, on behalf of the California Regional Water Quality Control Board, San Diego Region (Regional Board), sued the IBWC for failing to treat its effluent to secondary treatment standards.

On September 11, 2002, the Regional Board approved a consent decree with the IBWC. The settlement terms require the IBWC to take one of the following actions on or before December 31, 2004:

(b) sign a contract to construct a secondary treatment facility for the IWTP, with completion of construction no later than December 31, 2007; or

(c) sign a contract or enter into a written agreement for another entity, either public or private, to provide secondary treatment of effluent from the IWTP with initiation of secondary treatment no later than December 31, 2007; or

(d) cease violations of the applicable permit limits by some other means, including but not limited to, redirecting some or all of the treated effluent from the IWTP from California waters and/or instituting a partial combination of options (a) and (b) above.

The consent decree must be signed by the Regional Board and the federal government and be entered with the court. There are several environmental groups that are considering appealing the Regional Board decision, and, to date, the consent decree has not been entered with the court.

The IBWC staff is currently reviewing interim measures for treating effluent from the IWTP to secondary treatment levels. On September 26, 2002, the IBWC sent Mayor Murphy a letter requesting consideration of treatment of effluent from the IWTP in the Metropolitan Sewerage System, at the Point Loma Wastewater Treatment Plant (PLWTP) and/or the South Bay Water Reclamation Plant (SBWRP), as an interim measure until secondary treatment comes on line at the end of 2007.

DISCUSSION

The PLWTP has a capacity of 240 mgd and currently treats 180 mgd of wastewater to advanced primary levels and discharges effluent through the Point Loma Ocean Outfall. Since 1965, the City and the IBWC have had various agreements to use the Tijuana Emergency Connection to convey up to 13 million gallons per day (mgd) of Tijuana sewage to the PLWTP on an emergency basis. This agreement is renewed annually and the current agreement runs through September 30, 2003. The last time the emergency connection was used was in September 2000. The SBWRP can treat up to 15 mgd to secondary and tertiary treatment levels and uses a biological activated sludge secondary treatment process. Effluent is discharged through the SBOO. In order to treat the 25 mgd from Tijuana, the flow would have to be split between the PLWTP and the SBWRP.

Before any decision is made on the IBWC's request for treatment, the following issues need to be addressed.

1. Toxicity of Tijuana Wastewater - The IWTP effluent currently experiences exceedances of its permit limits for acute and chronic toxicity. There is the potential of upsets to the treatment process of both the PLWTP and SBWRP due to the constituents in the Tijuana wastewater. A wastewater characterization study to determine the impact on the treatment process would need to be conducted.

2. Handling of Sludge - Currently the SBWRP does not have any sludge handling facilities. All sludge is conveyed via sewer lines to the PLWTP. Sludge digested at Pt. Loma must meet EPA 503 regulations. Combining sludge from Tijuana with that of San Diego may place the City out of compliance with those regulations due to higher concentrations of metals and other toxic substances that are not removed in Tijuana's industrial pre-treatment program. An option would be to require the IBWC to treat the effluent at the IWTP prior to sending it to one of the City's plants. Doing so would reduce the amount of solids that the City has to treat.

3. Capacity - If the City were to take Tijuana sewage into the Metro System, it would reduce the capacity available to the City in the San Ysidro Trunk Sewer, the South Metro Interceptor and the downstream Pump Stations No. 1 and 2. This would increase the risks of sewer spills into San Diego Harbor. One of the main reasons that the City chose to build the SBWRP early was to reduce the volume of flows to the pump stations, especially during peak wet weather.

4. Reclaimed Water - Directing Tijuana sewage to the SBWRP could impact the production of reclaimed water or require additional treatment. This would jeopardize current and future agreements the City has for the sale of reclaimed water. Also, under the agreement the IBWC has with Mexico, Mexico considers their sewage to be their commodity and may want rights to the reclaimed water.

5. Funding - Currently the City has an agreement with the IBWC for use of the Tijuana Emergency Connection and treatment of up to 13 mgd of Tijuana sewage. The IBWC is charged for only the operations and maintenance costs, while all other ratepayers are charged capital costs in addition to operations and maintenance. The reason for this difference is that the Emergency Connection was intended to be used on an infrequent emergency basis only. If the City were to receive Tijuana sewage on a continuous basis, the IBWC should be charged the same rates all other Metro Participating agencies are charged. This could amount to roughly $22 million a year for treatment of 25 mgd. It is doubtful that the federal government will appropriate this amount of funding, creating the potential that City ratepayers may be asked to subsidize these treatment costs. The IBWC has requested $3 million in their Fiscal Year 2003 budget and $2 million in Fiscal Year 2004 for the upgrade to secondary treatment. This money, if approved by Congress, will be used to fund preliminary studies and environmental review. They currently do not have any funding to reimburse the City for treatment costs.

6. Liability - The toxicity of the waste stream from the IWTP may increase the toxicity of the effluent from the PLWTP or the SBWRP. If there is a violation of the City's NPDES permits that can be attributed to the treatment of Tijuana sewage, the City will expect to be held harmless from all lawsuits, fines, and regulatory actions

7. Disincentive to Progress - If the City agrees to treat Tijuana sewage, it may lessen the urgency for the federal government to move quickly to implement a permanent solution. Once the City takes Tijuana sewage, it could be very difficult to stop taking the sewage if the IBWC does not meet the 2007 deadline. Also, it puts the City in the position of taking responsibility for a problem that belongs to the federal government.

8. Treatment at Point Loma Only - If it is not technically feasible to treat Tijuana sewage at the SBWRP because of potential upset to the biological secondary treatment process, an option would be to send Tijuana sewage to the PLWTP only, assuming items 1 through 7 could be addressed. However, with this option, because of the configuration of the sewer system, the Grove Avenue Pump Station and SBWRP may have to be shutdown. The Tijuana emergency connection flows into the San Ysidro Trunk Sewer upstream of the Grove Avenue Pump Station. The Grove Avenue Pump Station diverts flow from the San Ysidro Trunk Sewer to the SBWRP. In order to convey Tijuana flow to the PLWTP, the flow would have to bypass the Grove Avenue Pump Station, essentially shutting down the pump station and the SBWRP.

9. Schedule - Implementation of any interim measures will require environmental review, permitting, installation of additional infrastructure and requests for funding. A schedule will be needed to determine whether an interim measure can be funded and implemented any sooner than the permanent solution. Funding and time constraints may make the interim measure uneconomical.

If all of the above concerns can be addressed, the possible benefits to the City of treating Tijuana sewage are as follows:

1. There is the potential for a reduction in the toxicity levels in the ocean area around the discharge point of the SBOO.

2. There is the possibility for improvement in pollution levels along some of the southern area beaches.

MANAGER'S RECOMMENDATION

On January 22, 2002, the City Council approved a resolution endorsing the development of a privately funded facility in Mexico for secondary treatment of wastewater from the IWTP, as proposed by Bajagua, a Limited Liability Company, as the most expeditious method of achieving secondary treatment. Based upon the potential risks to the City and concern over schedule and funding constraints, it is recommended that the City deny the IBWC's request to use the Metro System and encourage the IBWC to vigorously pursue other alternatives.

ALTERNATIVE RECOMMENDATION

Delay the decision on the IBWC's request and proceed with a technical feasibility study to determine the impact of taking Tijuana sewage on the overall capacity of the Metro system, the operations of the SBWRP and PLWTP, and Pt. Loma's sludge handling process, subject to full reimbursement of all study costs by the federal government and the State of California. Once the results of the feasibility study are completed, make a final determination on taking Tijuana sewage.

Respectfully submitted,

Scott Tulloch
Metropolitan Wastewater Director

Approved: George I. Loveland
Senior Deputy City Manager

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