Financial and Economic Impacts of Storm Water Treatment Los Angeles County NPDES Permit Area

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Section 1
Executive Summary

This report evaluates the potential financial and economic impacts of implementing an enhanced storm water treatment program in the Los Angeles National Pollutant Discharge Elimination System (NPDES) Permit area as part of the Caltrans District 7 Storm Water Facilities Retrofit Evaluation. The full storm water treatment system would require about $53.6 billion in capital improvement costs which includes land and $198.9 million in annual operations and maintenance costs. Land requirements for the estimated 480 treatment facilities would total about 13,950 acres. The evaluation methodology applies the EPA Municipal Screener approach and other selected economic indicators.

l.l Preliminary Municipal Screener Impacts

The EPA publication, Economic Guidance for Water Standards Workbook, describes a methodology for measuring economic impacts. One test in the described methodology is called the Preliminary Municipal Screener. According to the Workbook:

> "This guidance is presented to assist States and applicants in understanding the economic factors that may be considered, and the types of tests that can be used to determine if a designated use cannot be attained, if a variance can be granted, or if degradation of high-quality water is warranted. To remove a designated use or obtain a variance, the State or discharger must demonstrate that attaining the designated use would result in substantial and widespread economic and social impacts."

The Municipal Screener test indicates whether a public entity will *not* incur any substantial economic impacts from the proposed pollution control program. This Screener is the estimated Total Annual Pollution Control Cost per Household as a percent of Median Household income in the community deemed "affordable" by the United States Environmental Protection Agency (EPA). The test specifies that local pollution control costs between 1 percent and 2 percent of median household income constitute "Mid-Range" impacts and greater than 2 present constitute "Large" impacts. The estimated cost for existing pollution controls plus the full storm water system is about $1,295 per household annually which results in impacts over 2 percent of median household income, therefore; this is judged to create a substantial economic impact. This total cost is comprised of the annual existing non-storm water pollution control cost of $554 per household plus the annual average storm water cost estimate of $741 per household.

1.2 Secondary Municipal Screener

The EPA standards workbook also specifies that a secondary test must be done if the Municipal Screener is not clearly less than 1 percent of median household income. The secondary test is intended to characterize the community's ability to obtain financing and to indicate the socioeconomic health of the community. As applied to the Los Angeles area, this test generates a score that is within EPA's Mid-Range level of economic impacts.

The Secondary Text utilizes five indicators to form a composite assessment of the community's economic health and the financial impact of the pollution control project. Besides providing guidance on how to calculate each indicator, the Workbook supplies criteria for scoring each as 1-weak, 2-mid-range or 3-strong. For each of the five indicators the community is rated as weak, mid-range, or strong, based on various thresholds that apply to specific indicators. For example, overall net debt is used as an indicator of a community's ability to meet debt obligations and its capacity to finance infrastructure. For example, if the Overall Net Debt Per Capita is greater than $3,000, the community would have less capacity to fund additional infrastructure and would therefore be rated weak with a rating of l. However, if the debt per capita is less than $1,000 it would be considered strong and assigned a rating of 3. The indicators are then averaged to derive the Secondary Score.

The results from the Preliminary Municipal Screener and the Secondary Screener are measured jointly to determine whether the community would be expected to incur substantial impacts due to the proposed pollution control project. As shown on Table 1-1, for the Los Angeles area based on the secondary screener analysis, the score falls within the 1.5 to 2.5 range. When combined with annualized cost greater than 2 percent of median household income, the joint score results in estimated substantial impacts, according to EPA's Substantial Impacts Matrix.

1.3 Widespread Impacts

Based on the EPA methodology and other economic indicators presented below, the economic impacts are judged to be both substantial and widespread for the full system storm water treatment costs. Other levels of treatment or funding sources may e considered to mitigate these impacts.

1.3.1 Property Tax Impacts

One measure of financial feasibility is the estimated impact on the property tax rate. The property tax rate for a single family unit is estimated to increase by 0.87 percentage points for the full system. When added to the median base property tax of 1.19 present, this results in a total property tax of 2.06 percent, increasing the annual property tax bill by about 70 percent. Given the current economic climate in California, this estimated increase is clearly more than is likely to be absorbed by local single family households alone. For multi-family units, the estimated increase of 0.67 percentage points would also represent a potential sizable rental pass through.

1.3.2 Sales Tax Impacts

To compare the annualized storm water treatment costs to other economic indicators, a hypothetical increase of 6 percentage points above the present sales tax rate, to a level of about 12 percent, was estimated in lieu of increasing the property tax for the cost of full treatment. This impact is judged to be widespread and much higher than most households would consider acceptable.

1.3.3 Land Requirement and Displacement Impacts

Treatment facilities for storm water runoff are land intensive. The land and land cost requirements for the full system are about 13,950 acres and 6.1 billion dollars, requiring multiple treatment plants. About 67 percent of this acreage would be required for treatment Level 1 and the rest for treatment Level2. While marginal or vacant parcels would initially be sought, potential displacement of many households and businesses as well as relocation and land acquisition costs would be required.

1.3.4 Employment Impacts

The Los Angeles area economy has been recovering from the deep recession of the early 1990s when the total County economy lost more than 400,000 jobs. The County is currently on a recovery path. The additional costs per household and per business are likely to slow this recovery and cause some businesses to relocate or expand elsewhere. Again, while specific estimates of impacts are not made, the burden of additional costs of a substantial nature is viewed as widespread because the potential treatment plants would be distributed throughout the Los Angeles drainage areas. Since specific locations are not identified, these displacement impacts are not quantified as part of this study.

As was indicated earlier, the average household share of the financing burden would amount to about a 73 percent increase in annual property taxes. For many households, such an increase in property taxes would cause a significant reduction in their consumption and savings. Over time, landowners would also pass forward tax increases to renters as increased rents which would produce a reduction in consumption by renters. Such potentially widespread reduction in consumption among households would likely cause loss of retailing and other local serving jobs.

1.3.5 Impacts on Outstanding Local Debt

According to California Municipal Statistics, Inc., There is an estimate $11.6 billion of outstanding local public debt in Los Angeles County. The estimated cost of $53.6 billion for full storm water treatment would represent almost a fivefold increase in debt. Even the Secondary Municipal Screener level of $5.3 billion of estimated capital costs represents about 46 percent of existing unpaid local public debt.

1.4 Estimated Non-Storm Water Pollution Control Costs

According to the EPA guidelines, the Municipal Screener approach provides an estimate of what is deemed “affordable” for pollution control programs. The present study first examined the incremental financial and economic burden of storm water treatment in the Los Angeles County NPDES Permit Area. However, other public pollution control programs also require funding and must be considered in setting expenditure priorities. According to the EPA Municipal Screener, the estimated incremental cost of any new pollution control program should be added to the existing and future costs for other types of pollution control programs, such as air quality, wastewater treatment, and solid and toxic waste disposal.

In Section 10 of this report, estimates of existing and future non-storm water pollution controls are made which can be added to the incremental costs for storm water treatment by area to determine whether they exceed the 2 percent of median household income criteria prescribed by the EPA methodology. Two approaches were utilized to estimate the impacts of existing and future non-storm water pollution control costs in combination with estimated incremental storm water treatment costs: 1) analysis of estimated localized, direct costs in California; and 2) a literature review, including a 1990 comprehensive study by the EPA updated to 1998 dollars. Both methods result in estimated substantial impacts according to the EPA Municipal Screener methodology.

These additional annual pollution control costs per household were based on localized California costs of wastewater user fees, tire/oil disposal, automobile emissions testing and repairs, drinking water treatment and solid waste disposal. This amount was estimated to be about $554 annually per household for the Los Angeles area compared with $537 annually per household based on the nationwide EPA study.

1.5 Cost Limited by EPA Municipal Screeners

When the estimated amount of $703 per household at the Secondary Municipal Screener level of 1.6 percent of median household income level ($43,916), is reduced by the estimated cost of $554 for existing and future pollution controls, this results in a net amount of $149 per household for storm water treatment. If this annual amount of $149 is multiplied by the estimated 3,228,269 households in the Los Angeles County NPDES study area and is then capitalized using a 6 percent interest rate and a term of 20 years, this results in an estimated affordable capital cost of $5.3 billion. This represents about 9.9 percent of the estimated full storm water treatment cost of $53.6 billion.